Archaeoleg Brython Archaeology

Post-Excavation Assessment of Potential
Wylfa Hotspot 11-13

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Wylfa Newydd Development, Hotspot 11-13

Post-Excavation Assessment of Potential

Prepared for Wardell Armstrong LLP.

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Contents

Crynodeb

Comisiynwyd Archaeoleg Brython gan Horizon Nuclear Power Ltd. (HNP) i gyflawni rhaglen o waith cloddio archaeolegol rhwng 2017 a 2019 yn ystod gwaith clirio cynnar cyn cyflwyno cais Orchymyn Cydsyniad Datblygu (OCD/DCO) ar gyfer Orsaf Bŵer Wylfa Newydd ar Ynys Môn, Gogledd Cymru.

Wedi cwblhau'r cloddio commisynwyd Wardell Armstrong LLP. ac Archaeoleg Brython gan HNP i ddarparu crynodeb o ganlyniadau'r gwaith ac i gyflawni rhaglen o waith ôl-gloddio rhwng Medi 2019 a Mawrth 2020 i asesu arwyddocâd a photensial yr archif a'r darganfyddiadau.

Adroddiad Asesiad o Botensial yw'r ddogfen hon ar gyfer archif a chasgliad arteffactau safle Hotspot 11-13 a gloddiwyd fel rhan o'r gwaith clirio cynnar.

Roedd cloddfa Hotspot 11-13 (NGR SH34969288; EVENT PRN 46043) yn mesur 920m² ac wedi ei leoli i asesu potensial y safle yn dilyn arolwg geoffisegol ac arolwg ffosi gan Wessex Archaeology. Yn ystod y gwerthusiad ffosi nodwyd grochenwaith Gynhanesyddol, nifer o bydewau, ffosydd a thwll postyn.

Yn ystod cloddio darganfyddwyd wal Gynhanesyddol, pydewau, popty neu ffwrnais wedi ei leinio â cherrig, 21 bedd o'r canoloesoedd cynnar, a chyfundrefn amgaeedig. Ni ddarganfyddwyd unrhyw weddillion dynol. Darganfyddwyd nifer o arteffactau gan gynnwys crochenwaith Cynhanesyddol, esgyrn llosg a chrochenwaith ol-ganoloesol.

Mae dyddiadau radiocarbon yn awgrymu dyddiad Neolithig i Oes Efydd Cynnar i'r pydewau a dyddiad Rhufeinig i chanoloesoedd cynnar i'r beddi.

Summary

Brython Archaeology, commissioned by Horizon Nuclear Power Ltd. (HNP), undertook a phased programme of excavation in 2017-2019 in advance of the submission of a Development Consent Order (DCO) application for the construction of the proposed Wylfa Newydd Power Station on the Isle of Anglesey, North Wales.

Wardell Armstrong LLP. (WA) and Brython Archaeology were subsequently commissioned by HNP to provide a summary of the results of the archaeological excavation and to undertake a programme of post-excavation during September 2019 to March 2020 to assess the significance and potential of the site archive and finds.

This is an Assessment of Potential Report of the archive and finds assemblage of Hotspot 11-13, which was excavated during early clearance works.

The excavation area of 920m^2 at Wylfa Hotspot 11-13 (NGR SH34969288; EVENT PRN 46043) was identified following a geophysical survey and archaeological trial trench evaluation by Wessex Archaeology to address the archaeological potential of the site. During the evaluation Prehistoric pottery, several pits, ditches and a posthole where identified.

During the excavation a prehistoric stone bank, pits, a stone lined oven/furnace, 21 early medieval graves and an undated enclosure system were revealed. No human remains were recovered. Artefacts recovered included prehistoric pottery, burnt bone and post-medieval pottery. Radiocarbon dates from organic material recovered from the fill of intercutting pits date from the Neolithic to Early Bronze Age, and the cemetery dates from the Roman to early medieval period.

1 Introduction

During August 2017 to January 2019, Archaeoleg Brython Archaeology CYF. (ABA), commissioned by HNP, conducted a phased programme of excavation of Prehistoric, early medieval and post-medieval features at Wylfa Hotspot 11-13, Anglesey (NGR SH34969288) in advance of the submission of a Development Consent Order (DCO) application (PINS reference number EN010007) for the construction of the proposed Wylfa Newydd Power Station. The excavations at the Wylfa Newydd development site involved 30 open area excavations, with some undertaken as set piece excavations and others as strip map and sample excavations. In total 32 strip, map and sample areas, described as 'Hotspots' were identified, and organized into four zones referred to as 1a, 1b, 2 and 3 within the Written Scheme of Investigation (WSI; Horizon Nuclear Power, 2016; 2017). Fourteen of these areas were excavated by ABA totalling an area of approximately 25,578m^2 (*Figure 1*):

- Wylfa Head (EVENT PRN 46035)
- Area 7 (EVENT PRN 46036)
- Area 8 (EVENT PRN 46037)
- Hotspot 5 (EVENT PRN 46038)
- Hotspot 6 (EVENT PRN 46039)
- Hotspot 7-9 (EVENT PRN 46040)
- Hotspot 8 (EVENT PRN 46041)
- Hotspot 10 (EVENT PRN 46042)
- Hotspot 11-13 (EVENT PRN 46043)
- Hotspot 12 (EVENT PRN 46044)
- Hotspot 14 (EVENT PRN 46045)
- Hotspot 15 (EVENT PRN 46046)
- Hotspot 16 (EVENT PRN 46047)
- Hotspot 17 (EVENT PRN 46048)

Two supplementary excavation areas, Hotspot 8B and Hotspot 15 West, were opened to investigate the interaction between the archaeology in Hotspot 8 and Hotspot 15. This phase of fieldwork was concluded in January 2019. In February 2019 it was announced that the Wylfa Newydd project was being put into a suspended state. As a result of this all further works on the site have been suspended.

Prior to the excavation of the Wylfa Hotspot 11-13 site, it had been subject to an archaeological Desk Based Assessment (DBA) (Cooke *et al*., 2012), magnetometer geophysical survey (Hopewell, 2011a; b; Hopewell 2012) and a programme of evaluation trenching by Wessex Archaeology (2016). During the evaluation several pits, ditches and a posthole where recorded. Prehistoric pottery was recorded in Trench 134 (which later became Hotspot 11). Excavation of Hotspot 11-13 revealed an early medieval cemetery consisting of 21 graves, most of which were cut into colluvial deposits. The excavation also revealed several prehistoric features intercutting pits, a stone lined oven or small furnace, and wall which was sealed by numerous layers of colluvium.

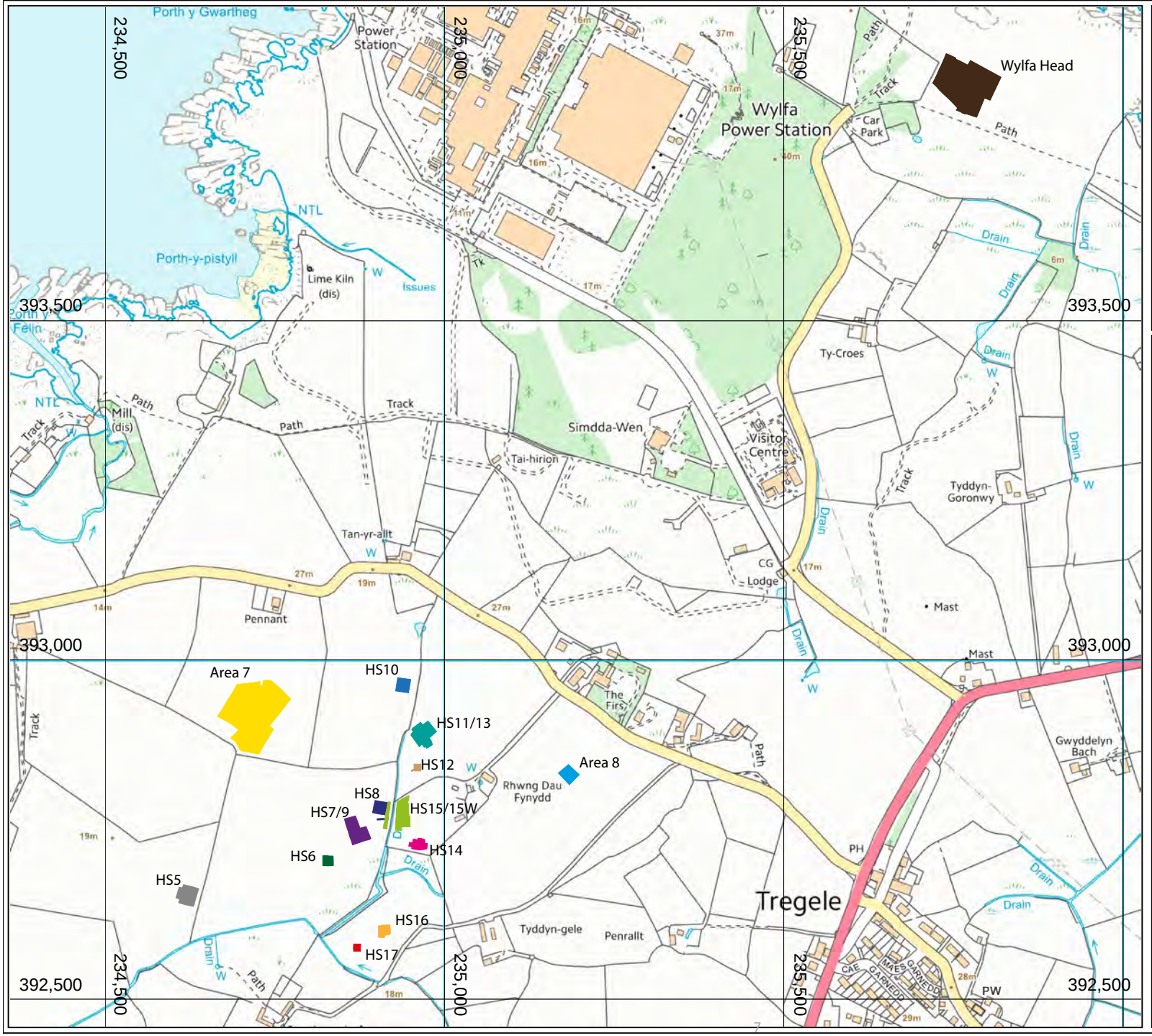
All archaeological works were undertaken in accordance with the Written Scheme of Investigation (WSI [Horizon Nuclear Power, 2016; 2017]), and in line with paragraph 5.8.21 of the overarching National Policy Statement for Energy (EN-1 [Department of Energy and Climate Change, 2011]). The work was monitored by Gwynedd Archaeological Planning Services (GAPS), cultural heritage advisors to the Local Authority. WA have been employed by HNP as cultural heritage consultants for the project and within this capacity have provided guidance and advice during the works. The key historic environment stakeholders are:

- Cadw – The principal Welsh government body responsible for the historic environment of Wales; and
- GAPS - The curators responsible for monitoring archaeological investigations undertaken as part of development in the region.

During the fieldwork and post-excavation work an archaeological record and archive of the site, AB1703 Hotspot 11-13, was created. WA was appointed by HNP to undertake a programme of assessment of the archaeological potential of the evidence accumulated during the excavations

and ABA was selected to undertake a portion of this work under a sub-contract agreement with WA. The excavated finds and environmental samples were handed over to WA in April 2019.

The purpose of this document is to report on the post-excavation assessment of the Hotspot 11-13 archive and finds assemblage, and to create an ordered archive for deposition. This report is written and structured to conform to MoRPHE guidelines, the Charted Institute for Archaeologists standards required of post excavation assessment (CIfA 2014a; 2014b), and in line with the recommendations as stated in the ABA site summary report (ABA, 2018). Digital copies of this report are to be submitted to HNP and relevant stakeholders. The archive and finds assemblage were stored in accordance to CIfA's standards and guidance (CIfA, 2014a: 2014b) while under the curatorship of ABA. The paper archive and digital data, including photographs will be lodged with the Royal Commission on Ancient and Historical Monuments of Wales (RCAHMW) in Aberystwyth on completion of the project. ABA will hold a digital version of the archive indefinitely.



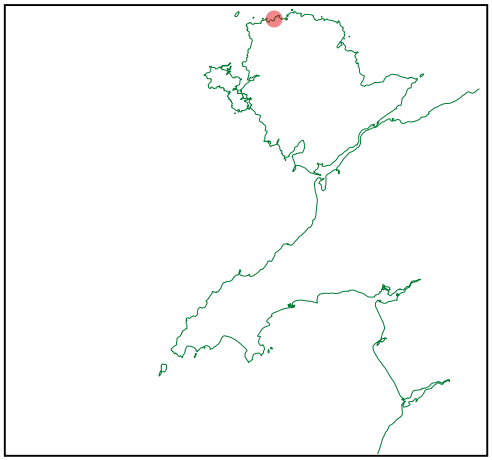


Figure 1
Location plan showing the areas excavated by ABA in the Wylfa Newydd Devleopment Area

Key

- Wylfa Head
- Area 8
- Area 7
- Hotspot 5
- Hotspot 6
- Hotspot 7/9
- Hotspot 8
- Hotspot 10
- Hotspot 11/13
- Hotspot 12
- Hotspot 14
- Hotspot 15
- Hotspot 16
- Hotspot 17

Project No.
AB1703

Drawn By: IGP

Date: 09/06/2021

Location:
SH35439322

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2 Project Background

2.1 Site Location

The Hotspot 11-13 site was located in Field group 1, in a field which was designated 'A13' during the archaeological trial trench evaluation works which identified colluvial layers containing prehistoric pottery and two pits (Headland Archaeology, 2017). The excavation area was approximately 920m^2 in size and centred on NGR SH34969288. The site was located approximately 150m north of Hotspot 14 (an Early Bronze Age roundhouse site [ABA, 2021b]), and 700m northwest of Tregele and 750m south of the existing decommissioned power station in a westerly sloping field which was laid to pasture on the edge of marshy land (*Figure 2*). Higher ground was located to the east of the area with the ground gradually levelling out and becoming wetter to the west. A post-medieval drainage ditch was located approximately 5m to the west, at a height of 19.5m AOD. Due to the close proximity to each other Hotspot 11 and Hotspot 13 were merged to become Hotspot 11-13.

2.2 Geology and Topography

The British Geological Survey's Geology of Britain viewer states the superficial deposits in the area consist of Till, Devensian – Diamicton. These are sedimentary deposits which formed between 11.6 and 11.8 thousand years ago, during the Quaternary period, indicating a landscape dominated by Ice Age conditions. The underlying bedrock geology consists of Mica schist and psammite of the New Harbour Group. This is a metamorphic bedrock which formed between 635 and 541 million years ago, during the Ediacaran period. These rocks were originally sedimentary, formed in deep seas, later altered by low-grade metamorphism (BGS, 2019).

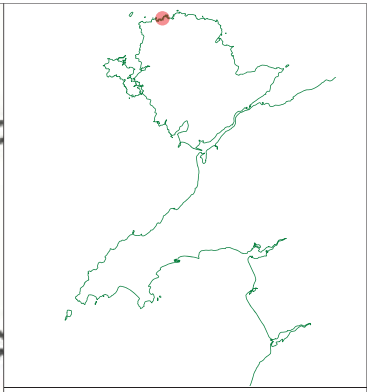

Figure 2
Location Plan, Hotspot 11-13.

Key

Hotspot 11-13

Drawn By:	LWP
Date:	31/01/19
Location:	SH34969288
Project:	AB1703 Hotspot 11-13

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2.3 Archaeological and Historical Background Data

Historic mapping and documentary sources consulted by ABA did not indicate the presence of the cemetery, pits or any other archaeological features identified during the excavation of Hotspot 11-13. However, Anglesey is rich in archaeological sites and artefacts dating from the Mesolithic to the modern period. The information below is summarised from reports and archaeological baseline assessments (Cooke *et al*., 2012; Parry *et al*., 2012; Jacobs, 2015; Wessex Archaeology, 2016; ABA, 2017; Headland Archaeology, 2018).

Mesolithic finds in the area generally consist of flint scatters and tools located at a number of locations across Anglesey, generally close to water sources and often at coastal locations. The nearest possible Mesolithic activity recorded is at Cemlyn Bay, located approximately 2km to the west of the existing decommissioned Wylfa power station, in the form of flint scatters (HER PRN GAT 31584). Another discovery of three blade-like flint flakes (HER PRN GAT 7046) is recorded approximately 8km to the south near Llyn Alaw. Two possible Mesolithic lithic scatters (HER PRN GAT 91809/ HER PRN GAT 91811) were identified during the early clearance works at the Wylfa Head excavation area, approximately 350m east of the existing decommissioned power station.

Evidence for Neolithic activity in the area is abundant, mostly represented by megalithic funerary monuments, including chambered and passage tombs. These tombs would have been held the remains, both skeletal and cremated, of numerous individuals of the early farming communities which constructed them. Such monuments were often in use for long periods of time spanning both the Neolithic and Early Bronze Age periods, some examples show evidence of re-arrangement and alteration to accommodate changing funerary practices. A ruined chambered tomb (HER PRN GAT 3046) is located approximately 1.8km to the south-east at Llanfechell. A limited number of domestic sites have been recorded on Anglesey, with the closest being the Early Neolithic settlement at Llanfaethlu, located approximately 8km south-west of the existing decommissioned Wylfa power station. The settlement of at least three Early Neolithic houses is the first of its kind identified in Wales and one of the first in the UK (Rees and Jones, 2015). Evidence of Neolithic activity was identified during the early clearance works at the Wylfa Head excavation area where a group of stone axes and polishing tools were identified in a pit (HER PRN GAT 91812).

Few Bronze Age settlements have been identified on Anglesey but evidence of activity during this period, such as barrow and cairn construction and erection of standing stones, remains visible in the landscape. During the Bronze Age, settlements become apparent on high, defendable ground suggesting the establishment of centres of power, likely organised into tribes or clans. During early clearance works an undefended Bronze Age roundhouse (HER PRN GAT 91868) was identified at Hotspot 14. The nearest Scheduled Monument dating to the Bronze Age is Meini Hirion (AN 30), a group of three standing stones, which may form part of a Prehistoric complex along with the previously mentioned ruined chambered tomb (HER PRN GAT 3046), located approximately 2km south-east of the existing decommissioned Wylfa power station. Prehistoric burials in the later part of the period appear to have moved away from the communal tradition with the appearance of individual urned cremations and crouched cist inhumations. Arguably the most common feature type associated with the Bronze Age is burnt mounds. Evidence of these features are plentiful in the region and as many as twenty burnt mound deposits were identified within the footprint of the Wylfa Newydd development area. The closest recorded burnt mound (HER PRN GAT 61102/91837) is located east of Rhwng Dau Fynydd, approximately 1km south of the existing decommissioned Wylfa power station and was excavated in Area 8. Further burnt mounds were excavated in Hotspot 5 (HER PRN GAT 91839) and Hotspot 7-9 (HER PRN GAT 91846) during the early clearance works.

Prior to the commencement of the archaeological evaluation and early clearance works no Iron Age activity had been recorded at the site. The closest recorded Iron Age enclosure (HER PRN GAT

61454) is found north of Penymorwydd, located approximately 4km south-east of the existing decommissioned power station at Wylfa. A number of undated large enclosures and ring-gullies were identified in the development area during the evaluation phase, excavation during early clearance indicates that some of these date to the Iron Age. A partially enclosed hilltop settlement with a single roundhouse and possible granary (HER PRN GAT 91829), dated to the Iron Age, was identified in Area 7. Unenclosed and low-lying Iron Age settlements were also identified at Hotspot 15 (HER PRN GAT 91875) and Area O5 South, occupation of these settlements is likely to have spanned from the Iron Age through to the Romano British period.

The closest evidence of Roman activity to the Wylfa Newydd development site previously identified was a probable fortlet (HER PRN GAT 37976) near Cemlyn Bay, near the western extent of the development area, and Roman coins (HER PRN GAT 998) and brooch (HER PRN GAT 999) found at Cemaes Fawr Farm, located approximately 2km east. During evaluation and early clearance Roman and Romano British archaeology was identified at a number of locations. At Area 4, approximately 500m south of the existing power station, a possible Roman invasion camp (HER PRN GAT 92053) was identified. Iron Age/Romano British settlements were identified at Wylfa Head (HER PRN GAT 91817), Area O5 South, and Hotspot 15 (HER PRN GAT 91875).

Prior to the evaluation and early clearance works evidence of early medieval archaeology within the development area was scant. Few sites of this period have been identified on Anglesey, the majority of known sites are ecclesiastical, including a 9th century cross slab (HER PRN GAT 3059) from Llanbadrig which pre-dates the 12th century church (HER PRN GAT 3052). During evaluation an early medieval cist cemetery (HER PRN GAT 91824) was identified at Wylfa Head, this was fully excavated during the early clearance works. A second cemetery (HER PRN GAT 91830) which included four square funerary enclosures (HER PRN GAT 91831, 91832, 91833, 91834) was identified at Area 7 and, as discussed in this report, a possible group of family graves at Hotspot 11-13 (HER PRN GAT 91862).

Documentary and physical evidence suggests that the area was extensively habited and utilised by the 12th century. The area would have been within the Kingdom of Gwynedd which was sub-divided into a number of regional commotes (Cwmwd) which would have had a royal manorial centre (Mardref) to act as a focus for administration and taxation (Cooke *et al.*, 2012). The proposed development area was within the commote of Tanybolion, the Mardref was located approximately 1km east at Cemaes. No medieval settlements have been recorded in the area and the existence of settlements is largely known from documentary sources. Two place names that are however spatially closely associated with the site are:

- Tre'r Gof (township of the smith) – documented from the 12th century and is thought to have been a medieval township or hamlet with the commote of Talybolion.
- Wylfa (lookout point) – documented from the later medieval period as a farm that was part of the township of Caerdegog.

Although no physical evidence of the hamlets have been identified it is possible that buried archaeology remains below later farms.

Evidence of early post-medieval field systems across the site was identified through desk-based assessments, geophysical survey and confirmed during evaluation and early clearance works. Many of these are likely to date to the 16th and 17th centuries and are likely to have been removed in the 19th century during episodes of land improvement and creation of larger fields for new farming techniques. It is likely that much of the land improvement during the 19th century was driven by the estates which held the land, these include Carreglwyd, Plas Coch, Cefn Coch and Bodorgan (Cooke *et al.,* 2012).

Although no large estate houses were ever located within the proposed development area large houses with associated ancillary buildings, landscaped grounds and gardens were constructed at several former farms including Wylfa, Simdde Wen and Cestyll (Cooke *et al.,* 2012).

During WWII a Chain Home radar station (HER PRN GAT 36597/3658) was established at Wylfa Head to identify enemy aircraft and to manage the shipping routes for Liverpool.

The current landscape is dominated by the now decommissioned Wylfa power station which was constructed in the 1960s and was operational until 2015. As well as the present building much of the surrounding area was impacted by the construction of the plant but recent work shows that buried archaeology survives in close proximity to impacted areas.

2.4 Original Geophysical Survey Results

Geophysical surveys were carried out during the assessment of the site (WYAS, 2015; Hopewell 2011a: 2011b; Hopewell, 2012). The surveys did not show the presence of significant archaeological remains within the excavation area.

2.5 Original Evaluation Results

Archaeological investigations undertaken in 2015-2016 indicated a fairly consistent non-archaeological deposit of 0.1-0.45m of brown sand loam topsoil, overlying 0.02-0.58m of yellow brown silt loam subsoil across Field Group 1. Natural deposits of orange brown sand clay lay at 0.2-0.8m below ground level. A total of 35 trenches were opened in Field A13, with 18 of those containing recorded Archaeology. Seven trenches contained undated ditches, and two contained undated pits (Wessex Archaeology, 2016).

Trench 134, which later became Hotspot 11, contained two layers of colluvium. The upper contained sparse charcoal inclusions and 11 sherds of prehistoric pottery. The colluvium deposit below contained abundant charcoal, but no artefacts. The southern section of Trench 134 contained a single layer of colluvium which contained three small fragments of prehistoric pottery. Although these could have been moved from their original location in the hill wash, this does indicate the presence of prehistoric activity within the vicinity. A small group of two pits, one posthole and a possible enclosure associated with Trench 134 may be prehistoric as the features pre-date the alluvial deposit The enclosure was formed by two ditches, both measuring around 1.54m wide and 0.48m in depth (Wessex Archaeology, 2016).

Trench 987, which later became Hotspot 13, contained two isolated pits, similar to those found in Trench 134, suggesting they may have been contemporary. The pits measured 0.75m in diameter and 0.08m deep, and 0.5m in diameter and 0.28m deep (Wessex Archaeology, 2016).

As a result of the evaluation results, Hotspot 11-13 was positioned to ensure potential features associated with archaeological remains identified during the evaluation were excavated and recorded, mitigating the impact of the proposed development upon the archaeological remains.

2.6 Original Aims and Objectives

According to the WSI (Horizon Nuclear Power, 2016: 2017), the general aim of the excavations at the Wylfa Newydd development site was to gather additional information of the extent, condition, depth, character, quality, stratigraphic sequence and date of the archaeological remains within the

excavation areas and to preserve the revealed remains, in record, in anticipation that their physical remains may be destroyed by future development works. The results of the investigations are to be disseminated through the deposition of an ordered archive at suitable repositories for both physical and digital material, the deposition of a detailed report at the Historic Environment Record and the production of a publication article, at a level of detail appropriate to the significance of the results.

2.6.1 Archaeological Strip, Map and Sample Aims

1. To ensure the adequate recording of any archaeological remains revealed by the strip map and sample work.
2. To identify, investigate and record the character, nature, extent and relationships of the archaeological remains discovered, to the extent possible by the methods put forward in the specification.
3. To determine (as far as possible) the stratigraphic sequence and dating of the deposits or features identified.
4. To integrate the results of the work into the wider historic and archaeological context of the landscape and to address relevant regional research objectives where applicable, and as far as is possible.
5. To disseminate the results through deposition of an ordered archive at the suitable repositories for both physical and digital material, the deposition of a detailed report at the Historic Environment Record (HER) and publication at a level of detail appropriate to the significance of the results.
6. To undertake the works in such a way as to allow sufficient data to be gathered to address the various research objectives outlined below. This includes the investigation and recording of features, the identification, recording and collection of artefacts and ecofacts, including environmental samples, and the use of appropriate analytical methodologies and/or techniques when examining the record and artefacts.

2.6.2 Archaeological Strip, Map and Sample Objectives

The relevant archaeological framework documents identified in the WSI (Horizon Nuclear Power, 2016: 2017) were:

- Review of the Research Framework for the Archaeology of Wales: North West Wales – Neolithic and Early Bronze Age (Burrow, 2010);
- Review of the Research Framework for the Archaeology of Wales: North West Wales – Later Bronze Age and Iron Age (Gale, 2010);
- A Research Framework for the Archaeology of Wales – Romano-British (AD 43-AD 410) (Davies, 2017);
- A Research Framework for the Archaeology of Wales: North West Wales - early medieval c. AD 400-1070 (Edwards *et al*., 2016); and
- A Research Framework for the Archaeology of Wales: North West Wales – medieval c.AD 1100 – 1539 (Longley, 2010).

Due to the discovery of a probable early medieval cemetery, the following, relevant, research objectives (RO) can be identified:

1. Confirmation of the date, nature, character and extent of potential medieval sites in order so that they can be placed into the wider context of medieval Anglesey.

2. To undertake detailed analysis of (early) medieval artefacts and their contexts in order to understand the chronological and typographic development, and use, of the artefacts.
3. Placing the setting of the information gained from the archaeological investigation into a broader regional and national (including Britain and Ireland) context.
4. Gaining of insights into the chronology and process of Christian conversion, the evolution and changing functions of religious sites and the broader impact of these on the landscape and (early) medieval society in Wales.
5. Identifying, in so far as is possible, the settlement and ecclesiastical sites associated with cemetery sites in order to understand the interrelationships between settlement sites, parish catchment areas and cemetery catchment areas.
6. Identifying, so far as is possible, the status of the individuals placed within the cemetery and understanding how this relates to the status of the settlement from which they came.
7. Gaining insights into the local farming economy and the wider exploitation of the natural environment – with particular reference to the exploitation of lakes and fens/bogs (such as the adjacent Tre'r Gof SSSI site) and the sea.
8. Gaining insights into long distance trade (via the analysis of recovered artefacts) especially in such products as pottery, glass and metalwork.
9. Establishing the extent of continuity or discontinuity between the Late Roman and early medieval periods via analysis of environmental evidence (RO8), the agricultural economy (RO8), the artefacts recovered (RO2) and changes in settlement patterns (RO6), trade (RO9) and burial/funeral practices (RO5).
10. Understanding how the transition between the Late Roman and early medieval period on Anglesey (RO10) compares with the same period elsewhere in Wales and Britain.
11. Understanding what, if any, impact Irish and Scandinavian populations had on (early) medieval Wales (artefacts, agricultural economy, funerary practices *etc*.).

As the excavations revealed layers of colluvium with inclusions of prehistoric pottery, lithic artefacts and associated debitage the following archaeological research questions identified in the WSI for Strip, Map and Sample areas (Horizon Nuclear Power, 2017) are also relevant:

Prehistoric;

Q.1. Are the possible structural features associated with isolated structures or part of a larger settlement?

Q.3. What is the functional and stratigraphic relationship between the burnt mounds/spreads and other spatially associated features in particular reference to possible structural features (post holes) and ditch type features ('troughs')?

Q.4. What relationships or patterns, if any, can been seen between these prehistoric features and their wider landscape setting?

Q.5. What evidence do the ditch features provide for prehistoric landscape organisation and enclosure?

Q.6. What is the relationship between the ditches and other prehistoric features such as settlement features and burnt mounds/spreads?

Q.7. What relationships or patterns, if any, can been seen between these potential prehistoric features and their wider landscape setting?

Q.8. What types of artefacts are present in the SMS zones?

Q.9. What can these artefacts tell us about daily life and ritual activity?

Q.10. Were those artefacts, which may be found in the SMS Zones, produced locally?

2.7 Field Methodology

The investigations were undertaken in accordance with the scope and methodology outlined in the WSI (Horizon Nuclear Power, 2016: 2017), and as described in the Site Summary Report (ABA, 2018). All works complied to CIfA's best practice guidance, regulations and standards (CIfA, 2014b: 2014c). With the possibility of human remains being present, the excavations of graves and/or burials were undertaken in accordance with the best practice guidelines set out in the *Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England* (Historic England, 2015 and 2017).

2.7.1 Surveying and Setting Out

The original excavation area was set out by Jones Brothers Balfour Beatty Joint Venture (JBBBJV). The excavation area and all archaeological features were subsequently surveyed by ABA using a Leica Viva GPS system, all surveys were tied into the Ordnance Survey National Grid. During the excavation a 10m grid, also tied into the Ordnance Survey National Grid, was set out and marked with grid pegs on the site.

2.7.2 Excavation and Sampling

2.7.2.1 Mechanical Excavation

All mechanical excavation and/or stripping was undertaken by ABA. Topsoil and other overburden were removed using a tracked 360-degree excavator fitted with a toothless ditching bucket. Mechanical excavation proceeded to a depth sufficient to address the objectives of the excavation. Mechanical excavation ceased when the first archaeologically significant horizon was encountered or when the absence of any archaeological 'horizon' was adequately demonstrated. Spoil from the stripping operations were stockpiled in bunds outside of the archaeological excavation area. After the completion of mechanical excavation, both the spoil heaps and the stripped surface were scanned with a metal detector. Any artefacts of potential archaeological interest identified were recovered and their location accurately recorded (Horizon Nuclear Power, 2016; ABA, 2018).

2.7.2.2 Hand Excavation

After the removal of deposits overlying the archaeological horizon, the area was manually cleaned, and all features investigated and recorded. As pre-excavation plans of all visible features were prepared by GPS survey; this was printed out and brought to site to be checked and enhanced by hand planning. Unstratified artefacts or small finds exposed during the cleaning were collected. All hand cleaned surfaces, features and archaeological layers were scanned for metal object signals using a metal detector. Excavation priorities were assessed by taking these signals into account (ABA, 2018).

2.7.2.2.1 Funerary Remains

All funerary type archaeological remains identified were excavated in accordance with the following strategy (ABA, 2018):

- 100% Of all graves and cists were excavated;
- Prior to excavation detailed photography and photogrammetry was undertaken and a pre-excavation plan of all such features produced, at a scale of 1:20. These show the details of any burial cuts and visible artefacts such as capping and/or side stones or Human Skeletal Remains (HSR). The pre-excavation plan of the burial features was recorded in 3D by a GPS system tied into the OS NGR system, with an accuracy of ± 5mm;
- All capping stones were carefully removed, weighed and retained on site, 10% of the total number of cist stones were retained for further specialist analysis off site;
- Hand excavation was undertaken in order to reveal any HSR *in situ*;
- All excavated fills were retained as bulk sample material;
- Prior to removal all in situ HSR were subject to detailed photography and georeferenced photogrammetry, 3D located using a GPS system tied into the OS NGR system, accurate to ± 5mm;
- Once recorded all HSR were carefully removed and retained;
- Remaining burial fill was excavated and retained as bulk sample material – burial fill from the skeletal head, mid-section and feet area was taken as separate samples for further analysis off site;
- Detailed post excavation photographs, photogrammetry, plans and sections (at a maximum scale of 1:20) of the emptied cists were undertaken to illustrate the arrangement and detail of the remaining lining slabs of the cist;
- Post excavation sections of graves cuts, at a maximum scale of 1:20, were produced - along with a detailed photographic record of the post excavation appearance of the features;
- All lining (side and where present base) stone slabs of the cists, were removed, weighed and retained on site, approximately 10% of the stones were retained for further specialist analysis off site;
- During the works care was taken to establish stratigraphic relationships with any other intercutting features;
- The post-excavation plan of the burial features was recorded in 3D by GPS system tied into the OS NGR system, with an accuracy of ± 5mm; and
- The location of all section and plan drawings was recorded in 3D by GPS system tied into the OS NGR system, with an accuracy of ± 5mm.

2.7.2.2.2 Non-Funerary Remains

All non-funerary type archaeological remains were excavated in accordance with the following strategy (ABA, 2018):

- Positive features likely to obscure earlier archaeological features – 100%;
- Discrete negative features of less than 1m in diameter - at least 50% by area in addition to all stratigraphic relationships;
- Discrete negative features of more than 1m in diameter - at least 50% by area in addition to all stratigraphic relationships;
- Discrete negative features containing good artefact assemblages - 100%;

- Non-structural linear negative features - at least 10% by area in addition to all stratigraphic relationships and termini;
- Structural negative features - 100% unless otherwise agreed with the Consultant;
- Hearths, pyre remains or other features with evidence of deliberate in situ heating - 100%;
- All intersections between features, all terminals of linear features, and all other features - 25% unless otherwise agreed with the Consultant; and
- The location of all small finds, except for those discovered within discrete features, were recorded in 3D by a GPS system tied into the OS NGR system, with an accuracy of ± 5mm.

2.7.2.3 Recording

All excavated contexts were fully recorded in line with the standards set out in the WSI (Horizon Nuclear Power, 2016) using appropriate ABA pro-forma recording sheets.

- A complete drawn record of archaeological features and deposits was compiled - this includes both plans and sections, drawn to appropriate scales (1:20 for plans, 1:10 for sections). The Ordnance Datum (OD) height of all principal features and levels were calculated and plans/sections have been annotated with OD heights;
- All photogrammetry and drawing control points were located in 3D by a GPS system tied into the OS NGR system, with an accuracy of ± 5mm; and
- The photographic record was compiled using digital cameras equipped with an image sensor of not less than 10 megapixels, these were taken as high-quality JPEG and RAW images, TIFF images will be created from RAW files for final archiving. Digital images were subject to managed quality control, curation processes which will embed appropriate metadata within the image and ensure long term accessibility of the image.

2.7.2.4 Palaeoenvironmental Sampling

General environmental sampling was undertaken in accordance with Historic England's (2011) environmental archaeology guide in sampling methods for post-excavation analysis (ABA, 2018).

- 100% Of all grave fills were collected as bulk soil samples - the fill was collected from four specific areas (head, torso, feet and a smaller sample from the pelvic area) and given a separate sample number to aid identification; and
- Bulk environmental soil samples for plant macro fossils, small animal bones and other small artefacts were taken from appropriate well sealed and dated/datable archaeological contexts.

2.7.2.5 Archiving

The creation, compilation, transfer and deposition of the archaeological archive followed in line with the regulations of the Chartered Institute for Archaeologists Standards and Guidance (CIfA, 2014a; 2014b). At the time of writing the finds assemblage was under the curatorship of WA while awaiting assessment. Upon completion of the project the paper archive and all digital data including photographs will be lodged with the Royal Commission on Ancient and Historical Monuments of Wales (RCAHMW) in Aberystwyth. Digital copies of the report will be submitted to Horizon who will then distributed to stakeholders. Printed versions will only be produced if specifically requested. ABA will hold a digital version of the archive indefinitely.

3 Excavation Results

The excavation of Hotspot 11-13 (PRN 46043) was carried out under difficult conditions over several weeks with the trench being subject to deep flooding on numerous occasions and requiring multiple phases of cleaning. These conditions may have had some baring on the observations made. The excavations revealed a prehistoric wall, pits, stone lined oven/furnace, 21 graves likely to be early medieval in date, and an undated enclosure system (*Figure 3*). The results were first described in the ABA 2018 site summary report.

3.1 Quantification of Excavation Data

Data Category	Number
Context	195 (13 voided)
Small finds	25 (422.9g / 0.4229kg)
Environmental samples	106 (3453 litres / 346 buckets)
Graves	21
Human Remains	0
Digital photographs	231 JPEG / 231 NEF
Rectified photographs	73.1GB (Graves) / 98.1GB (Features and Areas)
GPS surveyed digital data	3.58 MB
Hand drawn plans	57
Hand drawn sections	79

Allocated PRNs

PRN	Feature
HER PRN GAT 91859	Pits, Stakeholes, Postholes & Stone Bank
HER PRN GAT 91860	Enclosure
HER PRN GAT 91861	Ditch
HER PRN GAT 91862	Cemetery
HER PRN GAT 91863	Ditch

3.2 Phasing/Stratigraphic Sequence

Post-excavation work involved checking and collating the site records, grouping contexts and phasing the stratigraphic data. A stratigraphic Harris Matrix was constructed from this data and included as Appendix X. A total of 195 contexts (*Appendix III*) were identified during the Hotspot 11-13 excavation. Upon investigation 13 contexts were found to not be of archaeological interest. The physical relationship between features excavated at the site suggested four potential phases and/or groups of activity within the limits of Hotspot 11-13:

1. Period 2 - Late Neolithic to Early Bronze Age;
2. Post - Period 2 Features;
3. Period 5 - Early medieval; and
4. Undated Features.

Period	Dates
0 Natural	
1 Palaeolithic to Mesolithic	250 000 – 4000 BC
2 Neolithic to Early Bronze Age	4000 – 1500 BC
3 Late Bronze Age to Iron Age	1500 BC – AD 43
4 Roman	AD 43 – 410
5 Early Medieval	AD 410 – 1100
6 Medieval	AD 1100 – 1539
7 Post-medieval	AD 1539 – 1750
8 Industrial and Modern	AD 1750 – present
Undated	

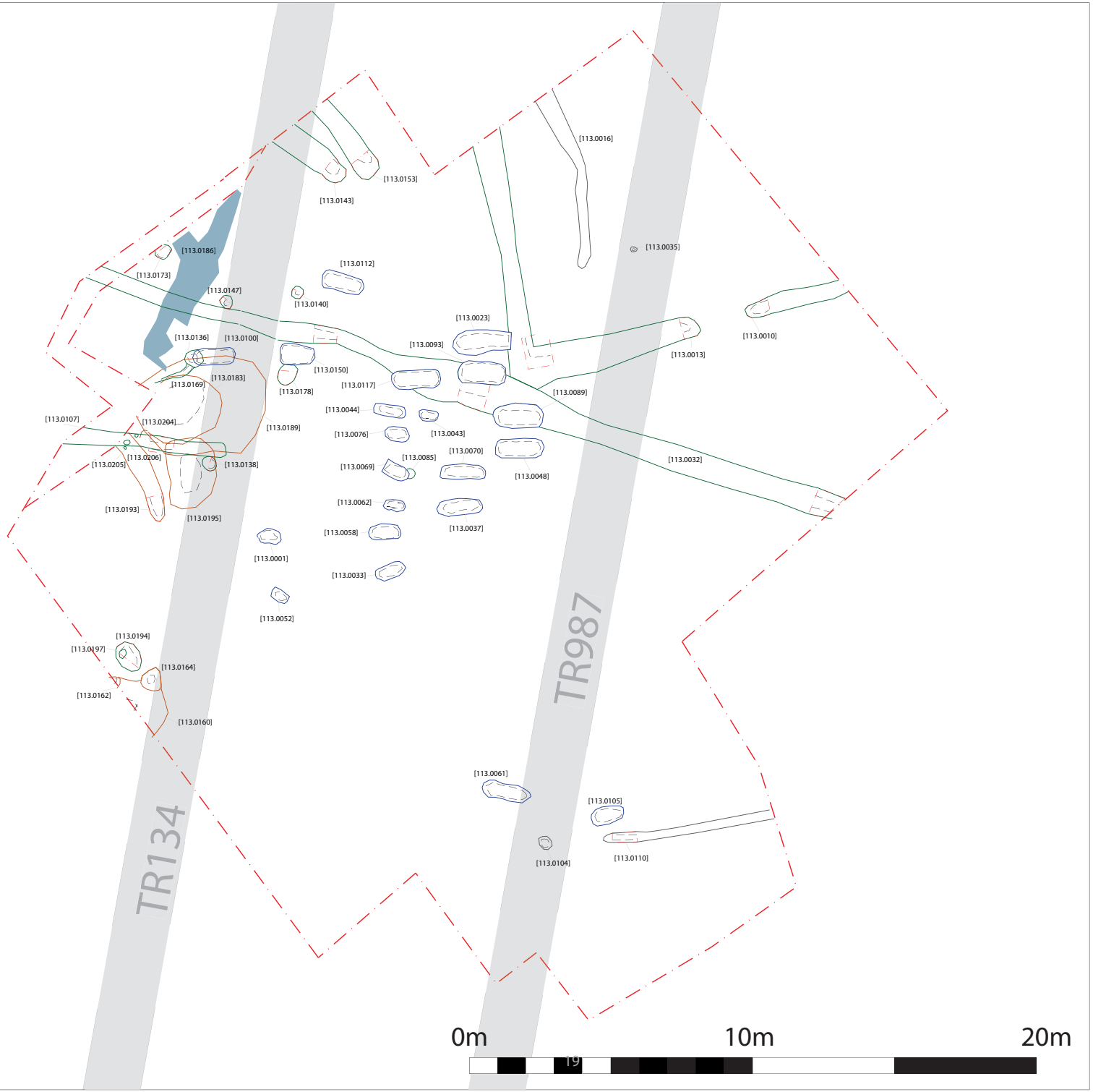

Figure 3
Plan of Hotspot 11-13

Key

- Limit Of Excavation
- Break of slope
- Truncation
- Line of stones
- Features below early colluvial layer
- Features between colluvial layers
- Early Medieval 410-1100
- Undated

Drawn By: KM

Date: 12/03/21

Location: SH34969272

Project: AB1703 Hotspot 11-13

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3.2.1 Period 2 - Neolithic to Early Bronze Age (HER PRN GAT 91859)

The earliest phase of activity within Hotspot 11-13 appeared to be represented by two groups of relatively large intercutting pits (*Figures 4, 5 and 6*):

- Group I - located at the south-western edge of the excavation area and continuing into the baulk; and
- Group II - located 8m north of Group I.

Group I consisted of three intercutting pits [113.0162], [113.0160] and [113.164]. All three pits appeared to be broadly contemporary and associated with episodes of burning and partial backfilling. The earliest pit in the sequence was [113.0162] which was filled with a mid-grey brown silt clay with inclusions of charcoal and small stones. This had been cut by the largest pit [113.0160], which measured 2.70m in length and 1.64m in width and continued into the baulk. Pit [113.0164] was likely contemporary with [113.0160] due to the nature of the fills and may have represented an area into which [113.0160] was periodically emptied. The pits had multiple fills which demonstrated two phases of stone lining and burning, which could relate to industrial or domestic activity. These features may relate to posthole [13415] excavated in Evaluation Trench 134.

Group II consisted of a pit [113.0195] which had been truncated by a larger pit [113.0183], which was subsequently cut by pit [113.0189]. The earliest pit measured approximately 2m wide and 3m in length, but the exact dimensions could not be ascertained due to later truncation. Pit [113.0189] measured 3m x 4m and was 0.31m deep. All of the pits were filled with similar material consisting of mid red brown silt clay with occasional charcoal inclusions, which were very similar to the colluvium which sealed the prehistoric deposits. Occasional patches of concentrated charcoal were present on the edge of the cuts of the pits suggesting that burning may have taken place within the pits or nearby. These features relate to pit [13408] excavated in evaluation trench 134.

To the south-west of these intercutting pits was the rounded terminus of ditch [113.0193] running north-west to south-east into the limit of excavation. It was 0.68m wide and its length was visible for 3.40m. It had irregular sides leading to a concave base, and was filled by (113.0192), a brown yellow clay silt containing moderate inclusions of sub rounded stones.

A well-defined line of rubble (113.0186), consisting of small sub-angular stones, was identified at the western edge of the excavation area (*Plate 1*). The feature was oriented southwest-northeast and measured 2.80m in length and 0.3m wide, petering out to the southwest. It is likely that this feature represented a small bank or wall, possibly formed utilising stones removed during ground clearance which may explain why no substantial foundation or basal stones were observed. The feature was overlain by a friable grey-brown mixed and charcoal rich deposit (113.0182) of alluvial soil which was overlain by colluvial deposit (113.0115). The bank had no obvious cut and no coursing or bonding and was unlikely to represent a permanent or substantial structure. Stratigraphy suggested that the feature was likely to date to the Late Neolithic or Early Bronze Age, this was confirmed with radiocarbon dating of organic material recovered from deposit (113.0182) retuning a date of *c*. 3704-3632 BC, confirming a Neolithic date. The overlying colluvial deposit (113.0115) consisted of a mid red brown sand silt which extended over the western edge of the excavation (*Figure 7*). This deposit likely represents a hiatus of activity on the site and the build-up of sediment over time.

Plate 1. Stone bank [113.0186]. View from the South-West, 1m scale.

Cut into colluvial deposit (113.0115) was a small charcoal filled pit [113.0173] containing sherds of prehistoric pottery (SF017) near the western limit of excavation (*Figure 8*). The fill of the pit (113.0176) consisted of friable mid red brown silt sand, with frequent inclusions of small stones and charcoal.

Colluvial deposit (113.0115) was also cut by a possible stone lined oven or small furnace [113.0136] and flue [113.0169] (*Plate 2 and Figure 9*) that cut into the colluvial deposits which overlay the stone bank at the western edge of the excavation area. This feature was surrounded by a group of approximately 30 stakeholes (*Plate 3*), distributed in four distinct clusters, which may have been part of a windbreak or structure constructed around the feature. Numerous distinct colluvial layers, some containing significant amounts of charcoal, were observed in the western and south-western baulks of the Hotspot. Column samples of these deposits were collected from the western baulk. The presence of the colluvium indicates disturbances of the soil cover, likely due to woodland clearance or tillage.

Plate 2. Pre-excavation of oven or small furnace [113.0136]. View from the North-East, 1m scale.

Plate 3. Post-excavation of oven or small furnace with associated stakeholes. View from the North-East, 1m scale.

To the south of this structure was a line of three postholes [113.0204], [113.0205] and [113.0206]. Aligned north-east to south-west the central posthole ([113.0206]) was 0.18m in diameter whilst the two either side of it were 0.11m (113.0205]) and 0.12m ([113.0204) in diameter. These postholes were truncated by ditch [113.0107] which ran east to west. This ditch was 0.65m wide and 0.30m deep with steeper slope on its south side than its north, leading gradually to a concave base. Only 3m of the ditch was visible before it ran into the baulk to the west. It was filled by (113.0108), a moderately compact mid brown grey silt sand with frequent gravel inclusions. In the north-west of the excavated area, extending from the baulk, two linear gullies, [113.0143] and [113.0153], were excavated. The gullies were aligned north-west to south-east and were filled by friable orange-brown silt clay, (113.0142) and (113.0152), with inclusions of small stones and are likely to be contemporary.

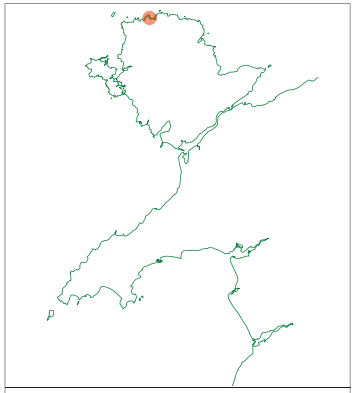

Figure 4
Plan of Hotspot 11-13 showing early features Pit Groups I and II and stone structure (113.01086)

Key

- Limit Of Excavation
- Break of slope
- Truncation
- Line of stones
- Features below early colluvial layer
- Features between colluvial layers
- Early Medieval 410-1100
- Undated

Drawn By:	KM
Date:	15/03/21
Location:	SH34969272
Project:	AB1703 Hotspot 11-13

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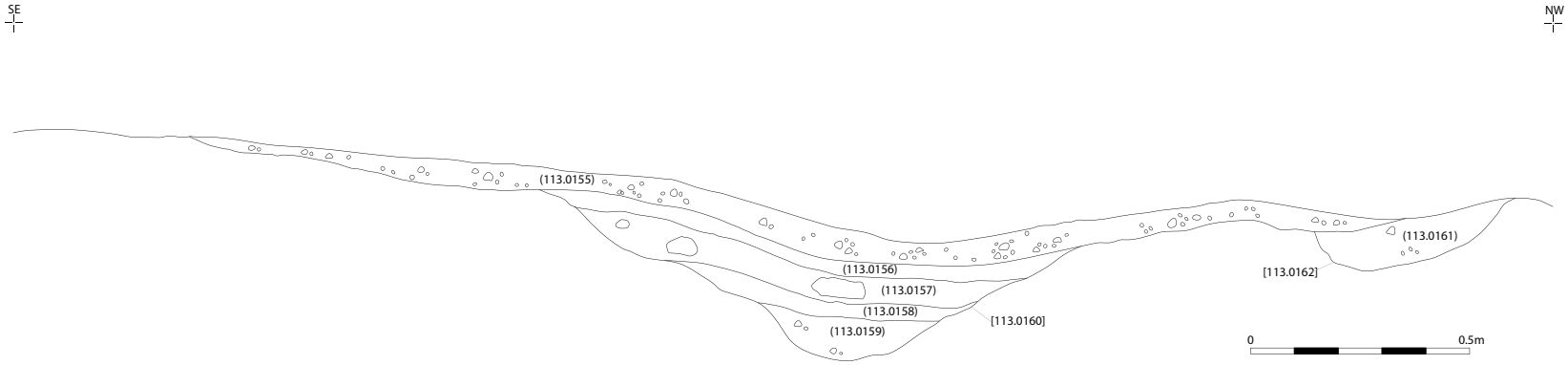

Figure 5. NE Facing Section of Pit Group I

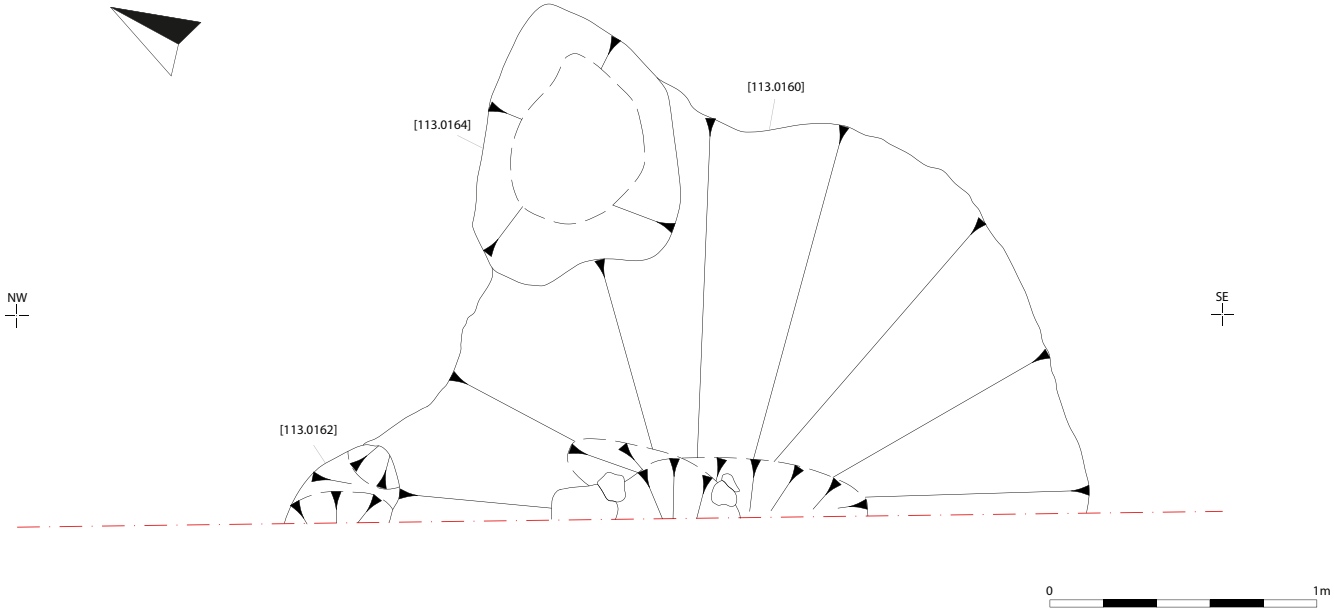

Figure 6. Plan of Pit Group I

Figure 5
NE section of Pit Group I

Figure 6
Plan of Pit Group I

Key

Limit of Excavation (L.O.E.)

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Location: SH34969288

Project: AB1703 Hotspot 11-13

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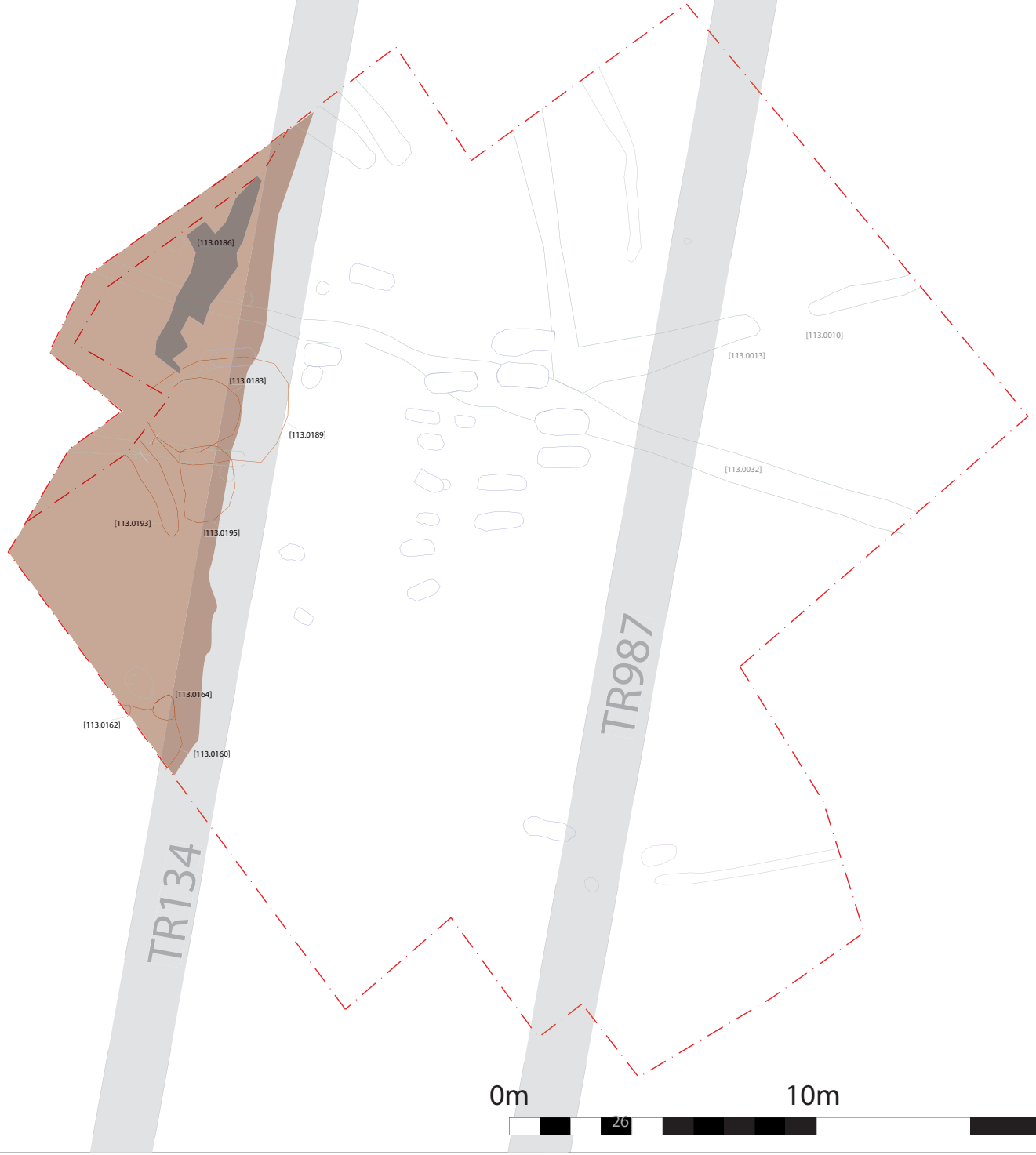

Figure 7
Plan of Hotspot 11-13 showing the extent of early colluvial depost (113.0115)

Key

- Limit Of Excavation
- Break of slope
- Truncation
- Colluvial Deposit (113.0115)
- Line of stones
- Features below early colluvial layer
- Features between colluvial layers
- Early Medieval 410-1100
- Undated

Drawn By: KM

Date: 15/03/21

Location: SH34969272

Project: AB1703 Hotspot 11-13

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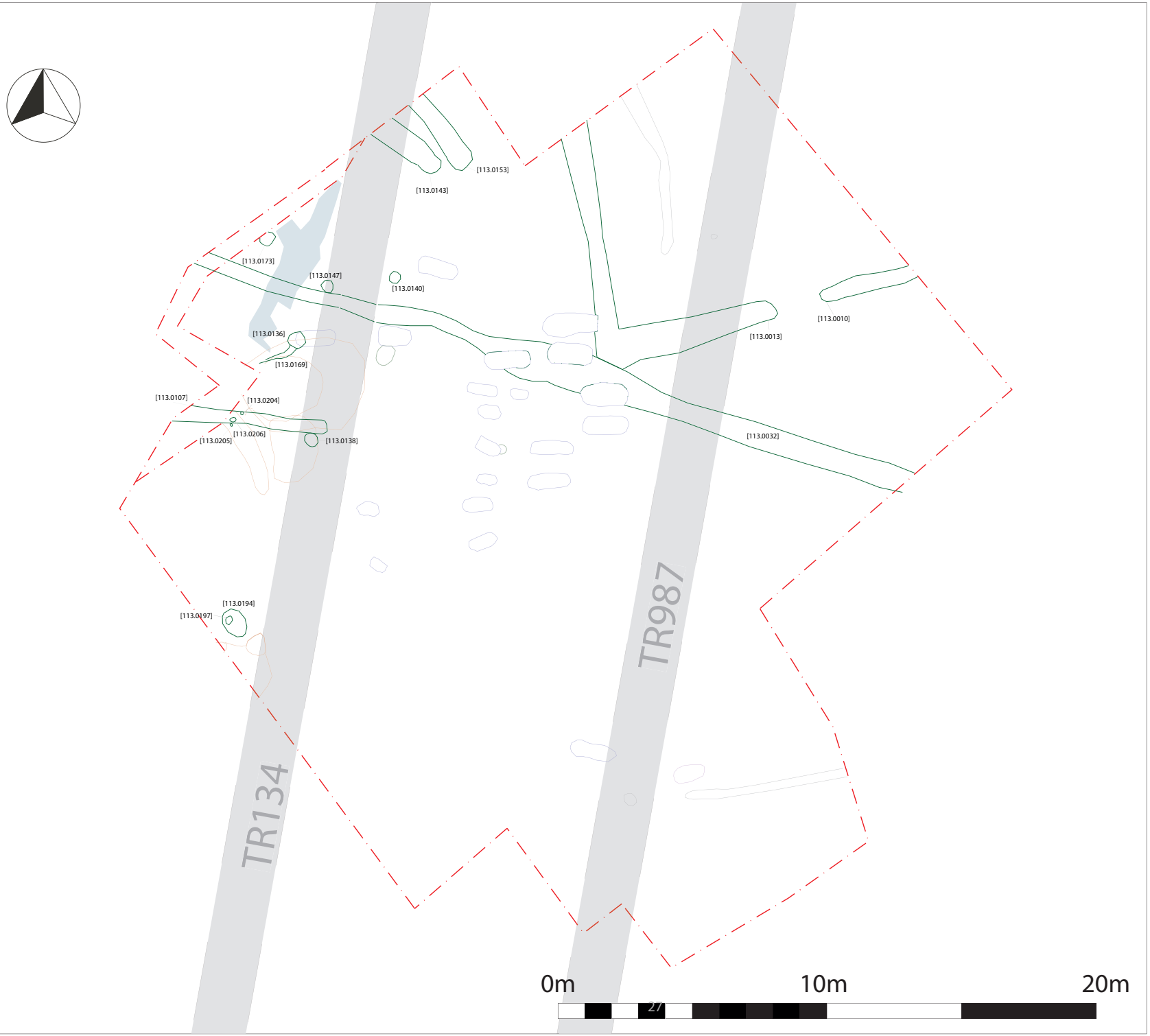

Figure 8
Plan of Hotspot 11-13 showing activity after colluvial layer (113.0115) was deposited and pre-dating Coluvial layer (115.0004)

Key

- Limit Of Excavation
- Break of slope
- Truncation
- Line of stones
- Features below early colluvial layer
- Features between colluvial layers
- Early Medieval 410-1100
- Undated

Drawn By: KM

Date: 15/03/21

Location: SH34969272

Project: AB1703 Hotspot 11-13

Archaeoleg Brython Archaeology

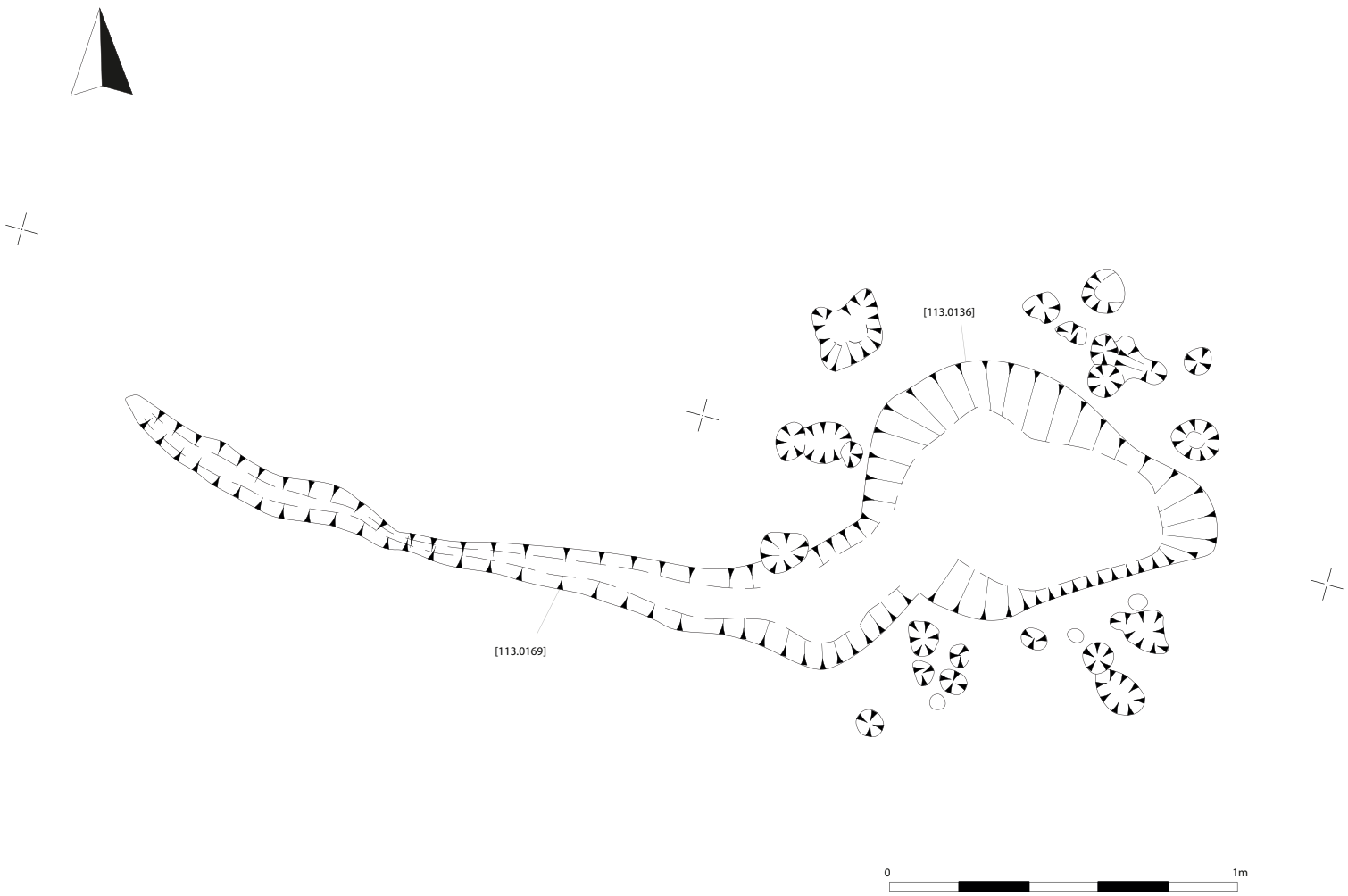

Figure 9

Plan of oven [113.0136] with flue [113.0169] and associated postholes.

Drawn By: KM

Date: 28/02/20

Location: SH34969288

Project: AB1703 Hotspot 11-13

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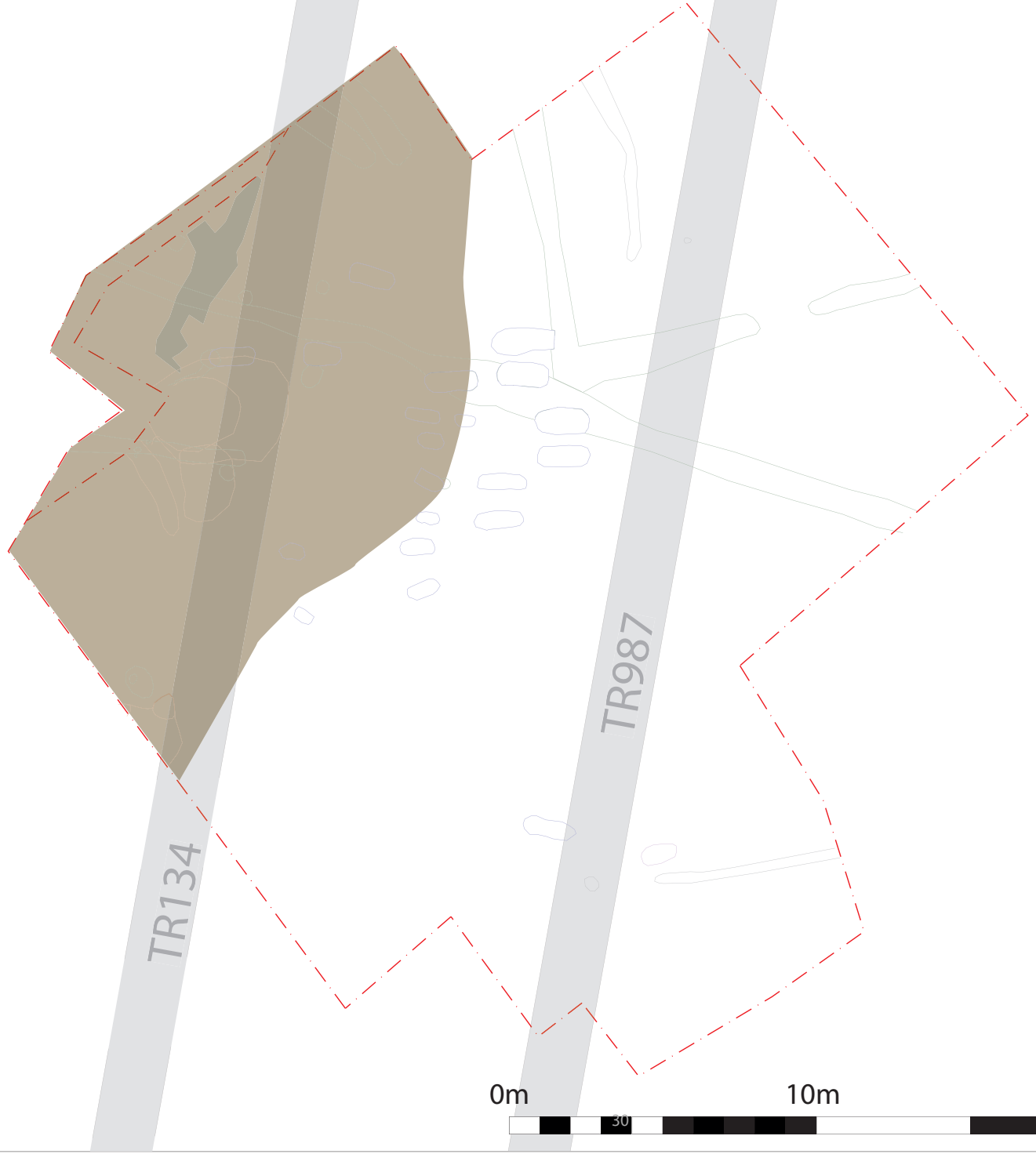
3.2.2 Post-Period 2 Features

An apparent square or rectangular enclosure (HER PRN GAT 91860) with an entrance orientated to the south-east was excavated at the north of the Hotspot. The enclosure was similar to the possible early medieval square enclosure identified in Hotspot 6, located approximately 228m south-west (ABA, 2021a). The gullies [113.0013] and [113.0010], both of which were orientated north-east to south-west, form the two visible sides of the enclosure. The full extent of the enclosure was not investigated as it extended beyond the limits of the excavation. Radiocarbon dating of organic material recovered from the fill of gully [113.0010] returned a post-medieval to modern date of *c.* 1725-1814 AD. However due to the stratigraphy of the site the dated material may be intrusive. It is likely that these features correspond with the possible enclosure (13305/98712) identified in evaluation Trench 134 and 987, formed by two ditches (11305=98712=13406 and 13307=98714) thought to be prehistoric in date (Wessex Archaeology, 2016). The only features identified within the enclosure were a very shallow gully [113.0016] which was 1.0m long and 0.5m wide, and a small shallow pit [113.0035] which measured 0.34m in diameter. Both features were very shallow at 0.05m in depth, suggesting that they were heavily truncated. No datable artefacts were recovered from either feature and no relationships were observed to confirm their contemporaneity with the enclosure.

Cutting the southern corner of the enclosure was ditch [113.0032] (HER PRN GAT 91861). This ditch post-dated the Neolithic/Bronze Age activity but pre-dated the probable early medieval cemetery (*Figure 3 and Figure 7*). The ditch traversed the entire excavation area on a north-west to south-east orientation. The ditch was steep sided with a rounded base and varied in width between 0.65m and 1.5m. It appeared to have filled due to silting with a grey brown clay silt with frequent small stone and gravel inclusions. No artefacts were recovered from the feature. Towards its west end the ditch was covered by upper colluvial layer (113.0004). Three graves, [113.0089], [113.0093] and [113.0117], had been cut into the ditch, with grave [113.0117] also being cut through the colluvial deposit. This ditch likely corresponds to the possible enclosure identified in evaluation Trench 134 and 987, and may also correspond to pit [13404] identified in ditch terminal [13406] in Trench 134, however this is less certain.

These features were overlain by colluvial layer (113.0004) (*Figure 10*), a friable mid orange sand silt with frequent inclusions of well sorted sub angular and sub rounded stones. It covered almost 30% of the excavated area on the west side of the site. The only features cut into this deposit were two small pits [113.0178] and [113.0085] and nine graves; [113.0100], [113.0112], [113.0150], [113.0117], [113.0044], [113.0076], 113.0043], [113.0069] and [113.0001]. This deposit likely represents a hiatus of activity on the site between the earlier cut features and the later graves, and is described in the geoarchaeological assessment report as soil formation within the existing colluvium (113.0208) of pre-early medieval to modern date.



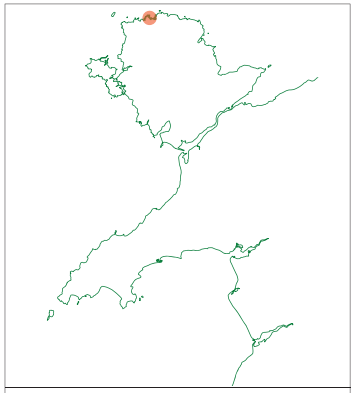


Figure 10
Plan of Hotspot 11-13 showing the extent of colluvial layer (113.0004)

Key

- Limit Of Excavation
- Break of slope
- Truncation
- Colluvial Deposit (113.0004)
- Line of stones
- Features below early colluvial layer
- Features between colluvial layers
- Early Medieval 410-1100
- Undated

Drawn By: KM

Date: 15/03/21

Location: SH34969272

Project: AB1703 Hotspot 11-13

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3.2.3 Period 5 (Early Medieval)

The cemetery (*Figure 11*) (HER PRN GAT 91862) contained 21 graves aligned east-west, suggesting an early medieval date. No human remains were recovered, possibly due to the acidic nature of the soil.

- Grave 1 [113.0023]
- Grave 2 [113.0044]
- Grave 3 [113.0043]
- Grave 4 – number void
- Grave 5 [113.0052]
- Grave 6 [113.0037]
- Grave 7 [113.0058]
- Grave 8 [113.0048]
- Grave 9 [113.0061]
- Grave 10 [113.0062]
- Grave 11 [113.0069]
- Grave 12 [113.0070]
- Grave 13 [113.0076]
- Grave 14 [113.0089]
- Grave 15 [113.0093]
- Grave 16 [113.0100]
- Grave 17 – number void
- Grave 18 [113.0112]
- Grave 19 [113.0117]
- Grave 20 [113.0105]
- Grave 21 [113.0150]
- Grave 22 [113.0033]
- Grave 23 [113.0001]

Of the graves, 17 retained evidence of cists (*Plate 4 and 5*) and four ([113.0033], [113.0037], [113.0089] and [113.0105]) were simple earth cut graves. Two graves cut ditch [113.0032], (*Figure 12*) they were [113.0093] and [113.0089] with grave [113.0023] cutting enclosure ditch [113.0013]. Nine graves ([113.0100], [113.0112], [113.0150], [113.0117], [113.0043], [113.0044], [113.0076], [113.0001] and [113.0069]) were cut into colluvium layer (113.0004) with the remaining nine ([113.0062], [113.0058], [113.0033], [113.0052], [113.0070], [113.0037], [113.0048], [113.0061] and [113.0105]) being cut into the natural underlying glacial subsoil.

Of the graves that had evidence of cists four graves ([113.0058], [113.0100], [113.0023] and [113.0112]) had capstones, side stones and base stones present; five graves ([113.0150], [113.0117], [113.0070], [113.0043] and [113.0062]) had side stones and base stones only; and seven graves ([113.0048], [113.0093], [113.0052], [113.0069], [113.0061], [113.0076] and [113.0001]) had side stones only. Grave ([113.0044]) had capstones and side stones.

Cut [113.0001], measuring 0.9m in length, 0.5m in width and 0.25m deep was originally interpreted as a stone lined storage pit or hearth. However, based on its proximity to the cemetery and similarity to the other graves it is likely to have been a grave. Radiocarbon dating of charcoal recovered from the fill (113.0002) of this feature returned a Neolithic date of *c*. 2231-2116 BC. This early date is likely due to contamination with much of the plant materials recovered thought to have been re-deposited during backfilling. The graves within the main group appeared to be deliberately arranged by size; graves which were of a size that would accommodate adults were generally located on the eastern side of the group, whilst graves of a size to accommodate infants or neonates were to the west. Though some adult sized graves were located to the west of the smaller graves, the general pattern appeared to be deliberate. Additionally, the graves appeared to have been arranged in rough rows indicating some knowledge of prior grave locations either through above ground markers, visible changes on the ground or living memory. No evidence of post holes was observed in relation to the graves. Radiocarbon dates of charred plant remains recovered from grave fill (113.0021) in cut [113.0023] and grave fill (113.055) in cut [113.0058] returned dates ranging from the Early Roman period to post-medieval (*c*. 66-1780 AD). Like the early Neolithic date obtained for cut [113.0001], the plant materials dated are likely present as a result of backfilling and later ingress.

Two graves, [113.0061] and [113.0105], were located 10m south of the main group on the same alignment as the others, but there was no evidence to suggest that graves had been present in the area between these graves and the main group.

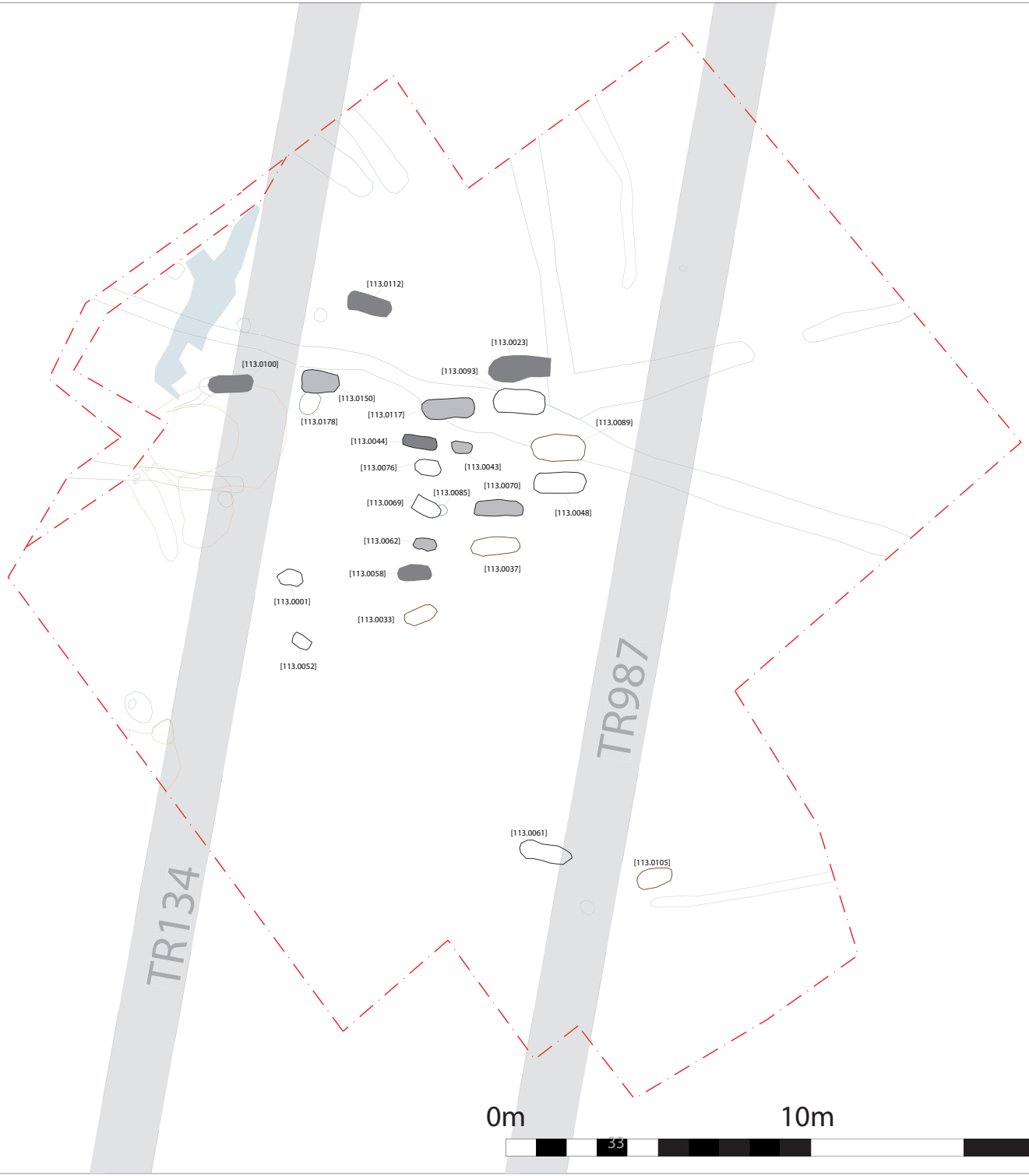

Figure 11
Plan of Hotspot 11-13 showing the early medieval cemtery and features cut into colluvial laye (115.0004).

Key

- Limit Of Excavation
- Break of slope
- Truncation
- Capstones, Side Stones and Base Stones
- Side Stones and Base Stones
- Capstones and Side Stones
- Side Stones Only
- Earth Cut Grave

Drawn By: KM

Date: 15/03/21

Location: SH34969272

Project: AB1703 Hotspot 11-13

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Plate 4. Pre-excavation of grave G002 ([113.0044]) with example of capstones. View from the South, 0.5m scale.

Plate 5. Mid-excavation of grave G016 ([113.0100]) with example of cist and base stones. View from the South, 1m scale.

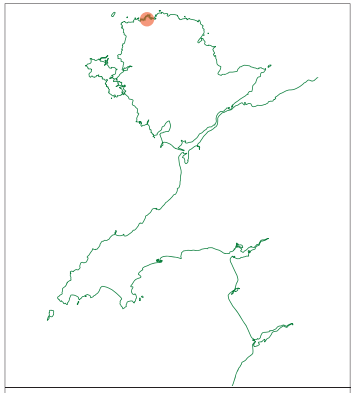

Figure 12
West facing section drawing showing grave cut [113.0093] truncating ditch [113.0032] (numbered as [113.0091] in this slot).

Drawn By:	KM
Date:	28/02/20
Location:	SH34969288
Project:	AB1703 Hotspot 11-13

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3.2.4 Undated Features

At the southern extent of the excavation area a small east-west oriented ditch [113.0110] (HER PRN GAT 91863), which may have formed part of an enclosure system was excavated and measured 1.55m in length, 0.50m in width and 0.09m deep. This may correspond with pit [98704] and [98708] excavated in evaluation Trench 987.

4 Assessment of Potential and Significance

All finds were treated in accordance with the guidelines set out in Watkinson and Neal's (1998) and CIfA's (2014a; 2014b) standards and guidelines in collecting, packaging and documenting of archaeological materials. The finds assemblage and environmental samples were handed over to WA in April 2019 for curation and assessment of potential. All processing of artefact and ecofacts were undertaken away from site. At the time of writing the finds assemblage was under the curatorship of WA.

4.1 Finds Assessment

During the excavation of Hotspot 11-13 a total of 25 small finds (SF) where allocated to 80 artefacts, weighing 454g. The finds assessment was compiled by Sue Thompson, with the burnt bone analysed by Megan Stoakley. The full Finds Assessment Report is included as Appendix IV. The Prehistoric pottery was assessed by Frances Lynch and the reports are included as Appendix V and VI.

4.1.1 Prehistoric Pottery

Twenty-nine fragment of prehistoric pottery, most of which derived from three pots, was recovered during the excavation of Hotspot 11-13 from two locations: Pit [113.0173] and colluvial deposit (113.0171). The pottery was consistent with an identification as Food Vessels, like the pottery recovered from Hotspot 14 (ABA, 2021b), located approximately 160m south.

- Pot 1 – SF016

A singe rimsherd (SF016) was recovered from fill (113.0177) of pit [113.0173]. The sherd measured 60 x 62 x 9-17mm and the vessel likely measured 240mm in diameter. The fabric was brown on the outside and black inside with a good deal of sooting. The surfaces were smooth, very hard fired but not densely gritted. It had a narrow rounded collar with a concave internal bevel. Both surfaces were decorated with lines of triangular/circular stab marks; three on the outside and two on the inside where the lines are less coherent. The neck was decorated with a largescale herringbone pattern of thick incised lines.

The curved collar and concave internal bevel are best paralleled in a pot from a burial cairn on Carnedd Howell above Llandygai, near Bangor (Savory, 1956: figure 3.10) but the decoration of rough stabs and incised herringbone can be found on several Anglesey examples, notably the vase from Cerrig Dewi at Bedd Branwen on Pot E and on the Early Collared Urn found there in 1813 (Lynch, 1991: figures 45 and 53.7,), and on pot 1 recovered from Hotspot 14.

- Pot 2 – SF017

One small fragment (SF017), likely from a flat base, was recovered from fill (113.0176) of pit [113.0173]. The sherd measured 45 x 30 x 13mm. The fabric was low-fired and crumbly, and densely gritted with small angular pieces of pale rhyolite. The fragment was in a locally unusual fabric, but within the range of Early Bronze Age practice.

- Pot 3 – Surface scatter

Twenty seven sherds were recovered from colluvial deposit (113.0171), most of which derived from the upper part of a small vase shaped pot that would have measured 210mm in diameter and approximately 200-240mm tall. The twenty-seven sherds are associated with small finds SF009 to

SF011, SF013 to SF015, SF019 and SF024. SF011, SF012, SF023 and SF024 contain a mixture of sherds of Pot 3 and possibly different pots.

The pot was decorated on the interior and exterior surface with horizontal line of this loosely twisted cord. Seven lines were observed on the inner surface running down to a slight bevel. Eleven lines were observed on the outside ending at a gently rounded shoulder. The undecorated lower body of the pot was not well represented and consisted of seven sherd. There were no signs of the expected flat base. The outer surface of the pot was pink and the inner surface grey with the clay densely gritted with medium (3-5mm) stone grits. The smaller dark grits seemed to be concentrated within the outer coils. The inner coils contained larger rhyolite pieces.

This is the best-preserved of the HS11-13 pots, trodden underfoot in a busy area of pits and ovens. It has a more gently curved profile than some of the others and is decorated with impressed lines of twisted cord inside and out. The closest parallel is the slightly smaller Accessory Vessel (8) from the richest burial in the Llanddyfnan barrow (Lynch, 1991: figure 48). This burial, in a larger Vase Food Vessel, was accompanied by a small decorated bronze dagger of Camerton-Snowshill type which links it to the second half of the Wessex Culture. Another Anglesey pot which is similar to the pot is Vessel 5 from the cemetery group from Cae Mickney, decorated with a slightly more complex pattern of cord impressions (Lynch, 1991: figure 55.5).

Small find descriptions:

SF009 and SF010; Two single sherds joining at a coil overlap to form a section of the waist (65 x 65 x 12-14-10mm)

SF011 and SF014; Join at a coil overlap to form a section of rim and neck (55 x 36 x 10-14mm). SF011 also consisted of a small scrap which joins SF015 at the same coil overlap and a separate piece of rim (30 x 13 x 10mm), and a featureless sherd (33 x27 x 8mm) in a very hard fabric that was grey throughout and likely from a possible fourth pot.

SF012; A single undecorated sherd (35 x 25 x 11mm) in a pink/grey fabric which seemed rather softer than Pot 3, but the grits seemed similar.

SF013 and SF019; Joined to form a section of the undecorated body just below the shoulder. SF013 (62 x 55 x 11-13mm) had a diameter of 200mm which provided a clue to the profile of the lower body. The outer surface of the sherd was particularly well smoothed. SF019 (40 x 40 x 14mm) was closer to the shoulder.

SF014 (40 x 42 x 13mm); Part of the neck, joining a sherd from SF011. SF014 was grey throughout.

SF015 (30 x 30 x11mm); A small piece of the neck with a joining spall from SF011.

SF023; A single curved sherd (40 x 30 x 13mm) with a good inner surface. The outer surface was mainly lost. The sherd is likely from the shoulder of Pot 3 but the fabric seemed more lightweight.

SF024; Consist of five undecorated sherds. The largest sherd (30 x 40 x 11mm) may have been close to the base but seemed, like SF012, to be a softer fabric. Three of the sherds (largest measuring 30 x 30 x 12mm) are very likely SF013 and had a pink/grey smooth surface. The fifth is a curved sherd (30 x 20 x 11mm) which seemed too thin to be the shoulder of Pot 3, but had the same fabric.

The pottery has reasonable counterparts amongst food vessels found throughout Anglesey and north Wales. However, the Hotspot 11-13 and Hotspot 14 assemblage is associated with settlements rather than burials. This makes it unique in Anglesey and rare in most parts of the country. Food vessels in Anglesey include the occasional bowl, such as that from Merddyn Gwyn (Lynch 1991, 187 Fig 52.2), but are predominately vase food vessels which come in a variety of sizes. All those known previously have come from burial contexts where the larger ones contain

the cremated bone, but smaller ones, like those recovered at Hotspot 11-13 (pot 3) and Hotspot 14 (pot 3), may have been used as accessory vessels. Domestic use would have called for a variety of container sizes and it appears that the containers eventually used for the burial of the dead were taken from among the pottery available in the home (*Appendix VI*).

The pottery can be dated typologically to a period when Collared Urns were developing and food vessels were at the beginning of their decline (2000 – 1750 cal BC). The fact that many of their typological parallels are burial urns from Bedd Branwen and Llanddyfnan demonstrates that the early Urns and later food vessels overlap in their period of use and revised radiocarbon dates on the cremated bone from a number of Welsh cairns, including Bedd Branwen, have been reviewed and published by Brindley (2007) in her study of the Irish food vessels. The association at Bedd Branwen and at Llanddyfnan with the second half of the Wessex Culture trading nexus suggests that the vase food vessel was in use in Anglesey throughout the period 2000-1750 cal BC (*Appendix VI*).

A further 11 sherds of Prehistoric pottery, likely Early Neolithic in date, were recorded by Wessex Archaeology in Trench 134 during the evaluation phase. The pottery fabrics were described as containing numerous voids, giving a vesicular appearance and 'corky' texture (Wessex Archaeology, 2016: 55). These fragments have not been assessed by Frances Lynch and according to Wardell Armstrong all the evaluation material has been deposited. No further analysis was recommended for the Prehistoric pottery.

4.1.2 Post-Medieval Pottery

Four (36g) sherds of post-medieval pottery were recovered from context (113.0005), a cleaning layer of stone lined features [113.0001], and subsoil deposits. The pottery was in moderate to good condition and included red earthenware with clear and black glaze (REFR) and slipware decoration (SLRE) and refined white earthenware (REFW). Vessel types include hollow and flat wares and represent typical late post-medieval household items and tableware's dated to the 18th and 20th century. No further analysis was recommended.

4.1.3 Stone

Three (41g) stone small finds (SF) were recovered from context (113.0005). The artefacts consist of two small smooth pebbles, likely naturally occurring, with SF002 potentially used as a counter, and two re-fitting fragments of an incomplete trapezoidal stone (SF001), the function of which is unknown. No further analysis was recommended.

4.1.4 Burnt Bone

Small fragments of burnt bone (SF025) were recovered from context (113.0135), the fill of stone line feature [113.0136] identified as a possible hearth. The bone fragments are in poor condition and highly abraded and could not be identified to species or anatomical element. An additional five grams of unidentifiable animal bone was recovered from environmental sample <52>. No further analysis was recommended.

4.1.5 Industrial waste and CBM

Very small quantifies (less than 1g) of industrial waste were recovered from environmental sample <16> (113.0038), <43> (113.0071) and <61> (113.0101), in addition to highly abraded and fragmentary ceramic building material (CBM) from sample <79> (113.0171). No further analysis was recommended.

4.2 Palaeoenvironmental Assessment

A total of 106 bulk environmental samples were taken during the excavation of Hotspot 11-13, of which 87 samples (4374kg) were processed by WA. Samples were processed according to guidelines stipulated in the Wardell Armstrong LLP. Technical Manual No. 2 (2018) and Wardell Armstrong (2019). The assessment identified the significance and potential of the material for further analysis, and provided identification to species where practical to do so on material selected for radiocarbon dating. Due to samples being damaged in storage and transit, 19 samples were deemed unfit for processing by WA. The full report by Freddie Sisson is included as Appendix VII.

4.2.1 Results

Artefactual material recovered from the dried residues was minimal and of low archaeological significance. The finds include examples of industrial waste and Ceramic Building Material (CBM). The material recovered from the flots are outlined below.

4.2.1.1 Charred Plant Remains (CPR)

CPR was present in 49 samples and was in relatively poor condition, consisting mostly of cereal grains. All the samples yielded under 20 examples apart from sample <68> from fill (113.0135) of oven/small furnace [113.0136] which yielded 55 examples. Sample <80> from flue [113.0169] yielded 37 examples and sample <85> from pit [133.0175] yielder 36 examples of CPR. Whilst most of the charred plant remains were too badly preserved for identifications beyond indeterminate Cerealia there were the odd examples of barley (*Hordeum* sp.), wheat (*Triticum* sp.) and possible spelt wheat (*T. aestivum* ssp. *spelta*).

The CPR came mostly from grave fills and pit fills and were likely to have been deposited during backfilling and therefore not in its primary deposition. The condition of the CPR also was suggestive of movement from their original deposition. Due to preservation and quantities nothing can be stated about past crop-husbandry practices or palaeodiets.

4.2.1.2 Charcoal

Charcoal was present in 80 samples. Those that yielded over 5 grams were: Sample <65> <66> and <67> from the fill (113.0113) of grave G018 [113.0112]; sample <68> from fill (113.0135) of stone feature [113.0136]; samples <69> (113.0141), <70> (113.0146), <71> (113.0139), <76> (113.0156), <77> (113.0157) and <82> (113.0144), <84> (113.0174), <85> (113.0176) and <86> (113.0177) from pit features; sample <80> (113.0170) from flue [113.0169]; sample <87> from charcoal fill (113.0185); samples <78> (113.0168) from an unknown layer, and sample <90> from and unknown black layer (113.0182), identified as alluvial soil due the hill wash and levelling (*Appendix VIII*). For

radiocarbon purposes charcoal that was identified to species were cherry-type (*Prunus* sp.) from sample **<1>**, ash (*Fraxinus excelsior*) from sample **<2>**, oak (*Quercus* sp.) from sample **<48>** and hazel (*Corylus avellana*) from sample **<90>.** The charcoal may be suitable for analysis and may assist in determining which species were being exploited in past societies for wood and fuel procurement.

The charcoal assemblage was prolific in samples **<64>**, **<65>**, **<66> and <67>** from G**018,** and samples **<68>**, **<69>**, **<70>**, **<71>**, **<76>**, **<77>**, **<84>**, **<87>**, **<90>** from pit fills. Whilst these fills were unlikely to be their primary deposition, in the case of the pit fills, their presence may be through rubbish disposal practices. Their presence in the grave fill would likely have been residual.

4.2.1.3 Magnetic Material

Magnetic material was present in 30 samples, and consisted of small magnetised stone, most of which seemed to have undergone some form of heat alteration. The absence of hammerscale suggest that the magnetic materials derive from burning activities and was likely deposited as backfill, along with charcoal and the CPR possibly when the Roman/Iron Age industrial area to the north (Wylfa head site summary report, 2018) was used to back fill the medieval graves (Hotspot 11-13 site summary report, 2018). No further analysis was recommended.

4.2.1.4 Bone and Shell

Five grams of bone was recovered from sample <52> (113.0090), the fill of grave G008 [113.0048], and is suspected to be human. Two grams of unidentifiable terrestrial shells were recovered from sample <17> (113.0038), the fill of grave G006 [113.0037], and sample <75> (113.0149), the fill of grave G021 [113.0150]. No further analysis was recommended.

4.3 Geoarchaeology Assessment

Numerous distinct colluvial layers were observed in the western and south-western baulks of Hotspot 11-13, and three profiles (147, 145 and 146) were selected from sampling to provide insight into the formation of these layers. A total of 16 monolith samples was collected by ABA for geoarchaeological recording interpretation and subsampling for palaeoenvironmental proxies, i.e. pollen and diatoms, and radiocarbon datable material if available. The samples were analysed by Michael J. Allen and the full report is included as Appendix VIII. The samples were subsampled as a single profile/section and described following standard pedological terminology (Hodgson, 1997).

Profile	Context Number	Monolith
147	113.0004, 113.0208, 113.0182, 113.0210	091-195
145	113.0004, 113.0208, 113.0207, 113.0148, 113.0182, 113.0210	096-101
146	113.0004, 113.0208, 113.0148/113.0182, 113.0182. 113.0210	102-106

Following examination a provisional interpretation of the geoarchaeology and humic activity associated to the colluvial profile identified a buried soil and two clear sediments as well as divisions in the colluvium.

113.0004	Colluvium	Upper colluvium	Brown to dark yellowish brown silt loam rare stones, massive the medium blocky structure Colluvial B (colluvial brown earth)

113.0208	Colluvium = 10.0148	Upper colluvium	Yellowish brown to brown silt to silt loam, rare small stones, weak structure, mottled, fine charcoal Colluvium
113.0207	Burning lens	Charcoal layer – no *in situ* burning	Very dark greyish brown silt, charcoal fragments and charcoal dust, no soil reddening sharp/abrupt boundary
113.0148	Colluvium	Basal colluvium developed in alluvium	Brown to light yellowish-brown silt, largely stone-free
113.0182	Hillwash + levelling	Alluvial soil	Grey to greyish brown and dark greyish brown silt and few stones, blocky structure charcoal fragments and charcoal dust
113.0210	Parent material	Till	Light yellowish brown to pale brown massive cemented silt stone-free

Based on context ascriptions, and additional interpretation based on the geoarchaeology assessment, three main events were identified:

1. Clearance of the woodland and removal of the initial soil (no physical evidence), which resulted in increased run off and local alluviation (possibly associated with Beaker activity);
2. Stasis and soil formation – some archaeological activity in the form of 'levelling', possibly associated with the cut features; and
3. Local soil destabilisation as a result of either local hillside vegetation clearance or tillage leading to colluviation during which burning was being undertake locally.

A tentative land-use history based on the sediment record and known archaeological activity is outlined below:

Deposit	Deposit formation and associated activity
Graves & enclosure	Early medieval cemetery and settlement
Colluvial soil (113.0004)	Soil formation within the existing colluvium (113.0208) of pre-early medieval to modern date
	Early medieval activity cut into the colluvium
Upper Colluvium (113.0208)	Tillage (late Iron Age or Romano-British) on the adjacent slope
Charcoal layer (113.0207)	Charcoal burning in the locality (no soil reddening)
Initial / lower colluvium (113.0148)	Prehistoric (?Bronze Age) colluviation; tillage of the adjacent slopes
Alluviation and soil formation (113.0182)	"Human activity– levelling". Soil formation in alluvium – blocky ped structure. Prehistoric cut features
Alluviation and soil formation (113.0182)	Beaker alluviation possibly caused by clearance leading to increase run-off and alluviation
Truncation	Loss of former post-glacial soil
Devensian Till (113.0210)	Cold stage deposits of the last glaciation (also known as Boulder Clay)

4.3.1 Paleoenvironmental Subsampling and Soil Micromorphology

A total of 21 subsamples (for pollen and diatoms) were removed (15 pollen; 3 diatoms and one of charcoal) from profile 145 to provide information and interpretation of the taphonomy and depositional environment of the phases of the colluvial deposits. Analysis of the pollen and diatom samples can provide a detailed long land-use history to accompany the archaeological activity on the site, possibly even identifying activities or episodes (e.g. localised abandonment, episodes of woodland clearance, tillage and crop processing etc.) not recognised in the more

standard cultural and artefactual archaeological record. Assessment and analysis of the pollen and diatoms were not undertaken at the time of the geoarchaeological assessment and subsampling.

Two interpretations could be clarified and amplified by soil micromorphological analysis. These are the presence of a stasis represented by the surface on which charcoal layer (113.0207) rests, and the alluvial and pedogenic nature of the 'alluvial soil' (113.0148). To address these points samples 098 (and possibly 099) of the contact of the charcoal-rich layer (113.2017) and colluvium (113.0148), and samples 099 and 100 of the alluvial soil should be analysed and soil thin sections manufactured facilitating soil micromorphological analysis.

Assessment and analysis of pollen and diatoms are to be undertaken at a subsequent stage, as well as sol thin section slide manufacture, if approved.

4.4 Radiocarbon Dating Results

Samples for radiocarbon dating were selected based on the archaeology of the site, i.e. selecting viable contexts that would yield useful information, and the results obtained from bulk environmental sample assessment, i.e. selecting suitable material for dating from the samples obtained from the selected contexts. Based on this criteria six samples were suggested for radiocarbon dating. The samples were sent to Beta Analytic Radiocarbon Dating Laboratory for analysis. Prior to dating, it was suggested that the charcoal samples were identified to species to select the shorter-lived species to mitigate against the potential 'old wood effect' that may present a radiocarbon date range older than the feature. In the absence of single growth entities such as charred plant remains and hazel nutshell fragments, charcoal was chosen for radiocarbon determinations. Where no short-lived species were observed the youngest i.e. twig, branch or periderm fragments from longer-lived species such as oak were selected (*Appendix VII*). The results are presented in Appendix IX, and summarised below:

Sample	Context	Material	Date (probability %)	Period
1	113.0002 - fill of pit	Prunus	2231-2116 cal BC (66.7%)	Neolithic
2	113.0007 - fill of ditch	Ash	1725-1814 cal AD (53.4%)	Post medieval - modern
6	113.0021 - fill of grave G023	Barley	66-222 cal AD (95.4%)	Early – Middle Roman
31	113.0055 - fill of grave G007	Oat	1274-1320 cal AD (53.1%)	Medieval
48	113.0080 - fill of ditch	Oak	1669-1780 cal AD (43.1%)	Post medieval - modern
90	113.0182 - deposit	Hazel	3704-3632 cal BC (89.8%)	Neolithic

5 Discussion and Statement of Potential

Hotspot 11-13 was targeted for excavation because of the potential for prehistoric archaeology identified during evaluation trenching which revealed multiple colluvium layers containing Prehistoric pottery (Wessex Archaeology, 2016). Due to the small number of datable features and archaeological material identified during the excavation of Hotspot 11-13, the information gained from the assessment is limited. However, the excavation and assessment of the materials has revealed a site which has archaeological potential that requires further analysis to properly understand the archaeological features identified and how they relate to their wider setting. Additionally, the excavation produced charred plant remains and charcoal, some of which retrieved from stratified context for both the prehistoric features and early medieval cemetery. Regrettably, due to their preservation and quantity the material was identified as not being suitable for further analysis to inform on agricultural practises, and land use at the site, except for the charcoal samples identified in Section 6 which may be suitable for analysis and may assist in determining which species were being exploited in past societies for wood and fuel procurement.

5.1 Period 2 (Late Neolithic to Early Bronze Age)

Prehistoric activity was concentrated in the lower lying areas to the southwestern corner of the excavation area. Pottery recovered from the features and deposits in this area in addition to the limited number of radiocarbon dating results suggest that the activity probably dates to the Late Neolithic or Early Bronze Age.

The identified features did not appear to represent a coherent structure and are more likely to represent an area of activity which clearly involved episodes of burning due to the amount of charcoal present in most of the deposits encountered. The bank of small stones did not appear to be substantial enough to be part of a permanent structure and did not include substantial foundation stones which would be expected in a structure designed to support a roof. The small size of the stones may suggest that the wall was formed through small scale clearance of land for cultivation or general clearance for the activities undertaken in the area.

The intercutting pit groups may suggest that the same activities were undertaken at the site over an extended period of time. The smaller pits in Group I appeared to have been formed to contain some of the material removed from the larger pit, suggesting a repeated process which required maintenance of the feature. The stone lined oven or small furnace with associated stakeholes may have been associated with an industrial process but given the date of the feature this is unlikely to be associated with metalworking. The presence of charred plant remains, including indeterminate cereal grains, from the flue suggests that the feature may be associated with crop processing. Even though the cereal grains were not well preserved further analysis may be warranted to gain a better understanding of the economy of the area during the Late Neolithic and Early Bronze Age.

5.2 Period 5 and 7 (Early Medieval and Post Medieval)

A group of 21 graves were an unexpected discovery within the Hotspot. The style of the graves is typical of the early medieval period in North West Wales, and two cemeteries likely to be of a similar date have been excavated during the current phase of works at Wylfa Head (to the north-east) and Area 7 (to the west). Unlike the cemeteries at Wylfa Head and Area 7, the Hotspot 11-13 cemetery was located on low-lying land at the edge of fairly marshy ground, generally overlooked by the Area 7 cemetery. Given the location and size of the cemetery it may represents a family group. Unfortunately, given that no human remains were preserved it is unlikely that this theory

could ever be tested. The small number of Radiocarbon dating results obtained from the grave fills returned a date range of Early Roman to post-medieval. However, much of the material dated was suggested to be present due to backfilling and later ingress. The radiocarbon dates are therefore unlikely to be truly representative of the features (*Appendix VII*).

No artefactual dating evidence was recovered from the gullies which formed square or rectangular enclosures, which appear to be similar to the early medieval enclosure identified in Hotspot 6. Their physical relationships and the radiocarbon dating results determined that some of the gullies post-dated a number of graves at the cemetery which appears to contradict the stratigraphy. Firm dating could not be established due to the small number of dates obtained during assessment, as such determining the chronology for archaeological remains recorded at Hotspot 11-13 with any certainty is difficult.

5.3 Conclusion and Realisation of Original Aims and Objectives

The original aims and objectives stated in Section 2.6 have largely been met in that material was recovered during the excavation in order to date evidence of past activities, and samples were taken and analysed to better understand the past environment and land use. Excavation of Hotspot 11-13 revealed several prehistoric features including intercutting pits, a stone lined oven or small furnace, a stone bank which was sealed by numerous layers of colluvium, an early medieval cemetery consisting of 21 graves (most of which were cut into colluvial deposits), and an undated enclosure system. Geoarchaeological assessment of soil samples identified three main events; clearance of woodland, archaeological activity in the form of levelling associated with the cut features, and soil destabilisation due to local hillside vegetation clearance or tillage. Some broadly datable prehistoric pottery was recovered from some pits and occupation layers, but no datable artefacts were recovered from the majority of features, including the graves and gullies. To fulfil the potential of the site data, the updated objectives and research questions have been set out below to provide a framework for the proposed further analysis. Addressing the aims and objectives will be achieved through a detailed examination of the stratigraphy, contextual analysis of the excavated materials and comparative research.

5.3.1 Archaeological Strip, Map and Sample Objectives

Due to the discovery of an early medieval cemetery the following research objectives were identified:

1. Placing the setting of the information gained from the archaeological investigation and assessment into a broader regional and national (including Britain and Ireland) context.
2. Identifying, in so far as is possible, the settlement and ecclesiastical sites associated with cemetery sites in order to understand the interrelationships between settlement sites, parish catchment areas and cemetery catchment areas.
3. Gaining insights into the local farming economy and the wider exploitation of the natural environment – with particular reference to the exploitation of lakes and fens/bogs (such as the adjacent Tre'r Gof SSSI site) and the sea.
4. Gaining insights into long distance trade (via the analysis of recovered artefacts) especially in such products as pottery.
5. Establishing the extent of continuity or discontinuity between the late Roman and Early Medieval periods via analysis of environmental evidence (RO8), the agricultural economy (RO8), the artefacts recovered (RO2) and changes in settlement patterns (RO6), trade (RO9) and burial/funeral practices (RO5).

6. Understanding what, if any, impact Irish and Scandinavian populations had on (Early) Medieval Wales (artefacts, agricultural economy, funerary practices *etc*).

As the excavations revealed layers of colluvium with inclusions of Prehistoric pottery, lithic artefacts and associated debitage the following archaeological research questions identified in the WSI for Strip, Map and Sample areas (Horizon Nuclear Power, 2017) remain relevant:

Prehistoric;

1. What is the functional and stratigraphic relationship between the burnt mounds/spreads and other spatially associated features in particular reference to possible structural features (post holes) and ditch type features ('troughs')?
2. What relationships or patterns, if any, can been seen between these Prehistoric features and their wider landscape setting?
3. What evidence do the ditch features provide for Prehistoric landscape organisation and enclosure?
4. What types of artefacts are present in the SMS zones?
5. What can these artefacts tell us about daily life and ritual activity?
6. Were those artefacts, which may be found in the SMS Zones, produced locally?

6 Proposal for Further Work

The results from the investigation of the Prehistoric assemblage and probable early medieval cemetery are of local and regional interest and should be considered along with similar findings from neighbouring archaeological areas. It is proposed that a detailed site report, incorporating stratigraphic and further specialist finds analysis as recommended by the specialist assessment reports (*Appendix IV, V, VII and VIII*) are produced:

- Prehistoric pottery - Further analysis including detailed fabric analysis, illustration and comparative research with neighbouring prehistoric archaeological sites.
- Charcoal - The charcoal recovered from samples <65> to <71>, <76> to <78>, <82>, <80>, <84> to <87> and <90> may be suitable for analysis and may assist in determining which species were being exploited in past societies for wood and fuel procurement.
- Radiocarbon suitability - The most suitable material for radiocarbon dating would be the CPR and charcoal from sample <80>, <87> and <90>.
- Palaeoenvironmental proxies – A selection of samples should be assessed to define the presence, preservation and character of the pollen and diatoms and their changes through time to contribute to the understanding of the site, its setting, land-use history and potential exploitable resources. Soil micromorphology – To clarify the relationship between, and interpretation of, charcoal deposit (113.0207), colluvium (113.0148) and alluvial (113.0182), samples 098, 099 and 100 should be submitted for soil thin sectioning and soil micromorphological analysis.

7 Storage and Archive Deposition

At the time of writing the paper and digital archive was held at the ABA offices in Bangor, Gwynedd. The finds assemblage and environmental samples was under the curatorship of WA. Upon completion of the project, and with agreement with HNP and the relevant stakeholders, the paper archive and digital data, including photographs will be lodged with the Royal Commission on Ancient and Historical Monuments of Wales (RCAHMW) in Aberystwyth, under an accession number yet to be assigned. ABA will hold a digital version of the archive indefinitely.

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Appendix I

AB1703 Archaeoleg Brython Archaeology

Project Team

AB1703 Archaeoleg Brython Archaeology Project Team

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Marta Estanga Lopez de Murillas

Lucia Fernandez Rabanal

Sean Finlay-Scott

James Fish

Amy Gamman

Catherine Godsiffe

Sergio Gomez-Carrion

Paul Hickman

Karen Hole

Vickki Hudson

Rocio Jimenez Diaz

Mark Jones

William Jones

Trevor Jose

Callum Knauf

Leslie Law

Timothy Lewis

Karl Macrow

Meagan Mangum

Sharon Martin

Antonio Luis Martinez Rodriguez

Elena Matteacci

Georgina Merckel

Lucy Morrison

Tomasz Moskal

Alexis Mosley

Ramon Navas Losada

Cindy Nelson-Viljoen

Declan New

Tomasz Neyman

Jennifer O'Donnell

Edmund Palka

Craig Parkinson

Gethyn Phillips

Jeannette Plummer Sires

Stephen Porter

Blazej Prus

Gary Reid

Clair Richardson

Louis Roper

Kurt Russell

Karolina Saxerbo Sjoberg

Victoria Scott

James Sinclair

Robert Slabonski

Elena Stefani

Stuart Stokes

Luke Tremlett

Michael Tunnicliffe

Harri Twigg

Kerri Waite

April Williams

Edward Worsley

Luke Yates

Appendix II

AB1703 Wylfa Newydd Early Clearance Works

Site Gazetteer

Appendix II – Gazetteer of sites excavated by ABA

Area	PRN	Description	Easting	Northing	Period	Summary
Wylfa Head	91809	Lithic Scatter	235752	393877	Early Neolithic	Flint scatters consisting of a number of flint tools and debitage recovered from stoney layer (10.1954) that had evidence of being heat affected
Wylfa Head	91810	Pits, Wylfa Head	235746	393880	Early Neolithic	Two large pits [10.01372] and [10.1994] located in the north-western corner of site. Both pits were sub-circular in plan and possibly contemporary. Pit [10.1994] contained fire-cracked stone (10.1964) and the remains of a burring episode (10.1996)
Wylfa Head	91811	Lithic Scatter	235802	393867	Early Neolithic	Lithic scatters identified in test slot [10.2725] dug through two palaeosols (10.2621) and (10.2790). The assemblage was indicative of Mesolithic activity and included classic microlithic forms and bladelets. Radiocarbon dating of spit (10.2730) returned a Late Neolithic date
Wylfa Head	91812	Neolithic Pits, Wylfa Head	235765	393810	Early Neolithic	Large pit excavated at the southern limit of site, possibly consisting of two intercutting pits [10.0010] and [10.0008]. The pit contained three Neolithic axes (SF1210, SF1211 and SF1212), whetstones (SF1035 to SF1037) and a cache of small polishing stones
Wylfa Head	91813	Postholes	235787	393865	Late Iron Age/Early Romano-British	Three posthole groups, [10.2706], [10.2902] and [10.2910], each consist of three postholes forming a triangle. Postholes groups [10.2706] and [10.2902] was located along the southern edge of burnt daub patch (10.2614)
Wylfa Head	91814	Roundhouse	235790	393863	Late Iron Age/Early Romano-British	Roundhouse located in the north-eastern section of site and consisted of burnt daub patch (10.2614) and nearby postholes [10.2862], [10.2835], [10.2793], [10.2784], [10.2817] and [10.2745]. The roundhouse was heavily truncated by later activity
Wylfa Head	91815	Ditch	235778	393873	Late Iron Age/Early Romano-British	East to west aligned ditch identified below later stone walls and located north-west of roundhouse (HER GAT PRN 91814). The ditch may represent an early boundary. Radiocarbon dating of fill (10.2610) returned a mid to late Roman date
Wylfa Head	91816	Multi-post Structure (Granary)	235751	393873	Late Iron Age/Early Romano-British	Multi-post structure located in the north-west corner of site. Identified below later stone structures and consisted of three rows of three post arranged equally and aligned with the cardinal points of the compass. The most northerly row consisted of [10.0135], [10.0356] and [10.0233]. The central row consisted of [10.0317], [10.0231] and [10.02777]. The most southerly row consisted of [10.0296], [10.0183] and [10.0187]
Wylfa Head	91817	Enclosed Settlement	235781	393862	Late Iron Age/Early Romano-British	An enclosed settlement with substantial stone built walls forming the northern and eastern boundaries, presumably of a sub-square enclosure. A timber built roundhouse, heavily truncated by an early medieval cemetery, is likely to be contemporary. A number of internal stone built structures were identified including sections of curving walls which could not be easily interpreted due to later truncation. A large stone lined pit (HER PRN GAT 91823) is likely to be contemporary with the settlement, although radiocarbon dating suggested it may be later.
Wylfa Head	91818	Roundhouse	235779	393854	Late Iron Age/Early Romano-British	Ring of 18 postholes with a small number of central postholes located on top of plateau occupied by later cemetery. Heavily truncated by later medieval burials. Radiocarbon dating of fill (10.1165) of posthole [10.1167] and fill (10.2008) of posthole [10.2007] returned a Late Roman date
Wylfa Head	91819	Settlement Features	235742	393872	Late Iron Age/Early Romano-British	Possible settlement features identified in the north-western section of site that are likely contemporary with the later enclosed phase of settlement (HER GAT PRN 91818). The features included a stone lined drain [10.0845], post holes and gullies
Wylfa Head	91820	Platforms	235746	393860	Late Iron Age/Early Romano-British	Three rock-cut platforms with patched of heat discoloured bedrock was identified to the west of roundhouse (HER GAT PRN 91818). Radiocarbon dating of deposit (10.0439) returned a middle Roman date

Appendix II – Gazetteer of sites excavated by ABA

Wylfa Head	91821	Industrial Activity	235768	393833	Late Iron Age/Early Romano-British	Area of industrial activity identified north of southern boundary wall (10.2013), largely truncated by the early medieval cemetery. Features included walls and postholes, suggesting the presence of a structure, and pits containing slag.
Wylfa Head	91822	Ditch	235741	393883	Romano-British	A ditch [10.1022] at the western edge of the excavation area which was truncated by later activity but may have formed part of an enclosure system with ditch [10.1176].
Wylfa Head	91823	Stone Lined Pit	235794	393858	Late Iron Age/Early Romano-British	Large oval pit located within sub-rectangular structure (10.2782) north-east of roundhouse (HER GAT PRN 91818). The pit contained a rectangular lining of large schist orthostats in base of the cut with the western edge left open for access via a stepped slope
Wylfa Head	91824	Cemetery	235778	393845	Early Medieval	Early medieval cist cemetery that consisted of 315 graves. Human remains in varying degrees of preservation recovered from 109 graves representing 119 individuals
Wylfa Head	91825	Ditch	235778	393849	Post-Medieval/Modern	East-west aligned post medieval ditch pointed to square rock-cut shaft (HER GAT PRN 91826). The ditch truncated several early medieval graves. No dating evidence was recovered
Wylfa Head	91826	Shaft	235732	393851	Post-Medieval/Modern	Rock-cut shaft located on the crest of highest part of site to the west of post medieval ditch (HER GAT PRN 91825). No dating evidence was recovered
Wylfa Head	91827	Pits and Postholes	235732	393862	Undetermined date	Small pits and post-holes which appeared to form structures, windbreaks or fences and laid rough stone surfaces identified on the top of the hill at the western edge of the excavation area. No dating evidence was recovered
Area 7	91828	Pits	234727	392882	Neolithic	Three pits [07.0559], [07.0533] and [07.0477] that contained charcoal and burnt stones. Pit [07.0559] located north-east of Funerary Enclosure contained a burnt saddle quern (SF07.0013), two pieces of Graig Lwyd stone from Penmaenmawr (SF07.0014 and 07.0015) and a polished axe (SF07.0012). Pit [07.0533] to the south of pit [07.0559] contained a polished stone (SF07.0010)
Area 7	91829	Partially Enclosed Settlement	234728	392926	Iron Age	A hilltop enclosure comprising roundhouse with associated partial enclosure ditch, small ditches and gullies and group of pits and postholes likely representing a granary structure concentrated in the northern part of the site
Area 7	91830	Cemetery	234718	392898	Early Medieval	Early medieval cist cemetery with three square funerary enclosures excavated in the southern part of the site with a fourth heavily truncated by later activity (HER PRN GAT 91831 – 91834). Fifty-one graves were excavated. No human remains were recovered.
Area 7	91831	Funerary Enclosure	234715	392887	Early Medieval	Funerary Enclosure 1 was located in the southern central area of the site and contained one grave (G0.053). The largest of three complete enclosures with continuous ditch enclosing an area of 32 square metres
Area 7	91832	Funerary Enclosure	234723	392880	Early Medieval	Funerary Enclosure 2 was located south-east of the cemetery and contained three burials (G07.031), (G07.032) and (G07.033). Identified by evaluation Trench 97. An entrance way or causeway was located on the eastern side
Area 7	91833	Funerary Enclosure	234715	392873	Early Medieval	Funerary Enclosure 3, the southernmost of the enclosures was the smallest and contained one large central grave (G07.054) and a smaller juvenile grave (G07.052) to the north. The enclosure ditch enclosed an area of approximately 10.8 square metres. The entrance or causeway was located on the eastern side
Area 7	91834	Funerary Enclosure	234706	392890	Early Medieval	Funerary Enclosure 4 located to the west of funerary enclosure 1 contained one central grave (G07.009). The enclosure ditch was heavily truncated to the east and west and enclosed an area of approximately 12 square metres
Area 7	91835	Intercutting Pits	234709	392877	Undetermined date	Two groups of intercutting pits located to the west of funerary enclosure 3. Group 1 consisted of pits [07.0176], [07.0264] and [07.0367]. Group 2 consisted of pits [07.0542], [07.0177] and [07.0542]

Appendix II – Gazetteer of sites excavated by ABA

Area 7	91836	Ditches	234705	392872	Undetermined date	Two large ditches [07.0114] and [07.0115] traversed the southern edge of site along a north-west to south-east direction. They may have served as drainage ditches or delineated the southern edge of the cemetery
Area 8	91837	Burnt Mound	235186	392829	Middle to Late Bronze Age	Deposit (08.0003) identified as burnt mound 21404 during evaluation. Heavey agricultural activity resulted in substantial plough damage. No dating evidence was recovered. Associated trough [08.0019] located to the north-east and below the burnt mound contained one large loom weight (SF001) and charcoal.
Area 8	91838	Former Boundary	235174	392831	Post-Medieval/Modern	Double ditch field boundary, [08.0004] and [08.0006], aligned northwest to southeast running parallel to each other and continued beyond the limit of excavation. Both ditched contained modern backfill and debris. Ditches identified as clawdd boundary 2116 during evaluation and same as HER PRN GAT 61137
Hotspot 5	91839	Burnt Mound	234623	392652	Later Bronze Age to Iron Age	A large burnt mound, measuring approximately 25m x 14m, showing evidence of phases of activity, along with a number of troughs including [105.0012] which was stone lined.
Hotspot 5	91840	Possible Well	234622	392644	Later Bronze Age to Iron Age	Well [105.0071] located south of burnt mound (105.0022). Consisted of sub-circular pit with slightly undercut sides with some indication of stepping along eastern edge. Worked blue schist stone (SF004) and chert (SF005) was recovered from fill (105.0070)
Hotspot 5	91841	Pit	234613	392658	Undetermined date	Sub-circular pit [105.0091] located at north-western section of burnt mound (105.0022) and sealed by a discrete deposit of burnt mound material (105.0090). Function unknown
Hotspot 6	91842	Pit	234835	392703	Neolithic to Early Bronze Age	Sub-circular pit [106.0034] located toward the eastern extend of site containing charcoal, worked chert and flint.
Hotspot 6	91843	Trackway	234828	392706	Undetermined date	South-West to North-East aligned trackway [106.0008] which had a metalled stone surface, may be same as trackway (HER PRN GAT 91851) observed in Hotspot 7-9. Pre-dates enclosure system in same area which was dated early medieval/medieval.
Hotspot 6	91844	Enclosure Gullies	234829	392704	Early medieval to medieval	Series of intercutting gullies recorded across site that may represent two square enclosures with entrances located to the north-west sides. The north east enclosure consisted of gullies [103.0005] and [106.0012]. Gully [106.0012] was truncated by [106.0010], which along with [106.0013] formed the south-west enclosure. Gully [106.0010] was truncated by ditch [106.0021]. The gullies and enclosure appear similar to those identified in Hotspot 7-9 (HER PRN GAT 91849) and Hotspot 11-13 (HER PRN GAT 91861). Struck flint (SF002) was recovered from gully [106.0010]
Hotspot 7-9	91845	Stakeholes and Pits	234863	392740	Neolithic/Early Bronze Age	Group number (109.0101) consisted of a small pit and 35 stakeholes, likely forming a windbreak or small structure, located 7m north of burnt mound (HER PRN GAT 91846). Pit [109.0109] was cut into bedrock and contained firecracked stone, prehistoric pottery, grinding stone and a flint scraper. Pit [109.0135] pre-dated the burnt mound activity. Pit [109.0125] contained a possible axe roughout.
Hotspot 7-9	91846	Burnt Mound	234877	392737	Late Bronze Age to Iron Age	Burnt mound material (109.0154) identified as burnt mound (134508) in Trench 1345 during evaluation. Stretched across southern central part of site it contained a spindle whorl (SF020), worked chert (SF021). Evidence of phasing lost due to later ploughing.
Hotspot 7-9	91847	Possible Working Area	234883	392746	Later Iron Age and Romano British	Several features including a stone spread (109.0143) overlaying well [109.0214] cut below current ground water table with compacted stone surface (109.0210) abutting the stones of the well. These features may be associated with the Iron Age/Roman-British settlement identified in Hotspot 15 (HER PRN GAT 91875).
Hotspot 7-9	91848	Pits, Gullies and Ditches	234879	392750	Undetermined date	Several features of indeterminate function including: northwest-southeast aligned linear gully [109.0130] cutting through burnt mound (109.0154); ditch [109.0152], possibly a continuation

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						of gully [109.0132]; north-east to south-west aligned ditch [109.0198] that cut pit [109.0204] and ditch [109.0207]; northeast to southwest aligned ditch [109.0207]; and pit [109.0205]. No dating evidence was recovered
Hotspot 7-9	91849	Ditch	234863	392763	Undetermined date	North-East to South-West aligned ditch [109.0008] located at northern end of site. It continuing beyond limit of excavation and terminated north of the bedrock outcrop (HER PRN GAT 91850).
Hotspot 7-9	91850	Possible Quarrying	234860	392751	Undetermined date	Possible tool marks identified on outcrop of schist. Possible quarrying location for nearby settlement and long-cist cemeteries.
Hotspot 7-9	91851	Trackway	234864	392737	Undetermined date	Short section of trackway (109.0085) running from the north-east to the south-west (continued beyond limit of excavation). May be the same as (HER PRN GAT 91843) located to the south-west.
Hotspot 7-9	91852	Pits	234865	392765	Undetermined date	A number of undated pits of no apparent function identified in Hotspot 7-9.
Hotspot 8	91853	Stone Surface	234912	392781	Undetermined date/Likely Romano British	A surface of laid schist slabs, orientated North-South measuring approximately 2m x 1.5m. Likely associated with Romano British features in the vicinity.
Hotspot 8	91854	Ditches	234907	392786	Undetermined/Neolithic	Two ditches identified in Hotspot 8. Ditch [108.0035]=[108.043] was orientated North-South at the eastern side of the excavation area, it produced a Neolithic date and was cut by Late Iron Age features. The western ditch [108.0011] was orientated north-east to south-west and was undated.
Hotspot 8	91855	Pits and Postholes	234908	392780	Late Iron Age	A number of pits and postholes located at the south-eastern quarter of Hotspot 8. Likely to represent truncated postholes forming a structure, possibly a granary. Late Iron Age date obtained from pit [108.0053].
Hotspot 8	91856	Filed Clearance	234901	392774	Undetermined date	A deposit of stones, likely representing field clearance identified at the southern limit of excavation.
Hotspot 10	91857	Pit	234933	392962	Late Neolithic Early Bronze Age	A discrete pit [110.017] which was radiocarbon dated to the Late Neolithic or Early Bronze Age, 1.3m in diameter and 0.45m deep.
Hotspot 10	91858	Ditches	234938	392956	Undetermined date	A series of four ditched identified within the excavation area. The earliest by stratigraphy were a pair of parallel ditches [110.008] & [110.014] at the southern edge of the area which were orientated east-west. These were cut by a narrower ditch [110.007]orientated approximately north-south. Ditch [110.026]=[110.028], which was orientated north-east to south-west was 5m in length, terminated 0.5m north of ditch [110.020] and ran into the western baulk. The nature of the ditches suggests that they relate to a relict field systems.
Hotspot 11-13	91859	Pits, Stakeholes, Postholes and Stone Bank	234958	392894	Neolithic	A number of prehistoric features including a stone bank (113.0186), two pit groups and stone lined furnace or oven [113.0136] with associated stakeholes at the western side of the excavation area.
Hotspot 11-13	91860	Enclosure	234977	392902	Undetermined date	An apparent square or rectangular enclosure with an entrance orientated to the south-east was excavated at the north of the Hotspot. Stratigraphically pre-dated the early medieval features.
Hotspot 11-13	91861	Ditch	234969	392895	Undetermined date	Ditch [113.0032] pre dated the early medieval features and cut enclosure (HER PRN GAT 91860). The ditch traversed the entire excavation area on a north-west to south-east orientation.

Appendix II – Gazetteer of sites excavated by ABA

Hotspot 11-13	91862	Cemetery	234967	392893	Early medieval	The cemetery contained 21 graves aligned east-west, mostly long-cists, suggesting an early medieval date. No human remains were recovered, possibly due to the acidic nature of the soil.
Hotspot 11-13	91863	Ditch	234979	392878	Undetermined date	At the southern extent of the excavation area a small east-west oriented ditch [113.0110] which may have formed part of an enclosure system.
Hotspot 12	91864	Possible Quarrying	234952	392837	Undetermined date	A schist outcrop showing signs of possible quarrying. Could potentially be associated with Romano-British structures or early medieval long-cists in the wider area.
Hotspot 12	91865	Pit	234965	392838	Post-Medieval/Modern	A pit [112.0004] which contained a sherd of post-medieval white glazed pottery.
Hotspot 14	91866	Wetland Consolidation	234957	392727	Late Neolithic/Early Bronze Age	An area of wetland consolidation on the edge of marshy ground close to Early Bronze Age roundhouse (HER PRN GAT 91868).
Hotspot 14	91867	Pit	234964	392729	Undetermined date	A possible refuse or storage pit (114.0069) which pre dated the Early Bronze Age roundhouse (HER PRN GAT 91868).
Hotspot 14	91868	Roundhouse	234966	392727	Late Neolithic/Early Bronze Age	A timber built roundhouse comprising post ring, central hearth and ring gulley with a diameter of approximately 8m.
Hotspot 15	91869	Pits	234936	392792	Undetermined date	A group of pits at the northern end of the excavation area, stratigraphically earlier that the stone-built phase of the settlement. Function unknown, possibly Late Bronze Age/Early Iron Age.
Hotspot 15	91881	Ditch	234941	392789	Late Bronze Age to Iron Age	A shallow ditch [115.0215] running north to south and underlying the eastern enclosure wall may have formed part of an earlier enclosure associated with the pits and postholes.
Hotspot 15	91882	Postholes	234938	392792	Undetermined date	A line of three, closely spaced postholes [115.0276], [115.0277] and [115.0278] near the north edge of the excavation may have been associated with each other but no clear function. Likely Late Bronze Age/ Early Iron Age in date.
Hotspot 15	91870	Nine-Post Structure	234936	392789	Romano-British	A group of nine postholes in the area which may form part of a sub rectangular structure (HER PRN GAT 91870); [115.0393], [115.0394], [115.0422], [115.0402], [115.0458], [115.0392], [115.0391], [115.0346] and [115.0400]. Possible Granary.
Hotspot 15	91871	Postholes	234933	392782	Undetermined date	Three postholes, [115.0355], [115.0436] and [115.0361], located in the centre of the excavation area overlying the large nine-post/orthostat structure in the centre of the excavation (part of HER PRN GAT 91875). As such these may be contemporary with the later stone-built phase or predate it.
Hotspot 15	91872	Post-Built Structure	234937	392775	Undetermined date	A sub square post built structure, likely Iron Age/Romano-British in date.
Hotspot 15	91873	Pits	234935	392771	Undetermined date	Three pits, [115.0420], [115.0300] and [115.0305], excavated to the south of structure (HER PRN GAT 91872)
Hotspot 15 (W)	91874	Pits	234915	392760	Undetermined date	Three pits, [215.0009], [215.0021] and [215.0031], excavated at the southern end of Hotspot 15W. Likely contemporary with features pre-dating stone built phase of settlement.
Hotspot 15	91875	Stone Built Settlement	234934	392775	Late Iron Age/Romano-British	Stone-built roundhouse, well, raised floor building and a walled enclosure. A probable stone building identified in Hotspot 15 West (215.0004) also likely relates to this phase of activity. Radiocarbon dating of organic material recovered from occupation layer (215.0005) within this stone building returned a Late Iron Age to middle Roman date of c. 4-130 AD. Twelve sherds of pottery were also recovered from this occupation layer with many being identified as Black Burnish Ware DOR BB1. It appears the settlement was abandoned after a large burning episode.

Appendix II – Gazetteer of sites excavated by ABA

Hotspot 15	91876	Trackways	234943	392763	Late Iron Age/Romano-British	The convergence of two trackways associated with the stone-built settlement. Trackway [115.0072] ran north south, with its northern end indistinct whilst to the south it extended beyond the limit of excavation. Trackway [115.0005] ran northwest-southeast and extended beyond the eastern limit of excavation. These trackways consisted of stones and pebbles trampled into a shallow depression in the clay natural. Stratigraphically the trackways were contemporary with the stone built settlement.
Hotspot 15	91877	Post-Settlement Activity	234936	392773	Undetermined date	Acitvity in the area following abandonment of the settlement. Represented by a rough stone surface and the capping of the well, a number of small postholes of undetermined function likely represent later temporary structures or agricultural activity in the area.
Hotspot 16	91878	Pits	234909	392600	Late Iron Age/Romano-British	Three pits [116.0005], [116.0012] and [116.0002] which were cut into alluvial deposits. No artefacts recovered and function not apparent.
Hotspot 16	91879	Pit	234906	392597	Post-Medieval/Modern	Pit containing sherds of post-medieval pottery.
Hotspot 16	91880	Pits and Ditch	234915	392605	Undetermined date	A number of undated features within excavation area. [116.0008] was a shallow pit which may have been truncated. Pit [116.0020] was truncated by ditch [116.0018]. Pit [116.0025] contained charcoal and a fragment of preserved wood. No dating evidence was retrieved from any of the features.

Appendix III

AB1703 Wylfa Newydd Early Clearance Works

Hotspot 11-13 Context Register

Appendix III. AB1703 Hotspot 11-13 Context Register

Context	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
113.0001	CUT	GRAVE	0.90	0.50	0	0.25	EAST TO WEST SUB RECTANGULAR CUT OF GRAVE 113.0023, WITH ROUNDED CORNERS AND STEEPLY SLOPING SIDES LEADING GRADUALLY TO AN UNDULATING BASE
113.0002	FILL	GRAVE	0.90	0.50	0	0.25	FRIABLE MID ORANGE BROWN SILT SAND WITH SOME MEDIUM SUB RECTANGULAR STONES AND 5% CHARCOAL WITHIN GRAVE 113.0023
113.0003	FILL	GRAVE	0.62	0.33	0	0.32	CIST STONES PARTIALLY LINING GRAVE 113.0023
113.0004	LAYER	LAYER	0	0	0	0	FRIABLE MID ORANGE WELL SORTED SAND SILT WITH FREQUENT MEDIUM SUB ANGULAR AND SUB ROUNDED STONES
113.0005	LAYER	SUBSOIL	0	0	0	0	SUBSOIL
113.0006	FILL	DITCH	1.00	0.90	0	0.20	LOOSE AND FRIABLE DARK ORANGE BROWN SILT CLAY WITH SMALL TO MEDIUM STONES (<0.20M) AND ROOTING
113.0007	FILL	DITCH	0.60	0.62	0	0.17	FRIABLE MID RED BROWN CLAY WITH SMALL TO MEDIUM STONES AND RARE CHARCOAL
113.0008	CUT	TREE THROW	1.06	0.66	0	0.08	SUB OVAL WITH VERY GRADUAL SIDES LEADING IMPERCEPTIBLY TO A BASE THAT SLOPES DOWN TO THE WEST
113.0009	FILL	TREE THROW	1.06	0.66	0	0.08	FIRM GREY BROWN SILT SAND WITH SOME PEBBLES AND SLATE PIECES
113.0010	CUT	DITCH	0.98	0.60	0	0.17	LINEAR WEST TERMINUS WITH ROUNDED CORNERS AND STEEP SIDES, BECOMING MORE GRADUAL TO END, LEADING IMPERCEPTIBLY TO A FLAT BASE
113.0011	CUT	DITCH	2.00	0.82	0	0.42	LINEAR NORTH WEST TERMINUS WITH STEEP SIDES LEADING IMPERCEPTIBLY TO A CONCAVE BASE
113.0012	FILL	DITCH	2.00	0.82	0	0.42	FIRM GREY BROWN SAND SILT WITH FREQUENT PEBBLES AND OCCASIONAL MEDIUM STONES

Context	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
113.0013	CUT	DITCH	1.00	0.90	0	0.20	LINEAR EAST TERMINUS WITH GRADUAL SIDES LEADING GRADUALLY TO A FLAT BASE
113.0014	VOID						VOID
113.0015	VOID						VOID
113.0016	CUT	DITCH	1.00	0.50	0	0.05	NORTH WEST TO SOUTH EAST CURVED LINEAR WITH GRADUALLY SLOPING SIDES LEADING GRADUALLY TO A CONCAVE BASE
113.0017	FILL	DITCH	1.00	0.50	0	0.05	SOFT MID BROWN SAND SILT WITH SMALL STONES (<0.05M)
113.0018	CUT	DITCH	1.00	0.84	0	0.18	NORTH TO SOUTH LINEAR WITH GRADUALLY SLOPING SIDES LEADING GRADUALLY TO A CONCAVE BASE
113.0019	FILL	DITCH	1.00	0.84	0	0.18	COMPACT MID ORANGE BROWN SAND SILT WITH OCCASIONAL CHARCOAL AND SUB ANGULAR STONES (<0.05M)
113.0020	FILL	GRAVE	0.40	0.38	0	0.03	EAST TO WEST RECTANGULAR SCHIST CAPSTONE OVER GRAVE 113.0001
113.0021	FILL	GRAVE	0	0	0	0.34	COMPACT ORANGE BROWN SAND SILT WITH COMMON ROOTING AND OCCASIONAL SMALL TO MEDIUM SUB ANGULAR STONES WITHIN GRAVE 113.0023
113.0022	FILL	GRAVE	0	0	0	0	CIST STONES LINING THE SOUTH AND NORTH SIDES OF GRAVE 113.0001
113.0023	CUT	GRAVE	2.22	1.02	0	0.34	EAST TO WEST SUB RECTANGULAR CUT OF GRAVE 113.0001, WITH ROUNDED CORNERS AND STEEP SIDES LEADING SHARPLY TO A FLAT BASE
113.0024	VOID						VOID
113.0025	VOID						VOID
113.0026	FILL	GRAVE	0	0	0	0.05	SOFT DARK BROWN SAND SILT WITH SMALL STONES (<0.10M) WITHIN GRAVE 113.0002
113.0027	FILL	GRAVE	0	0	0	0	EAST TO WEST FLAT SLATE CAPSTONES OVER GRAVE 113.0002
113.0028	FILL	GRAVE	0	0	0	0.30	SOFT MID ORANGE BROWN SAND SILT WITH SMALL STONES, WITHIN GRAVE 113.0002

Context	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
113.0029	FILL	GRAVE	0	0	0	0	VERTICAL SCHIST SLABS LINING ALL BUT THE WEST END OF GRAVE 113.0002
113.0030	FILL	DITCH	1.00	1.35	0	0.10	SOFT ORANGE BROWN SAND SILT WITH STONES (<0.10M)
113.0031	FILL	DITCH	1.00	1.00	0	0.20	SOFT MID BROWN SAND SILT WITH SMALL STONES (<0.10M)
113.0032	CUT	DITCH	1.00	1.35	0	0.27	EAST TO WEST LINEAR WITH GRADUALLY SLOPING SIDES LEADING SHARPLY TO A FLAT BASE
113.0033	CUT	GRAVE	1.00	0.40	0	0.30	EAST TO WEST OVAL CUT OF GRAVE 113.0022, WITH ROUNDED CORNERS AND STEEP SIDES LEADING SHARPLY TO A FLAT BASE
113.0034	FILL	GRAVE	1.00	0.40	0	0.30	LOOSE DARK ORANGE BROWN GRAVELLY SAND SILT WITH SUB ANGULAR AND SUB ROUNDED STONES (<0.20M) WITHIN GRAVE 113.0022
113.0035	CUT	POST HOLE	0.34	0.17	0	0.06	CIRCULAR WITH STEEP SIDES LEADING IMPERCEPTIBLY TO A CONCAVE BASE
113.0036	FILL	POST HOLE	0.34	0.17	0	0.06	LOOSE DARK ORANGE BROWN SAND SILT WITH 10% CHARCOAL AND 5% STONES
113.0037	CUT	GRAVE	1.96	0.72	0	0.36	EAST TO WEST SUB RECTANGULAR CUT OF GRAVE 113.0006, WITH ROUNDED CORNERS AND STEEP SIDES LEADING SHARPLY TO A FLAT BASE
113.0038	FILL	GRAVE	1.96	0.72	0	0.36	FRIABLE MID ORANGE BROWN WELL SORTED SILT SAND WITH FREQUENT MEDIUM AND LARGE MIXED STONES WITHIN GRAVE 113.0006
113.0039	VOID						VOID
113.0040	FILL	GRAVE	0.85	0.45	0	0.05	FLAT SCHIST BASE STONES OF GRAVE 113.0003
113.0041	FILL	GRAVE	0.90	0	0	0.35	SOFT MID BROWN SAND SILT WITH SMALL STONES (<0.10M) WITHIN GRAVE 113.0003
113.0042	FILL	GRAVE	0	0	0	0	VERTICAL SLABS OF STONE LINING GRAVE 113.0003

Context	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
113.0043	CUT	GRAVE	0.85	0.45	0	0.35	EAST TO WEST SUB RECTANGULAR CUT OF GRAVE 113.0003, WITH ROUNDED CORNERS AND VERTICAL SIDES LEADING SHARPLY TO A FLAT BASE
113.0044	CUT	GRAVE	1.35	0.50	0	0.35	EAST TO WEST SUN RECTANGULAR CUT OF GRAVE 113.0002, WITH ROUNDED CORNERS AND MOSTLY VERTICAL SIDES, THOUGH GRADUAL TO WEST END, LEADING SHARPLY TO A FLAT BASE
113.0045	FILL	GRAVE	0	0	0	0	FLAT SCHIST BASE STONES OF GRAVE 113.0001
113.0046	CUT	POST HOLE	0.60	0.15	0	0.05	OVAL WITH STEEP SIDES LEADING GRADUALLY TO AN UNDULATING BASE
113.0047	FILL	POST HOLE	0.60	0.15	0	0.04	LOOSE DARK ORANGE BROWN SAND SILT WITH NO INCLUSIONS
113.0048	CUT	GRAVE	2.10	0.80	0	0.55	EAST TO WEST RECTANGULAR CUT OF GRAVE 113.0008, WITH ROUNDED CORNERS AND NEAR VERTICAL SIDES LEADING SHARPLY TO A FLAT BASE
113.0049	FILL	GRAVE	2.00	1.00	0	0.20	FRIABLE DARK RED BROWN GRAVELLY SAND SILT WITH SUB ANGULAR AND SUB ROUNDED STONES WITHIN GRAVE 113.0008
113.0050	VOID						VOID
113.0051	VOID						VOID
113.0052	CUT	GRAVE	0.80	0.50	0	0.30	NORTH WEST TO SOUTH EAST SUB RECTANGULAR CUT OF GRAVE 113.0005, WITH ROUNDED CORNERS AND NEAR VERTICAL SIDES LEADING SHARPLY TO A FLAT BASE
113.0053	FILL	GRAVE	0.80	0.50	0	0.30	SOFT DARK GREY BROWN SAND SILT WITH OCCASIONAL SMALL STONES AND GRAVELS
113.0054	FILL	GRAVE	0	0	0	0	EAST TO WEST FLAT SHIST CAPSTONES OVER GRAVE 113.0007
113.0055	FILL	GRAVE	0	0	0	0.35	LOOSE ORANGE BROWN SAND SILT WITH ROOTS AND SMALL SUB ANGULAR STONES, WITHIN GRAVE 113.0007
113.0056	FILL	GRAVE	0	0	0	0	VERTICAL SCHIST STONES LINING GRAVE 113.0007
113.0057	FILL	GRAVE	0	0	0	0	FLAT SCHIST BASE STONES OF GRAVE 113.0007

Context	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
113.0058	CUT	GRAVE	1.36	0.80	0	0.35	EAST TO WEST SUB RECTANGULAR CUT OF GRAVE 113.0007, WITH ROUNDED CORNERS AND STEEP SIDES LEADING GRADUALLY TO AN IRREGULAR BASE
113.0059	FILL	GRAVE	2.00	0.15	0	0	LOOSE DARK BROWN BLACK SILT WITH OCCASIONAL STONES (<0.10M) WITHIN GRAVE 113.0009
113.0060	FILL	GRAVE	0	0.74	0	0.28	CIST STONES LINING NORTH EDGE OF GRAVE 113.0009
113.0061	CUT	GRAVE	2.00	0.75	0	0	EAST TO WEST SUB OVAL CUT OF GRAVE 113.0009, WITH STEEP SIDES LEADING GRADUALLY TO AN UNDULATING BASE
113.0062	CUT	GRAVE	0.80	0.50	0	0.20	EAST TO WEST SUB RECTANGULAR CUT OF GRAVE 113.0010, WITH ROUNDED CORNERS AND GRADUALLY SLOPING SIDES LEADING GRADUALLY TO A FLAT BASE
113.0063	FILL	GRAVE	0.80	0.50	0	0.20	FRIABLE MID ORANGE BROWN WELL SORTED SAND SILT WITH FREQUENT SMALL SUB ANGULAR AND SUB ROUNDED STONES, WITHIN GRAVE 113.0010
113.0064	FILL	GRAVE	0	0	0	0	NORTH WEST TO SOUTH EAST FLAT CAPSTONES OVER GRAVE 113.0005
113.0065	FILL	GRAVE	0	0	0	0.05	LOOSE DARK ORANGE BROWN SAND SILT WITH ROOTS AND OCCASIONAL SMALL SUB ANGULAR STONES, WITHIN GRAVE 113.0007
113.0066	FILL	GRAVE	0.80	0.49	0	0.20	CIST STONES PARTIALLY LINING GRAVE 113.0010
113.0067	FILL	GRAVE	0	0	0	0.35	SOFT BROWN SAND SILT WITH FREQUENT SMALL STONES (<0.10M) WITHIN GRAVE 113.0011
113.0068	FILL	GRAVE	0	0	0	0	REMAINS OF POSSIBLE CIST STONES IN GRAVE 113.0011
113.0069	CUT	GRAVE	1.20	0.70	0	0.35	EAST TO WEST SUB OVAL CUT OF GRAVE 113.0011, WITH VERTICAL SIDES LEADING SHARPLY TO A FLAT BASE
113.0070	CUT	GRAVE	2.00	0.60	0	0.30	EAST TO WEST SUB RECTANGULAR CUT OF GRAVE 113.0012, WITH ROUNDED CORNERS AND VERTICAL SIDES LEADING SHARPLY TO A FLAT BASE

Context	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
113.0071	FILL	GRAVE	2.00	0.60	0	0.15	FIRM MID YELLOW BROWN SAND SILT WITH OCCASIONAL SMALL STONES AND GRAVELS WITHIN GRAVE 113.0012
113.0072	FILL	DITCH	1.24	0.31	0	0.58	LOOSE MID GREY BROWN CLAY SILT WITH 30% SUB ROUNDED AND SUB ANGULAR STONES
113.0073	CUT	DITCH	1.24	0.31	0	0.58	EAST TO WEST LINEAR WITH GRADUALLY SLOPING SIDES LEADING SHARPLY TO A FLAT BASE
113.0074	FILL	DITCH	1.10	0.96	0	0.66	LOOSE MID GREY BROWN CLAY SILT WITH 30% SUB ROUNDED AND SUB ANGULAR STONES
113.0075	CUT	DITCH	1.10	0.96	0	0.66	NORTH TO SOUTH LINEAR WITH GRADUALLY SLOPING SIDES LEADING SHARPLY TO A FLAT BASE
113.0076	CUT	GRAVE	1.20	0.65	0	0.21	EAST TO WEST RECTANGULAR CUT OF GRAVE 113.0013, WITH ROUNDED CORNERS AND GRADUALLY SLOPING SIDES LEADING GRADUALLY TO A FLAT BASE
113.0077	FILL	GRAVE	1.02	0.65	0	0.22	FIRM DARK RED BROWN SILT CLAY WITH ROOTS AND SMALL STONES (<0.05M) WITHIN GRAVE 113.0013
113.0078	FILL	GRAVE	1.00	0	0	0	CIST STONES PARTIALLY LINING GRAVE 113.0013
113.0079	CUT	DITCH	3.50	0.70	0	0.15	EAST TO WEST LINEAR WITH STEEP SIDES LEADING SHARPLY TO A SLIGHTLY CONCAVE BASE
113.0080	FILL	DITCH	3.50	0.70	0	0.15	SOFT MID GREY BROWN SAND SILT WITH OCCASIONAL SMALL TO MEDIUM STONES AND RARE CHARCOAL
113.0081	FILL	GRAVE	1.80	0.50	0	0.06	FLAT SCHIST BASE STONES OF GRAVE 113.0012
113.0082	FILL	GRAVE	1.80	0.60	0	0.20	CIST STONES PARTIALLY LINING GRAVE 113.0012
113.0083	FILL	GRAVE	2.00	0.60	0	0.20	SOFT MID GREY BROWN SAND SILT WITH OCCASIONAL SMALL STONES AND GRAVELS
113.0084	FILL	PIT	0	0.50	0	0.45	SOFT DARK BROWN SAND SILT WITH SMALL STONES
113.0085	CUT	PIT	0	0.50	0	0.45	SEMI CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A FLAT BASE

Context	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
113.0086	FILL	DITCH	0.74	0.44	0	0.26	FIRM ORANGE BROWN SAND SILT WITH OCCASIONAL SMALL TO MEDIUM SUN ANGULAR STONES
113.0087	CUT	DITCH	0.74	0.44	0	0.26	EAST TO WEST LINEAR WITH STEEP SIDES LEADING SHARPLY TO A CONCAVE BASE
113.0088	FILL	GRAVE	0	0	0	0.46	FIRM DARK ORANGE BROWN SAND SILT WITH COMMON MEDIUM TO LARGE SUB ANGULAR STONES, WITHIN GRAVE 113.0014
113.0089	CUT	GRAVE	2.04	0.88	0	0.44	EAST TO WEST SUB RECTANGULAR CUT OF GRAVE 113.0014, WITH ROUNDED CORNERS AND STEEP SIDES LEADING SHARPLY TO A CONCAVE BASE
113.0090	FILL	GRAVE	2.10	0.80	0	0	FIRM DARK ORANGE BROWN SILT CLAY WITH OCCASIONAL CHARCOAL AND SMALL, OCCASIONALLY BURNT, SUB ANGULAR STONES
113.0091	CUT	DITCH	1.30	1.50	0	0.24	EAST TO WEST LINEAR WITH IRREGULAR SIDES LEADING GRADUALLY TO AN UNDULATING BASE
113.0092	FILL	DITCH	1.30	1.50	0	0.24	MODERATELY LOOSE RED BROWN CLAY SILT WITH FREQUENT PEBBLES
113.0093	CUT	GRAVE	1.50	0.94	0	0.41	EAST TO WEST SUB OVAL CUT OF GRAVE 113.0015, WITH NEAR VERTICAL SIDES LEADING GRADUALLY TO A FLAT BASE
113.0094	FILL	GRAVE	2.04	0.92	0	0.84	MODERATELY LOOSE DARK GREY BROWN CLAY SILT WITH PEBBLES AND MEDIUM STONES, WITHIN GRAVE 113.0015
113.0095	FILL	GRAVE	1.66	0.60	0	0.25	CIST STONES PARTIALLY LINING GRAVE 113.0015
113.0096	FILL	GRAVE	0	0	0	0	CIST STONES LINING GRAVE 113.0008
113.0097	FILL	GULLY	0.85	0.39	0	0.27	FIRM DARK ORANGE BROWN SAND SILT WITH OCCASIONAL SMALL SUB ANGULAR STONES
113.0098	CUT	GULLY	0.85	0.39	0	0.27	SOUTHERN ROUNDED TERMINUS OF LINEAR WITH STEEP SIDES LEADING IMPERCEPTIBLY TO A CONCAVE BASE
113.0099	FILL	GRAVE	1.72	0.63	0	0.58	EAST TO WEST FLAT CAPSTONES OVER GRAVE 113.0016

Context	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
113.0100	CUT	GRAVE	1.72	0.69	0	0.58	EAST TO WEST SUB RECTANGULAR CUT OF GRAVE 113.0016, WITH ROUNDED CORNERS AND VERTICAL SIDES LEADING STEEPLY TO A FLAT BASE
113.0101	FILL	GRAVE	1.72	0.69	0	0.58	FRIABLE DARK RED BROWN MODERATELY SORTED SAND SILT WITH OCCASIONAL PEBBLES AND CHARCOAL WITHIN GRAVE 113.0016
113.0102	FILL	GRAVE	1.72	0.69	0	0.58	CIST STONES LINING ALL BUT THE EAST END OF GRAVE 113.0016
113.0103	FILL	PIT	0	0	0.58	0.09	FIRM MID ORANGE BROWN SAND SILT WITH OCCASIONAL SMALL SUB ANGULAR STONES
113.0104	CUT	PIT	0	0	0.58	0.09	SUB CIRCULAR WITH STEEP SIDES LEADING IMPERCEPTIBLY TO AN IRREGULAR BASE
113.0105	CUT	GRAVE	1.70	0.71	0	0.17	EAST TO WEST SUB OVAL CUT OF GRAVE 113.0020, WITH STEEP STRAIGHT SIDES LEADING SHARPLY TO AN IRREGULAR BASE
113.0106	FILL	GRAVE	1.70	0.71	0	0.17	MODERATELY COMPACT MID ORANGE BROWN SAND SILT WITH OCCASIONAL SMALL STONES
113.0107	CUT	DITCH	3.00	0.65	0	0.30	EAST TO WEST LINEAR WITH STEEP SIDES, STEEPER TO THE SOUTH, LEADING GRADUALLY TO A CONCAVE BASE
113.0108	FILL	DITCH	3.00	0.65	0	0.30	FIRM MID BROWN GREY SILT SAND WITH FREQUENT SMALL STONES AND GRAVELS
113.0109	FILL	DITCH	1.55	0.50	0	0.09	FRIABLE RED BROWN CLAY SILT WITH OCCASIONAL SUB ANGULAR STONES
113.0110	CUT	DITCH	1.55	0.50	0	0.09	EAST TO WEST LINEAR WITH GRADUALLY SLOPING SIDES LEADING GRADUALLY TO AN UNDULATING BASE
113.0111	FILL	GRAVE	1.72	0.69	0	0.58	FLAT BASE STONES OF GRAVE 113.0016
113.0112	CUT	GRAVE	1.90	0.80	0	0.40	EAST TO WEST SUB RECTANGULAR CUT OF GRAVE 113.0112, WITH ROUNDED CORNERS AND VERTICAL SIDES LEADING SHARPLY TO A FLAT BASE
113.0113	FILL	GRAVE	1.90	0.80	0	0.40	LOOSE MID ORANGE BROWN CLAY SILT WITH FREQUENT CHARCOAL AND SMALL TO MEDIUM STONES

Context	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
113.0114	FILL	GRAVE	0	0	0	0	EAST TO WEST CAPSTONES OF SCHIST AND SLATE OVER GRAVE 113.0018
113.0114	LAYER	LAYER	13.16	5.00	0	0	LOOSE MID RED BROWN SAND SILT WITH SOME SMALL TO MEDIUM STONES
113.0116	FILL	GRAVE	1.72	0.69	0	0.58	FRIABLE DARK YELLOW BROWN MODERATELY SORTED CLAY SILT WITH OCCASIONAL PEBBLES WITHIN GRAVE 113.0016
113.0117	CUT	GRAVE	2.22	0.74	0	0.31	EAST TO WEST SUB RECTANGULAR CUT OF GRAVE 113.0019, WITH VERTICAL SIDES LEADING SHARPLY TO A FLAT BASE
113.0118	FILL	GRAVE	2.22	0.74	0	0.31	FRIABLE DARK RED BROWN MODERATELY SORTED SAND SILT WITH OCCASIONAL SMALL STONES WITHIN GRAVE 113.0019
113.0119	LAYER	LAYER	7.30	0	0	0.59	FRIABLE DARK RED BROWN SAND SILT WITH SUB ANGULAR PEBBLES
113.0120	LAYER	LAYER	1.14	0	0	0.05	FIRM LIGHT BROWN WELL SORTED SILT CLAY WITH OCCASIONAL SMALL SUB ANGULAR PEBBLES
113.0121	FILL	GRAVE	1.72	0.69	0	0.58	FRIABLE DARK GREY BROWN CLAY SILT WITH FREQUENT SMALL PEBBLES AND MEDIUM STONES WITHIN GRAVE 113.0016
113.0122	LAYER	LAYER	0.85	0	0	0.08	FRIABLE MID ORANGE BROWN WITH OCCASIONAL SMALL STONES
113.0123	LAYER	LAYER	1.21	0	0	0.10	FIRM LIGHT BROWN SILT CLAY
113.0124	CUT	DITCH	1.00	0.80	0	0.12	EAST TO WEST LINEAR WITH GRADUAL STRAIGHT SIDES LEADING GRADUALLY TO A CONCAVE BASE
113.0125	FILL	DITCH	1.00	0.80	0	0.12	LOOSE MID ORANGE BROWN SAND SILT WITH OCCASIONAL MEDIUM STONES
113.0126	FILL	GRAVE	0	0	0	0	CIST STONES LINING GRAVE 113.0018
113.0127	FILL	GRAVE	0	0	0	0	FLAT SCHIST BASE STONES OF GRAVE 113.0018
113.0128	VOID						VOID
113.0129	VOID						VOID
113.0130	FILL	GRAVE	2.22	0.74	0	0.31	FLAT BASE STONES OF GRAVE 113.0019
113.0131	FILL	GRAVE	2.22	0.74	0	0.31	CIST STONES PARTIALLY LINING GRAVE 113.0019

Context	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
113.0132	FILL	GRAVE	2.22	0.74	0	0.31	PLASTIC DARK RED BROWN WELL SORTED CLAY SILT WITH OCCASIONAL PEBBLES
113.0133	FILL	PIT	0	0.50	0	0.07	FLAT STONES OVER INDUSTRIAL FEATURE
113.0134	FILL	PIT	0	0.50	0	0.20	STONE LINING OF INDUSTRIAL FEATURE
113.0135	FILL	PIT	0.90	0.80	0	0.38	FIRM MID GREY BROWN SAND SILT WITH COMMON MEDIUM TO LARGE SUB ROUNDED STONES
113.0136	CUT	PIT	0.90	0.80	0	0.38	SUB CIRCULAR WITH STEEP SIDES LEADING GRADUALLY TO A CONCAVE BASE
113.0137	LAYER	LAYER	2.86	0	0	0.23	FRIABLE LIGHT ORANGE BROWN CLAY SILT WITH OCCASIONAL SMALL STONES
113.0138	CUT	PIT	0.65	0.60	0	0.25	SUB CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A FLAT BASE
113.0139	FILL	PIT	0.65	0.60	0	0.25	SOFT GREY BROWN SILT CLAY WITH WELL SORTED OCCASIONAL CHARCOAL FLECKS, AND SUB ANGULAR AND SUB ROUNDED STONES (<0.10M)
113.0140	CUT	PIT	0.52	0.56	0	0.12	SUB CIRCULAR WITH GRADUAL SIDES LEADING IMPERCEPTIBLY TO A CONCAVE BASE
113.0141	FILL	PIT	0.52	0.56	0	0.12	FIRM GREY BROWN CLAY SILT WITH OCCASIONAL PEBBLES AND CHARCOAL WITH RARE BURNT BONE
113.0142	FILL	DITCH	2.00	0.96	0	0.13	FRIABLE ORANGE BROWN SILT CLAY WITH SUB ANGULAR AND SUB ROUNDED STONES (<0.05M)
113.0143	CUT	DITCH	2.00	0.96	0	0.13	SOUTH EAST IRREGULAR TERMINUS OF LINEAR WITH STEEP SIDES LEADING GRADUALLY TO A FLAT BASE
113.0144	FILL	PIT	0.65	0.60	0	0.09	LOOSE DARK GREY BROWN SILT CLAY WITH OCCASIONAL STONES AND CHARCOAL
113.0145	FILL	PIT	0.65	0.60	0	0.02	LOOSE GREY WHITE ASH
113.0146	FILL	PIT	0.65	0.60	0	0.10	LOOSE DARK BROWN BLACK SILT CLAY WITH VERY FREQUENT CHARCOAL

Context	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
113.0147	CUT	PIT	0.65	0.60	0	0.27	SUB CIRCULAR WITH GRADUAL SIDES LEADING IMPERCEPTIBLY TO A CONCAVE BASE
113.0148	LAYER	LAYER	0	0	0	0.37	FRIABLE MID DARK BROWN
113.0149	FILL	GRAVE	1.73	0.88	0	0.27	FRIABLE DARK RED BROWN SAND SILT WITH OCCASIONAL SMALL STONES
113.0150	CUT	GRAVE	1.73	0.88	0	0.27	EAST TO WEST SUB RECTANGULAR CUT OF GRAVE 113.0021, WITH ROUNDED CORNERS AND NEAR VERTICAL SIDES LEADING SHARPLY TO A FLAT BASE
113.0151	FILL	GRAVE	1.73	0.88	0	0.27	CIST STONES PARTIALLY LINING GRAVE 113.0021
113.0152	FILL	DITCH	3.00	0.98	0	0.14	FRIABLE ORANGE BROWN SILT CLAY WITH SUB ANGULAR AND SUB ROUNDED STONES (<0.05M)
113.0153	CUT	DITCH	3.00	0.98	0	0.14	SOUTH EAST IRREGULAR TERMINUS OF LINEAR WITH GRADUAL SIDES LEADING GRADUALLY TO AN IRREGULAR BASE
113.0154	FILL	GRAVE	1.73	0.82	0	0.27	FLAT STONE ON BASE OF GRAVE 113.0021
113.0155	FILL	PIT	2.70	1.64	0	0.07	LOOSE MID BROWN CLAY SILT WITH FREQUENT SMALL STONES AND OCCASIONAL CHARCOAL
113.0156	FILL	PIT	0	1.30	0	0.04	LOOSE DARK BROWN BLACK CLAY SILT WITH VERY FREQUENT CHARCOAL AND OCCASIONAL SMALL STONES
113.0157	FILL	PIT	0	1.32	0	0.10	LOOSE MID BROWN GREY CLAY SILT WITH FREQUENT LARGE STONES AND OCCASIONAL CHARCOAL
113.0158	FILL	PIT	0	0.68	0	0.06	LOOSE DARK GREY BLACK CLAY SILT WITH VERY FREQUENT CHARCOAL AND OCCASIONAL SMALL STONES
113.0159	FILL	PIT	0	0.40	0	0.10	LOOSE LIGHT BROWN GREY CLAY SILT WITH FREQUENT LARGE STONES
113.0160	CUT	PIT	2.70	1.64	0	0.46	SUB CIRCULAR WITH GRADUAL SIDES LEADING IMPERCEPTIBLY TO A CONCAVE BASE
113.0161	FILL	PIT	0.40	0.30	0	0.10	LOOSE MID GREY BROWN SILT CLAY WITH MODERATE SMALL STONES AND CHARCOAL

Context	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
113.0162	CUT	PIT	0.40	0.30	0	0.10	SUB OVAL WITH STEEP SIDES LEADING GRADUALLY TO AN IRREGULAR BASE
113.0163	FILL	PIT	1.06	0.78	0	0	LOOSE MID GREY BROWN SILT CLAY WITH FREQUENT CHARCOAL AND OCCASIONAL SMALL STONES
113.0164	CUT	PIT	1.06	0.78	0	0	SUB OVAL WITH GRADUAL SIDES LEADING GRADUALLY TO A CONCAVE BASE
113.0165	VOID						VOID
113.0166	GROUP NUMBER	GROUP	0	0	0	0	ROUGHLY CIRCULAR GROUP OF STAKE HOLES AROUND CENTRAL FEATURE [113.0136]
113.0167	FILL	GRAVE	1.73	0.82	0	0.27	FRIABLE DARK ORANGE BROWN CLAY SILT WITH OCCASIONAL SMALL STONES
113.0168	LAYER	LAYER	4.00	3.00	0	0.20	LOOSE MID GREY SAND SILT WITH PATCHES OF BURNING AND CHARCOAL, AND OCCASIONAL ANGULAR AND SUB ANGULAR SMALL STONES
113.0169	CUT	LINEAR	2.24	0.36	0	0.16	EAST TO WEST CURVED LINEAR WITH STEEP SIDES LEADING GRADUALLY TO A CONCAVE BASE
113.0170	FILL	LINEAR	2.24	0.36	0	0.16	CHARCOAL INCLUSIONS
113.0171	LAYER	LAYER	1.70	0.82	0	0	FIRM LIGHT GREY BROWN SILT CLAY WITH SMALL STONES AND CHARCOAL
113.0172	LAYER	LAYER	5.80	4.60	0	0	FRIABLE WITH ASH AND CHARCOAL
113.0173	CUT	PIT	0.60	0.41	0	0.37	SEMI CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A FLAT BASE
113.0174	FILL	PIT	0.60	0.41	0	0.18	FRIABLE MID RED BROWN SILT SAND WITH FREQUENT SMALL STONES AND OCCASIONAL MEDIUM STONE
113.0175	LAYER	LAYER	2.00	2.00	0	0	FIRM LIGHT GREY BROWN CLAY SILT WITH OCCASIONAL SMALL PEBBLES
113.0176	FILL	PIT	0.54	0	0	0.22	FRIABLE DARK GREY BLACK SILT SAND WITH FREQUENT CHARCOAL AND OCCASIONAL SMALL STONES

Context	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
113.0177	FILL	PIT	0.45	0	0	0.17	FRIABLE MID BLACK GREY SILT SAND WITH OCCASIONAL SMALL TO MEDIUM STONES, AND CHARCOAL
113.0178	CUT	PIT	0.62	0.46	0	0.02	SEMI CIRCULAR WITH GENTLY SLOPING SIDES LEADING IMPERCEPTIBLY TO A FLAT BASE
113.0179	FILL	PIT	0.62	0.46	0	0.02	FRIABLE DARK RED BROWN SAND SILT WITH OCCASIONAL SMALL AND MEDIUM STONES
113.0180	VOID						VOID
113.0181	FILL	PIT	0.33	0	0	0.03	FRIABLE DARK GREY BLACK SILT SAND WITH FREQUENT CHARCOAL AND OCCASIONAL SMALL STONES
113.0182	LAYER	LAYER	10.00	5.94	0	0	FRIABLE GREY BROWN MIXED DEPOSIT WITH ORANGE LENSES, CHARCOAL AND MEDIUM SUB ANGULAR STONES
113.0183	CUT	PIT	0	3.25	0	0.45	SUB OVAL WITH STEEP SIDES LEADING GRADUALLY TO A FLAT BASE
113.0184	FILL	PIT	0	3.25	0	0.13	FIRM LIGHT BROWN GREY CLAY WITH ORANGE MOTTLING AND RARE CHARCOAL FLECKS
113.0185	FILL	PIT	0	0.32	0	0.04	LOOSE DARK GREY BLACK SILT WITH 90% CHARCOAL
113.0186	STRUCTURE	WALL	2.80	0	0	0.30	NORTH EAST TO SOUTH WEST DEPOSIT OF STONES WITH NO BONDING
113.0187	VOID						VOID
113.0188	FILL	PIT	0	2.98	0	0.20	LOOSE LIGHT BROWN GREY CLAY SILT WITH OCCASIONAL CHARCOAL FLECKS
113.0189	CUT	PIT	7.45	5.10	0	0.31	SUB CIRCULAR WITH GRADUAL SIDES LEADING GRADUALLY TO A CONCAVE BASE
113.0190	FILL	PIT	7.45	5.10	0	0.31	FIRM MID GREY BROWN CLAY SILT WITH OCCASIONAL SMALL STONES AND RARE CHARCOAL FLECKS
113.0191	FILL	PIT	0	0.75	0	0.05	FRIABLE MID RED BROWN SILT CLAY WITH FREQUENT SMALL SUB ANGULAR STONES

Context	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
113.0192	FILL	DITCH	1.00	0.68	0	0.20	DARK BROWN YELLOW CLAY SILT WITH MEDIUM TO LARGE SUB ROUNDED STONES
113.0193	CUT	DITCH	1.00	0.68	0	0.20	SOUTH EAST ROUNDED TERMINUS OF LINEAR, WITH STEEP SIDES LEADING SHARPLY TO A FLAT BASE
113.0194	CUT	PIT	1.16	1.29	0	0.28	SUB CIRCULAR WITH STEEP SIDES LEADING GRADUALLY TO A FLAT BASE SLOPING DOWN TO NORTH WEST
113.0195	CUT	PIT	3.00	1.86	0	0.56	SUB OVAL WITH GRADUALLY SLOPING SIDES LEADING GRADUALLY TO A SLIGHTLY CONCAVE BASE
113.0196	FILL	PIT	1.16	1.29	0	0.28	LOOSE MID GREY BROWN SAND SILT WITH OCCASIONAL STONES
113.0197	CUT	POST HOLE	0	0	0.17	0.23	SUB CIRCULAR WITH STEEP STRAIGHT SIDES LEADING TO A ROUNDED POINT BASE
113.0198	FILL	POST HOLE	0	0	0.17	0.23	LOOSE DARK BROWN GREY SILT
113.0199	CUT	POST HOLE	0	0	0.15	0.25	CIRCULAR WITH VERTICAL SIDES LEADING GRADUALLY TO A CONCAVE BASE
113.0200	FILL	POST HOLE	0	0	0.15	0.25	FRIABLE DARK RED BROWN WELL SORTED CLAY SAND WITH OCCASIONAL SMALL STONES (<0.05M)
113.0201	CUT	PIT	0	0.64	0	0.30	SUB OVAL WITH STEEP SIDES LEADING GRADUALLY TO A FLAT BASE
113.0202	FILL	PIT	0	0.64	0	0.30	FIRM DARK GREY BROWN CLAY SILT WITH OCCASIONAL CHARCOAL FLECKS
113.0203	VOID						VOID
113.0204	CUT	STAKE HOLE	0.12	0	0	0	CIRCULAR
113.0205	CUT	STAKE HOLE	0	0	0	0	CIRCULAR
113.0206	CUT	STAKE HOLE	0.18	0	0	0	CIRCULAR
113.0207	LAYER	LAYER	2.38	0	0	0.07	FRIABLE CHARCOAL DEPOSIT WITH GREY SILTY SAND PATCHES
113.0208	LAYER	LAYER	0	0	0	0.27	FRIABLE MID BROWN

Appendix IV

AB1703 Wylfa Newydd Early Clearance Works

Hotspot 11-13 Finds Assessment

Appendix IV. AB1703 Hotspot 11-13 Finds Assessment

WYLFA HOTSPOT 11/13 FINDS ASSESSMENT

Introduction

A total of 25 Small Find numbers were allocated to 80 artefacts, weighing 454g, were recovered from an archaeological investigation on Area HS11-13, Anglesey. The finds assemblage was transferred to Carlisle and assessed by Wardell Armstrong. One of the small finds is absent from the assemblage.

All finds were dealt with according to the recommendations made by Watkinson & Neal (1998) and to the Chartered Institute for Archaeologists (CIfA) Standard & Guidance for the collection, documentation, conservation and research of archaeological materials (CIfA 2014b). All artefacts have been boxed according to material type and conforming to the deposition guidelines recommended by Brown (2011), EAC (2014) and the Oriel Ynys Môn. The project has the unique identifier WA 2019 / CL12283 / AB1703 / 35-2016.

The material archive has been assessed for its local, regional and national potential in line with the archaeological research framework for Wales (https://www.archaeoleg.org.uk/documents2017.html).

The finds assessment was compiled by Sue Thompson with the burnt bone analysed by Megan Stoakley.

Quantification of bulk finds by material and context is given in Table 1 and quantification of finds recovered from the environmental samples is included in Table 2.

Prehistoric Pottery

This is another excavation area in the wet valley close to Rhwng Dau Fynydd. It is about 150m north of Hotspot 14 and the pottery from this site is broadly contemporary with the Food Vessels from that settlement, but there is no structural evidence here, only pits and a possible oven and flue (without finds) at the northern extremity of the excavated area.

The major find in this area is a group of Early Mediaeval graves, 13 in quite organized lines and 5 more scattered, but all maintaining the important E-W orientation.

The pottery comes from 2 locations, both close to the northwestern edge of the excavation trench and neither fully excavated. **Pit 113.0173,** is a small pit with 2 fills: 113.0177 which produced a single rim sherd (Pot 1) and 113.0176 which contained a small piece of a flat base (Pot 2). Some 2m away was **a surface scatter 113.0171** of 27 sherds, most of which belong to Pot 3. There are quite a number of other features in this area, some quite complex intercut

pits, but they did not contain pottery.

However the Evaluation Trench 134 dug by Wessex Archaeology in 2016, the northern part of which runs through this area, is said to have produced a surface scatter of 11 sherds, identified at the time as Early Neolithic. I am trying to find these sherds to check whether that was a correct identification. The area was apparently known as A13 during the Evaluation phase.

Pot 1 From Pit 113.0173 (Context 113.0177) Find 16 (*illustrated*)

A single rim sherd (60 x 62 x 9-17mm) from a vessel probably 240mm in diameter. The fabric is brown on the outside and black inside (with a good deal of sooting). The surfaces are smooth and feel slightly sandy. It is very hard fired but it is not densely gritted. The grits are a dark angular stone, small to medium (2-5mm) in size. It has a narrow rounded collar with a concave internal bevel. Both surfaces are decorated with lines of triangular/circular stab marks; 3 on the outside and probably 2 on the inside where the lines are less coherent. Below the collar the neck is decorated with quite a largescale herringbone pattern of thick incised lines.

Pot 2 From Pit 113.0173 (context 113. 0176) Find 17 (*illustrated*)

A small piece from a base (45 x 30 x 13mm). This is a very different fabric, very low-fired and crumbly, but densely gritted with small angular pieces of pale rhyolite. There are no other sherds in this fabric.

Pot 3 From **surface scatter 113.0171** Finds 9, 10, 11, 13, 14, 15, 19 and 24. Finds 11 and 24 contain a mixture of sherds of Pot 3 and perhaps different pots; as might Finds 12 and 23. There are 27 sherds in all from this surface scatter. (*illustrated*)

Most of these sherds come from the upper part of a small vase-shaped pot, 210mm in diameter and perhaps 200-240mm tall, decorated inside and out with horizontal lines of thin loosely twisted cord, 7 on the inside running down to a slight bevel, and probably 11 on the outside ending at a gently rounded shoulder. The undecorated lower body is not well represented (7 sherds) and there is no sign of the expected flat base. The joins between the individual finds suggest that the broken pot had been trodden into the ground and not subsequently moved much.

The outer surface is pink and the inner is grey; the clay is densely gritted with medium (c 3-5mm) stone grits which do not appear on the well-smoothed surfaces. The smaller dark grits seem to be concentrated within the outer coils and the inner coils contain some larger rhyolite pieces. The overlapping coils in sherds 9 and 10 are of interest in terms of the manufacturing process. The undecorated body surfaces are particularly well-smoothed and the pot has been

very competently fired.

Finds 9 & 10. Two single sherds joining at a coil overlap to form a section of the waist (65 x 65 x 12-14-10mm).

Finds 14 & 11 join at a coil overlap to form a section of rim and neck (55 x 36 x 10-14mm).

Find 11 contains another small scrap which joins Find 15 at the same coil overlap and a separate piece of rim (30 x 13 x 10mm). It also contains another featureless sherd (33 x27 x 8mm) in a very hard fabric, grey throughout, which may be from a fourth pot.

Find 12 is a single undecorated sherd (35 x 25 x 11mm) in a pink/grey fabric which seems rather softer than Pot 3, but the grits seem to be similar.

Find 13 & 19 join to form a section of the undecorated body just below the shoulder. Find 13 (62 x 55 x 11-13mm) has a diameter of 200mm which provides a clue to the profile of the lower body. The outer surface of this sherd is particularly well smoothed. Find 19 (40 x 40 x 14mm) is closer to the shoulder.

Find 14 (40 x 42 x 13mm) is part of the neck, joining a sherd from Find 11. It is grey throughout; generally, the upper part of the pot is less pink than the lower sherds

Find 15 (30 x 30 x11mm) is another small piece of the neck with a joining spall from find 11.

Find 23 A single curved sherd (40 x 30 x 13mm) with a good inner surface but the outer is mainly lost. This might be from the shoulder of Pot 3 but the fabric seems rather different – more lightweight.

Find 24 5 undecorated sherds: the largest (30mm x 40mm x 11mm) may be close to the base but seems, like find 12, to be a softer fabric; 3 others (largest 30 x 30 x 12mm) are very like Find 13, pink/grey smooth surfaced; and the fifth is a curved sherd (30 x 20 x 11mm) which seems a bit too thin to be the shoulder of Pot 3, but the fabric fits.

*Comment***.** The pottery from these two locations, Pit 0173 and surface scatter 0171, is all consistent with an identification as Food Vessels, like the pottery from Hotspot 14, and the two groups will be discussed together. It is disappointing that there is no structural evidence here, but the house at Hotspot 14 is a good example and the two sites, being only 150m apart, might reasonably be considered one settlement unit.

Post-medieval Pottery

Four sherds of post-medieval pottery, weighing a total of 36g, were recovered from context (**113.0005**) and subsoil deposits; they were in moderate to good condition.

The pottery was examined with a x10 hand lens and recorded according to national guidelines (PCRG, SGRP & MPRG 2016). Where possible, mnemonic fabric codes were assigned when they could be identified; this was undertaken using material published by MOLA (2015).

The post-medieval pottery included red earthenware with clear and black glaze (REFR) and slipware decoration (SLRE) and refined white earthenware (REFW).

Vessel types include hollow and flat wares and represent typical late post-medieval household items including tablewares and are likely to be of 18th to 20th century in date.

No further work is necessary on the post-medieval pottery.

Stone

Three stone small finds weighing a total of 41g were recovered from context (**113.0005**). The stone artefacts comprise two small smooth pebbles which may be naturally occurring, although **SF2** is very regular and could have been used as a counter, and two re-fitting fragments of an incomplete trapezoidal stone **SF1**. This stone is flat with a roughly central circular 14mm diameter hole and is a fragment of sandstone originally of thicker depth. The purpose of this object is unknown.

As the stone objects were recovered along with post-medieval pottery, it possible that the worked stone is of a similar date.

Burnt Bone

Tiny fragments of burnt bone were recovered as **SF25** from context (**113.0135**). The burnt animal bone fragments are in very poor condition and are highly abraded and small (<3mm). The fragments likely comprise remnants of domestic food waste and could not be identified to species or anatomical element.

No further analysis is recommended.

Finds from Environmental Samples

Very small quantities of highly abraded and fragmentary ceramic building material, unidentifiable animal bone and industrial waste were recovered from five environmental samples (Table 2).

No further work is recommended.

Statement of Potential

The prehistoric pottery recovered from Hotspot 11/13 is of high archaeological potential and of regional significance. Further analysis on this material is recommended, including further

detailed fabric analysis, illustration and comparative research with neighbouring prehistoric archaeological sites.

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Table 1: Quantification of Bulk Finds

Context	SF #	Material	Qty	Wgt (g)	Period	Refined Date	Comments
113.0005	1	Stone	2	10	Prehistoric - PM		Refitting thin sandstone trapezoidal shaped 68x65x2mm with central circular hole 14mm
113.0005	2	Stone	1	2			Counter? Small rounded flat pebble
113.0005	3	Stone	1	29			Natural pebble
113.0063	4	Pottery?	1	1	Prehistoric - PM		Tiny fragment. Sandy fabric. Highly abraded
Subsoil	5	Pottery	1	10	PM-Mod	19th-20th	White earthenware REFW
113.0005	6	Pottery	1	5	Post Med	18th-19th	Slip ware - hollow ware SLRE
113.0005	7	Pottery	1	18	Post Med	18th-19th	Red earthenware fabric, external white slip and clear glaze REFR
113.0171	8	Pottery	1	1	Prehistoric	Neo-BA	Tiny fragment. Sandy fabric
113.0171	9	Pottery	1	28	Prehistoric	Neo-BA	External corded impression - joins SF 10
113.0171	10	Pottery	1	32	Prehistoric	Neo-BA	Internal and external corded impression - joins SF 9
113.0171	11	Pottery	5	22	Prehistoric	Neo-BA	2 x rim sherd. Impressed corded decoration - joins SF 14
113.0171	12	Pottery	1	10	Prehistoric	Neo-BA	Sandy fabric, oxidised externally, blacked internally. Same vessel as SF 24?
113.0171	13	Pottery	1	50	Prehistoric	Neo-BA	Smooth sandy fabric, oxidised externally, blacked internally. Same as SF 19
113.0171	14	Pottery	1	18	Prehistoric	Neo-BA	Impressed corded decoration internally and externally. joins SF 11
113.0171	15	Pottery	1	10	Prehistoric	Neo-BA	Impressed corded decoration. Same as SF 11/14
113.0177	16	Pottery	1	73	Prehistoric	Neo-BA	Rim sherd, external decoration
113.0176	17	Pottery	1	18	Prehistoric	Neo-BA	Base sherd, poorly fired porous fabric, large frequent inclusions. Same as SF21. Includes some slag?
	18	MISSING					MISSING
113.0171	19	Pottery	1	24	Prehistoric	Neo-BA	Smooth sandy fabric, oxidised externally, blacked internally. Same as SF 13
113.0171	20	Pottery	8	18	Prehistoric	Neo-BA	Small fragments
113.0176	21	Pottery	12	12	Prehistoric	Neo-BA	Small fragments, poorly fired porous fabric, large inclusions. Same as SF17
113.0005	22	Pottery	1	3	Post Med	18th - 19th C	Black glazed hollow ware
113.0171	23	Pottery	1	14	Prehistoric	Neo-BA	Thick walled grey fabric, abraded
113.0171	24	Pottery	5	45	Prehistoric	Neo-BA	Sandy fabric, oxidised externally, blacked internally. Same vessel as SF 12?
113.0135	25	Burnt bone	30	1		Unknown	Tiny fragments of burnt bone – no species / anatomical element ID
			80	**454**			

Table 2: Quantification of Finds from Environmental Samples

Context	<E>	Material	Actual qty	Qty 1-10	Weight (g)	Weight <1g	>4mm
113.009	52	Bone		yes	5	-	yes
113.0171	79	CBM	1	-	5	-	yes
113.0038	16	Ind waste		yes	0	yes	yes
113.0101	61	Ind waste		yes	0	yes	yes
113.007A	43	Ind waste		yes	0	yes	yes

Appendix V

AB1703 Wylfa Newydd Early Clearance Works

Hotspot 11-13 Prehistoric Pottery Report

Appendix V. AB1703 Hotspot 11-13 Prehistoric Pottery Report

This is another excavation area in the wet valley close to Rhwng Dau Fynydd. It is about 150m north of Hotspot 14 and the pottery from this site is broadly contemporary with the Food Vessels from that settlement, but there is no structural evidence here, only pits and a possible oven and flue (without finds) at the northern extremity of the excavated area.

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However the Evaluation Trench 134 dug by Wessex Archaeology in 2016, the northern part of which runs through this area, is said to have produced a surface scatter of 11 sherds, identified at the time as Early Neolithic. I am trying to find these sherds to check whether that was a correct identification. The area was apparently known as A13 during the Evaluation phase.

Pot 1 From Pit 113.0173 (Context 113.0177) Find 16 (*illustrated*)
A single rimsherd (60 x 62 x 9-17mm) from a vessel probably 240mm in diameter. The fabric is brown on the outside and black inside (with a good deal of sooting). The surfaces are smooth and feel slightly sandy. It is very hard fired but it is not densely gritted. The grits are a dark angular stone, small to medium (2-5mm) in size. It has a narrow rounded collar with a concave internal bevel. Both surfaces are decorated with lines of triangular/circular stab marks; 3 on the outside and probably 2 on the inside where the lines are less coherent. Below the collar the neck is decorated with quite a largescale herringbone pattern of thick incised lines.

Pot 2 From Pit 113.0173 (context 113. 0176) Find 17 (*illustrated*)
A small piece from a base (45 x 30 x 13mm). This is a very different fabric, very low-fired and crumbly, but densely gritted with small angular pieces of pale rhyolite. There are no other sherds in this fabric.

Pot 3 From **surface scatter 113.0171** Finds 9, 10, 11, 13, 14, 15, 19 and 24. Finds 11 and 24 contain a mixture of sherds of Pot 3 and perhaps different pots; as might Finds 12 and 23. There are 27 sherds in all from this surface scatter. (*illustrated*)
Most of these sherds come from the upper part of a small vase-shaped pot, 210mm in diameter and perhaps 200-240mm tall, decorated inside and out with horizontal lines of thin loosely twisted cord, 7 on the inside running down to a slight bevel, and probably 11 on the outside ending at a gently rounded shoulder. The undecorated lower body is not well represented (7 sherds) and there is no sign of the expected flat base. The joins between the individual finds suggest that the broken pot had been trodden into the ground and not subsequently moved much.

The outer surface is pink and the inner is grey; the clay is densely gritted with medium (c 3-5mm) stone grits which do not appear on the well-smoothed surfaces. The smaller dark grits seem to be concentrated within the outer coils and the inner coils contain some larger rhyolite pieces. The overlapping coils in sherds 9 and 10 are of interest in terms of the manufacturing process. The undecorated body surfaces are particularly well-smoothed and the pot has been very competently fired.

Finds 9 & 10. Two single sherds joining at a coil overlap to form a section of the waist (65 x 65 x 12-14-10mm)
Finds 14 & 11 join at a coil overlap to form a section of rim and neck (55 x 36 x 10-14mm)
Find 11 contains another small scrap which joins Find 15 at the same coil overlap and a separate piece of rim (30 x 13 x 10mm). It also contains another featureless sherd (33 x27 x 8mm) in a very hard fabric, grey throughout, which may be from a fourth pot.
Find 12 is a single undecorated sherd (35 x 25 x 11mm) in a pink/grey fabric which seems rather softer than Pot 3, but the grits seem to be similar.
Find 13 & 19 join to form a section of the undecorated body just below the shoulder. Find 13 (62 x 55 x 11-13mm) has a diameter of 200mm which provides a clue to the profile of the lower body. The outer surface of this sherd is particularly well smoothed. Find 19 (40 x 40 x 14mm) is closer to the shoulder.
Find 14 (40 x 42 x 13mm) is part of the neck, joining a sherd from Find 11. It is grey throughout; generally the upper part of the pot is less pink than the lower sherds
Find 15 (30 x 30 x11mm) is another small piece of the neck with a joining spall from find 11.
Find 23 A single curved sherd (40 x 30 x 13mm) with a good inner surface but the outer is mainly lost. This might be from the shoulder of Pot 3 but the fabric seems rather different – more lightweight.
Find 24 5 undecorated sherds: the largest (30 x 40 x 11mm) may be close to the base but seems, like find 12, to be a softer fabric; 3 others (largest 30 x 30 x 12mm) are very like Find 13, pink/grey smooth surfaced; and the fifth is a curved sherd (30 x 20 x 11mm) which seems a bit too thin to be the shoulder of Pot 3, but the fabric fits.

Comment
The pottery from these two locations, Pit 0173 and surface scatter 0171, is all consistent with an identification as Food Vessels, like the pottery from Hotspot 14, and the two groups will be discussed together. It is disappointing that there is no structural evidence here, but the house at Hotspot 14 is a good example and the two sites, being only 150m apart, might reasonably be considered one settlement unit.

Frances Lynch April 30th 2020

Appendix VI

AB1703 Wylfa Newydd Early Clearance Works

Hotspot 14 Prehistoric Pottery Report

Appendix VI. AB1703 Hotspot 14 Prehistoric Pottery Report

This is one of a group of occupation sites in the shallow wet valley close to the farms of Rhwng Dau Fynydd and Tyddyn-gele (NGR 349 927). Another area of less coherent, but certainly contemporary, occupation was found some 100m further up the valley to the north at Hotspot 11-13 (NGR 349 928). The pottery from that site will be considered alongside that from Hotspot 14.

The site was identified during the Evaluation Stage in 2016 by Wessex Archaeology who also undertook fuller excavation in May 2018 which was completed by Brython Archaeology, alongside their work at Hotspot 11-13, in September of that year. This change may have caused some of the confusions seen at this site. This is regrettable because it is a site with better artefactual and structural evidence than most.

The remains consist of a post-built round house with a central hearth and ring of 6 posts some 4m in diameter, surrounded on the east (upper) side by a very shallow drip trench with a diameter of about 8.5m. The western side may have been damaged by flooding since there is a 3m wide wet gulley or stream bed filled with burnt stone and containing some pottery and lithics which might have been swept up from around the side of the house. There is some evidence to suggest attempts to consolidate the ground again, but the proximity of the marsh may have forced the abandonment of the house. An arc of 4 postholes just in front of the porch of this house may suggest that houses needed to be frequently replaced at this spot.

The pottery is all consistent with an Early Bronze Age date and can be identified as Food Vessels. The same is true of Hotspots 11-13. Two of the pots (1 and 2) come from a large pit (22009) between the post ring and the drip trench on the south side. They are said to have been lying right on the bottom of the pit before any silting or filing had taken place. Pots 3 and 4, together with some flints, come from Context 114.002 which is described as 'fill of ditch with charcoal'. This is the broad stream bed to the west of the round house which was later investigated with a sondage 114.0044). The 5th pot, only a single small sherd, comes from the stone consolidation layer over the wet area. It was found with a spindlewhorl. A fragment of burnt clay (CBM) or pottery was found in the southern terminal of the drip trench (wessexSF.3 context 2016) but has now crumbled to dust, so no more can be said about it.

HS 14. Pot 1 from Context 22010 (Pit 22009) Bag Marked WessexSF 4 (*illustrated*)
Two of the 3 sherds are from the same pot which had a diameter of 240mm. Both are in a hard but fragile fabric, brown throughout with smooth surfaces but a bit lumpy. The clay contains as lot of large rounded and angular stone grit 5-8mm in size.

The rimsherd (52 x 52 x 8mm (rim) 16mm (cordon) 15mm (wall))is decorated: Exterior : 2 incised counter-hatched lines between the upright rim and a low cordon. On the inside is a shallow horizontal groove and a dot below it. The second sherd (originally 52 x 40 x 16-15mm) is now completely disintegrated, but when I recorded it in 2018 it showed the external cordon with some seed-like impressions in it and the internal groove and dot. This was at a slightly different level from that on the rimsherd.

HS 14. Pot 2 from the same context, Pit 22009 (*illustrated*)
A single shoulder sherd (48 x 55 x 10-16-13mm) from a different pot 200mm in diameter. The fabric is yellow inside and out with a black core; rather soft, with small stone grits, rhyolite and a darker rock. The decoration, spaced vertical lines on the neck is in whipped cord.

Context 114.0002 is described in the context Register as 'fill of ditch with charcoal', but the *Assessment Report* Para 6 says that 10 sherds and 3 flints came from 114.0044 which is described as

the top of the 'consolidation' layer over the edge of the marsh. The '10 sherds' approximate to the 12 sherds present (Pots 3 and 4: Finds 1, 4 and 14). The photo shows that there were 3 sondages through this consolidation layer so it is not quite clear where exactly this pottery came from, but the stratigraphic position is that they were found close to the exposed surface at an early stage, and come from the upper fill, probably removed from their original context in antiquity by water or human clearing up activities.

HS 14. Pot 3 from context 114.0002 Finds 1 and 14 (*illustrated*)
There are 6 sherds of this pot; 2 substantial segments (70 x 65 x 9mm and 60 x 50 x 10mm) running from rim to shoulder giving a confident reconstruction as a small urn-shaped pot 145mm in diameter at the bottom of the narrow collar and 165mm at the crisp shoulder. One body sherd from Find 1(50 x 40 x 11mm) joins the smaller section of rim from Find 14 on an ancient break at the shoulder, making a profile section of 100mm. Two other body sherds (50 x 40 x 11m and 30 x 32 x 11) have been broken recently and cannot be fully restored. A fourth curved body sherd (30 x 35 x 10mm) comes from Find 14 with the smaller rim section, but does not join it.

The pot is completely undecorated and made from a hard, red/black fabric with a smooth surface. Despite its careful finish it is slightly lopsided, as many coil-made pots are. It contains plentiful angular stone grit varying in size from 3-7mm. There is probably rhyolite and some other rock in it.

HS 14. Pot 4 from Context 114.0002 Find 4 (*illustrated*)
2 shoulder sherds, no rim and 4 pieces from the body of a vase about 180mm in diameter at the shoulder; none join. The shoulder sherds are 55 x 55 x 11-12mm and 40 x 35 x 10-13mm. A body sherd close to the shoulder is 68 x 60 x 10-12mm and the largest of the three other pieces is 40 x 35 x 9mm.

The decoration on the shoulder, and probably the missing neck, is impressed close-set horizontal lines of twisted cord, rather variable in thickness and depth of impression. The bottom line is made with a double twisted cord, but this is not the case everywhere. The body below the shoulder is undecorated.

The fabric is hard, orangey pink outside, black inside with smooth surfaces. There is a good deal of angular stone grit mostly medium in size (c. 5mm).

HS 14. Pot 5 from Context 114.0032: the 'Stony Layer' to the west of the consolidation layer. Find 6 (*illustrated*)
A single small concave sherd (30 x 25 x 11-13mm) from the neck, close to the shoulder; decorated with light incised hatching. The fabric is very hard, orange-surfaced on a grey core with masses of sharp angular grits 7+mm - 3mm in size, of dark and white rock. The white grit might possibly be burnt flint.

HS 13. Pot 1 From Pit 113.0173 (Context 113.0177) Find 16 (*illustrated*)
A single rimsherd (60 x 62 x 9-17mm) from a vessel probably 240mm in diameter. The fabric is brown on the outside and black inside (with a good deal of sooting). The surfaces are smooth and feel slightly sandy. It is very hard fired but it is not densely gritted. The grits are a dark angular stone, small to medium (2-5mm) in size. It has a narrow rounded collar with a concave internal bevel. Both surfaces are decorated with lines of triangular/circular stab marks; 3 on the outside and probably 2 on the inside where the lines are less coherent. Below the collar the neck is decorated with quite a largescale pattern of thick incised herringbone lines.

HS 13. Pot 2 From Pit 113.0173 (context 113. 0176) Find 17 (*illustrated*)

A small piece from a base (45 x 30 x 13mm). This is a very different fabric, very low-fired and crumbly, but densely gritted with small angular pieces of pale rhyolite. There are no other sherds in this fabric at either site.

HS 13. Pot 3 From **surface scatter 113.0171** Finds 9, 10, 11, 13, 14, 15, 19 and 24. Finds 11 and 24 contain a mixture of sherds of Pot 3 and perhaps different pots, as might Finds 12 and 23. There are 27 sherds in all from this surface scatter. (*illustrated*)

Most of these sherds come from the upper part of a small vase-shaped pot, 210mm in diameter and perhaps 200-240mm tall, decorated inside and out with horizontal lines of thin loosely twisted cord, 7 on the inside running down to a slight bevel, and probably 11 on the outside ending at a gently rounded shoulder. The undecorated lower body is not well represented (7 sherds) and there is no sign of the expected flat base. The joins between the individual finds suggest that the broken pot had been trodden into the ground and not subsequently moved much.

The outer surface is pink and the inner is grey; the clay is densely gritted with medium (c 3-5mm) stone grits which do not appear on the well-smoothed surfaces. The smaller dark grits seem to be concentrated within the outer coils and the inner coils contain some larger rhyolite pieces. The overlapping coils in sherds 9 and 10 are of interest in terms of the manufacturing process. The undecorated body surfaces are particularly well-smoothed and the pot has been very competently fired.

Finds 9 & 10. Two single sherds joining at a coil overlap to form a section of the waist (65 x 65 x 12-14-10mm)

Finds 14 & 11 join at a coil overlap to form a section of rim and neck (55 x 36 x 10-14mm)

Find 11 contains another small scrap which joins Find 15 at the same coil overlap and a separate piece of rim (30 x 13 x 10mm). It also contains another featureless sherd (33 x27 x 8mm) in a very hard fabric, grey throughout, which may be from a fourth pot.

Find 12 is a single undecorated sherd (35 x 25 x 11mm) in a pink/grey fabric which seems rather softer than Pot 3, but the grits seem to be similar.

Find 13 & 19 join to form a section of the undecorated body just below the shoulder. Find 13 (62 x 55 x 11-13mm) has a diameter of 200mm which provides a clue to the profile of the lower body. The outer surface of this sherd is particularly well smoothed. Find 19 (40 x 40 x 14mm) is closer to the shoulder.

Find 14 (40 x 42 x 13mm) is part of the neck, joining sherd from Find 11. It is grey throughout; generally the upper part of the pot is less pink than the lower sherds

Find 15 (30 x 30 x11mm) is another small piece of the neck with a joining spall from find 11.

Find 23 A single curved sherd (40 x 30 x 13mm) with a good inner surface but the outer is mainly lost. This might be from the shoulder of Pot 3 but the fabric seems rather different – more lightweight.

Find 24 5 undecorated sherds: the largest (30 x 40 x 11mm) may be close to the base but seems, like find 12, to be a softer fabric; 3 others (largest 30 x 30 x 12mm) are very like Find 13, pink/grey smooth surfaced; and the fifth is a curved sherd (30 x 20 x 11mm) which seems a bit too thin to be the shoulder of Pot 3, but the fabric fits.

Comment on the pottery from Hotspots 14 and 11-13.

Reasonable parallels for all these pots can be found amongst the Food Vessels of Anglesey and north Wales. The particularly interesting thing about this assemblage is that it is associated with settlement rather than burial. This makes it unique in Anglesey and rare in most parts of the country.

Food Vessels in Anglesey include the occasional Bowl, such as that from Merddyn Gwyn (Lynch 1991, 187 Fig 52.2), but are predominately Vase Food Vessels which come in a variety of sizes. All those known previously have come from burial contexts where the larger ones contain the cremated bone, but smaller ones, like HS 13.3 and HS 14.3, may be used as accessory vessels. Obviously domestic

use would have called for a variety of container sizes and it is clear from this assemblage that the containers eventually used for the burial of the dead were taken from among the pottery available in the home.

HS 14.1 This is very close to a poorly preserved pot from Bedd Branwen (Lynch 1971,33-4 Lynch 1991, 170, Fig 45). This Pot E is unlike most of the vessels from that barrow, but was judged to be a Ridged Food Vessel by Dr Ian Longworth. He was more right than I thought he was at the time! The upright cordoned rim and its internal decoration is almost identical, but not the external herringbone hatching, though this is another popular Food Vessel motif, also seen on HS 13.1. Pot E, like HS 14.1, was poorly fired with large grits.

HS 14.2 This is a single piece from the shoulder of a Vase decorated with whipped cord in vertical lines down the neck. This is not an especially typical Food Vessel, either in the way the decoration is set out, nor the use of whipped rather than twisted cord, though whipped cord is seen on the large Vase Food Vessel from Merddyn Gwyn, the burial for which the Beaker-period mound was enlarged (Lynch 1991, 187, Fig 52.1).

HS 14.3 This is a small plain version of the Vase Food Vessel with a narrow collar and a sharp shoulder. The height is uncertain but was probably about 160mm, very much the same size as the equally plain Pot K from Bedd Branwen which had been an accessory vessel, not a burial urn. Pot K is described as a Collared Urn, but in truth the difference between an early Collared Urn and a Vase Food Vessel is the product of modern archaeological typology and, when styles are shown to be contemporary, there is a great deal of fluidity. An analysis of the clays, grits and firing technique of typical pots in both styles from Moel Goedog in Merioneth showed that all were likely to have been made in the same workshop (D A Jenkins in Lynch 1984, 45-7).

HS 14.4 What remains of this pot is very closely comparable to HS 13.3, though the shoulder is more sharply defined. With a shoulder diameter of 180mm this is a smaller vase than those used for burial, and this domestic assemblage allows us to see more of this group of smaller pots. Those eventually used for burials are a sub-set of a broader range of equipment.

HS 14.5 This is a fragment of neck from near the shoulder and does not add much to our knowledge, but the grits are unusual and might repay study.

HS 13.1 This is a substantial rimsherd from the rim and neck of a large Vase Food Vessel some 240mm in diameter. The curved collar and concave internal bevel are best paralleled in a pot from a burial cairn on Carnedd Howell above Llandygai, near Bangor (Savory 1956 Fig 3. 10) but the decoration of rough stabs and incised herringbone can be found on several Anglesey examples, notably the vase from Cerrig Dewi (Lynch 1991, 190, Fig 53.7), at Bedd Branwen on Pot E and on the Early Collared Urn found there in 1813 (Lynch 1991,170, Fig 45), and here on HS 14.1.

HS 13.2 This is a flat base in a locally unusual fabric, but within the range of Early Bronze Age practice.

HS 13.3 This is the best-preserved of the HS13 pots, trodden underfoot in a busy area of pits and ovens. It is a medium –sized Vase Food Vessel, 210mm in diameter and perhaps about the same in height. It has a more gently curved profile than some of the others and is decorated with impressed lines of twisted cord inside and out. The closest parallel is the slightly smaller Accessory Vessel (8) from the richest burial in the Llanddyfnan barrow (Lynch 1991, 177 Fig 48). This burial, in a larger Vase Food Vessel , was accompanied by a small decorated bronze dagger of Camerton-Snowshill type which links it to the second half of the Wessex Culture. Another Anglesey pot which

is close to HS 13.3 is Vessel 5 from the cemetery group from Cae Mickney, decorated with a slightly more complex pattern of cord impressions (Lynch 1991, 197 Fig 55.5).

Dating

This pottery can be dated typologically to a period when Collared Urns were developing and Food Vessel s were at the beginning of their decline – a period from 3600 – 3500 in radiocarbon years BP (2000 – 1750 cal BC). The fact that many of their typological parallels are burial urns from Bedd Branwen and Llanddyfnan demonstrates that the early Urns and later Food Vessels overlap in their period of use and, conveniently, revised radiocarbon dates on the cremated bone from a number of Welsh cairns, including Bedd Branwen, have been reviewed and published by Brindley in her study of the Irish Food Vessels (2007, 361-369). The association at Bedd Branwen and at Llanddyfnan with the second half of the Wessex Culture trading nexus suggests that the Vase Food Vessel was in use in Anglesey throughout the period 2000-1750 cal BC.

Settlement context

This prosperous and expansive period is, surprisingly, a time when evidence for settlement is difficult to find. This is particularly true of Wales. Here the best parallel for the situation at Hotspot 14 is that at Stackpole Warren in Pembrokeshire, a similar coastal environment where small areas of activity were scattered amongst the sand dunes, none of them providing much evidence for concentration of population (Benson *et al* 1990). The element which is missing in the Wylfa area is the provision of some monumental public centre, which in Pembrokeshire was provided by The Devil's Quoit, a standing stone which was the focus of burials and ceremony over many centuries.

It is under the stone platform around this standing stone that the best evidence for the contemporary domestic structures was found, though demolition and re-building has made the detail difficult to disentangle. In broad terms the comparison is good. The size of the ring of posts supporting the roof is the same and initially the Stackpole house had a similar central hearth. Both houses had a long and substantial porch. It is the size – around 4-5m -- which most clearly distinguishes these Early Bronze Age houses from those of the Middle and Later Bronze Age which are between 7 and 8m in diameter. The convincing ring of posts at EV9 near Tregele is a good example of such a house and is associated with a range of competently made pottery which completely lacks the variation of styles and decoration that is such a feature of the Late Neolithic and Early Bronze Age, when there was a lot of cultural investment in the pottery used in the home and for more ceremonial roles.

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Hotspot 15

I was sent the Summary Report on Hotspot 15 but there are no prehistoric finds mentioned and no pottery was sent.

I'm afraid I can't make any helpful comments on the pits and postholes judged to predate the stone structures on the site. However, since it is clearly part of quite an extensive area of earlier Bronze Age activity, it is likely that some, if not all, might belong to that period.

Frances Lynch May 6th 2020

Appendix VII

AB1703 Wylfa Newydd Early Clearance Works

Hotspot 11-13 Palaeoenvironmental Assessment

Appendix VII. AB1703 Hotspot 11-13 Palaeoenvironmental Assessment

Palaeoenvironmental assessment

1.1 Introduction

1.1.1 Twenty-eight bulk samples were taken during the excavation on Hotspot 14 at Wylfa Newydd Nuclear Power Plant located in Anglesey, North Wales. Wessex Archaeology, who initially undertook the excavation on this area, took ten samples, (although only nine were received at Carlisle) and Brython Archaeology (who took over from Wessex on this site) presented 19 samples. A total weight of 429kg (296l) of sediment was processed for this stage of works. Further details for each sample can be found in Tables 1 (Brython samples) and 2 (Wessex samples).

1.1.2 The environmental assessment was undertaken by Freddie Sisson.

1.2 Methodology

1.2.1 This report presents the results of the assessment of the environmental samples, palaeobotanical and charcoal remains in accordance with Campbell et al. (2011) and English Heritage (2008). The assessment will establish the significance of the material and will only provide identifications where it was practicable to do so, such as, small quantities of plant material or charcoal identifications where radiocarbon determinations are sought. The report will focus on the preservational qualities and note the potential of the material to warrant analysis.

1.2.2 The bulk environmental samples were processed at Wardell Armstrong LLP following standards stated in Wardell Armstrong (2018 and 2019). The colour, lithology, weight and volume of each sample was recorded using standard Wardell Armstrong pro forma recording sheets. cf. Tables 1 and 2. The samples were processed with 500-micron retention and flotation meshes using the Siraf method of flotation (Williams 1973). Once dried, the residues from the retention mesh were sieved to 4mm and the artefacts and ecofacts removed from the larger fraction and forwarded to the finds department. The smaller fraction was scanned with a magnet for microslags such as hammerscales. This fraction was then examined for smaller artefacts such as beads. Once fully sorted, and all relevant material removed, the retent residues were discarded.

1.2.3 The flot plant macrofossils and charcoal were retained and scanned using a stereo microscope (up to x45 magnification). Any non-palaeobotanical finds were noted on the flot pro forma, cf. Tables 3 (Brython samples) and 4 (Wessex samples). Once fully sorted and all relevant material removed the flots were discarded.

1.2.4 The four common palaeoenvironmental materials (namely plant remains, charcoal, shell and bone), along with magnetic matter, will be listed within the results section and where none were present this will be stated.

1.2.5 In the absence of single growth entities such as charred plant remains and hazel nutshell fragments charcoal will be utilised for radiocarbon determinations. Charcoal was only identified to species to select the shortest-lived species for radiocarbon determination once the report author had determined what they would like dated. Where no short-lived species were observed the youngest i.e. twig, branch or periderm fragments from longer-lived species

were selected. Once this was achieved no further identification was undertaken. Identification was undertaken using Hather (2000), Schweingruber (1982) and the author's own reference collection. Nomenclature followed Stace (2010).

1.3 Results

1.3.1 Silty sand dominated the samples' sediment matrix with lesser quantities of sandy silt sediments.

1.3.2 Artefactual material recovered from the dried residues were minimal but contained examples of ceramic building material, glass, industrial waste and prehistoric pottery.

1.3.3 CPR: Ten samples presented charred plant remains (CPR) which were predominantly cereal grains and in a good state of preservation. The largest quantities were 18 CPR from **(114.0023) <9>** taken from posthole **[114.0024]**. 19 CPR from **(114.0051) <11>** from hearth **[114.0065]**, 23 CPR in **(114.0053) <12>** from posthole **[114.0063]** and 37 CPR from **(114.0050) <13>** from posthole **[114.0064]**. The hearth sampled in **(114.0062) <16>** only yielded 2 CPR (cf. Table 3).

1.3.4 CHARCOAL: Charcoal was present in all of the samples processed, of these nine yielded more than 5g and was in relatively good condition. These were taken from the charcoal-rich fill **(114.0002) <1>.** The postholes **(114.0023) <9> [114.0024], (114.0053) <12> [114.0063]. (114.0050) <13> [114.0064]** and **(114.0021) <18>**. From **(22012) <22003>** deliberate back fill of pit **[20009]** and **(22016) <22004>** from the fill of gully **[22015].** The two largest charcoal assemblages came from unknown layers **(22026) <220009>** and **(22028) <22010>** which yielded 93g and 90.71g respectively.

1.3.5 Only two sample had their charcoal identified for radiocarbon determination. Sample **<11>** presented oak (*Quercus* sp.) and rose-family (Rosaceae) was observed in **<13>**.

1.3.6 SHELL: No shell was recovered on site or in the environmental samples.

1.3.7 BONE: No bone was present in the samples.

1.3.8 MAGNETIC MATTER: Thirteen samples contained magnetic material only two of these yielded more than 10g **(20012) <22003>** from the back fill of pit **[20009]** and **(22018) <22005>** from the secondary fill of gully **[22017]**. The magnetic material was scanned under a microscope (x45 magnification) for microslags but none were present.

1.4 Discussion

1.4.1 The CPR listed in 1.3.3 appeared to be part of backfilling for the most part. The 19 CPR from **<11>** from hearth **[114.0065]** is also likely to be a re-deposit as none of the charcoal assemblages are in such quantities as to confirm definite human activity at the time of deposition.

1.4.2 The charcoal discussed in 1.3.4 are the largest assemblages. The charcoal from the post holes is likely to have been a primary deposit with the post burnt *in situ*. Whilst the pit and gully fills are likely to be secondary deposition and filled with burnt middening. Unknown layers sampled in **<22009>** and **<22010>,** although they have the highest yields of charcoal, are likely to be redeposition.

1.5 Statement of potential and recommendations

1.5.1 The CPR assemblages are too small to give any meaningful discussion. However, they do have radiocarbon potential and the most suitable samples are **<9>, <11>, <12>** and **<13>** as these have the most available examples.

1.5.2 Whilst the charcoal cannot tell us any specific dates about the features it was recovered from. It can tell us about fuel procurement or woodland management, in order to do this any features charcoal came from need to be dated through actual or typological methods. The most suitable charcoal for radiocarbon should be taken from **<1>, <12>, <13>, <22009>** and **<22010>** due to the large quantities of available charcoal.

1.5.3 It must be stated that if a radiocarbon determination is sought from charcoal then the fragment must be identified to species prior to submission to select the shorter lived species to mitigate against the potential 'old wood effect' that may present a radiocarbon age far older than the feature.

1.5.5 *Retention and discard*: It is recommended that all ecofactual material is retained at least until initial radiocarbon dates have been obtained and any analysis has been completed.

1.5.6 The magnetic matter from all samples may be discarded due to it being of no significance.

1.6 Acknowledgments

1.6.1 Freddie Sisson supervised the environmental team who consisted of, Megan Lowrie, Paul Sherwood, Oliver Tallis, Jessica McGreevy, Sophia Davies, Edited by Lynne F Gardiner

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Table 1 Brython Sample Information

C	<>	Cut	Description	TQ	Matrix	PW	PV	SW	SV
114.0002	1		Charcoal rich fill	4	sandy silt	45	33	3082	3100
114.0009	2	114.0010	Fill of posthole	1	silty sand	1	1	491	200
114.0030	3	114.0031	Fill of posthole	1	silty sand	1	1	337	275
114.0017	4	114.0018	Fill of posthole	1	silty sand	5	3	809	525
114.0003	5	114.0004	Fill of posthole	1	silty sand	4	3	1141	900
114.0028	6	114.0004	Post packing of posthole	1	silty sand	5	3	877	650
114.0007	7	114.0008	Fill of posthole	1	silty sand	6	4	0	0
114.0005	8	114.0006	Fill of posthole	1	sandy silt	5	4	1399	1000
114.0023	9	114.0024	Fill of posthole	1	sandy silt	6	4	1511	900
114.0025	10	114.0026	Fill of posthole	1	silty sand			511	375
114.0051	11	114.0065	Fill of hearth	1	silty sand	15	9	2998	2100
114.0053	12	114.0063	Fill of posthole	1	silty sand	6	5	4421	2850
114.0050	13	114.0064	Fill of posthole	2	silty sand	16	15	3000	2800
114.0062	14		Fill of hearth	1	silty sand	5	5	1521	1200
114.0066	15		Fill of hearth	1	silty sand	13	9	2921	2000
114.0062	16		Fill of hearth	1	silty sand	11	8	2297	2500
114.0045	17		Grey clay layer	4	clay	49	33	5805	3700
114.0021	18		Fill of posthole	2	silty sand	20	14	2917	2000
114.0026	19		Fill of posthole	1	silty sand	2	2	958	400

Key: C=context; <>=sample number; Cut=cut of feature; Description=description of context; TQ=tub quantity processed; Matrix= matrix of processed sediments; PW= processed weight (kg); PV= processed volume (l); SW= sorted weight (g); SV= sorted volume (ml)

Table 2 Wessex Sample Information

C	<>	Cut	Desc	TQ	Matrix	PW	PV	SW	SV
22020	22001	22019	Fill of Post pipe	1	sandy silt	9	5	3837	2000
22012	22003	20009	Deliberate backfill of pit	3	silty sand	27	21	5243	3300
22016	22004	22015	Secondary fill of gully	5	sandy silt	63	41	13833	8675
22018	22005	22017	Secondary fill of gully	3	sand	35	23	7468	4800
22014	22006	22013	Secondary fill of gully	3	silty sand	34	23	9596	7200
22007	22007	22006	Fill of post pipe	1	clayey silt	6	3	1211	825
22005	22008	22004	Secondary fill of posthole	1	sandy silt	7	4	1594	900
22026	22009		Layer	2	sandy silt	24	14	6952	5100
22028	22010		Layer	1	sandy silt	9	6	2020	1600

Key: C=context; <>=sample number; Cut=cut of feature; Description=description of context; TQ=tub quantity processed; Matrix= matrix of processed sediments; PW= processed weight (kg); PV= processed volume (l); SW= sorted weight (g); SV= sorted volume (ml)

Table 3 Brython Flots and Finds Information

		Flots				Retent		
C	**<>**	**WF**	**VF**	**CPR**	**Ch**	**Ch**	**MM**	**PP**
114.0002	1	569.64	1550	-	502.36			3
114.0009	2	305	15	-	1.54	<1		
114.0030	3	0.13	2	-	-	<1		
114.0017	4	2.64	20	2	1.58	<1	<1	
114.0003	5	10.44	30	-	1.9			
114.0028	6	3.32	15	-	-	<1		
114.0007	7	4.61	25	-	1.75			
114.0005	8	5.31	30	2	1.35	3	<1	
114.0023	9	13.56	50	18	6.4	<1	<1	
114.0025	10	1.49	10	-	0.07	<1		
114.0051	11	8.08	50	19	3.14	<1	<1	
114.0053	12	49.15	150	23	11.24	<1		

		Flots				Retent		
C	<>	WF	VF	CPR	Ch	Ch	MM	PP
114.0050	13	111.65	300	37	26.68	21		
114.0062	14	6.69	50	-	0.63	<2		
114.0066	15	3.79	50	-	1.09	<1		
114.0062	16	2.16	25	2	0.41	<1		
114.0045	17	10.1	50	-	-	<1		
114.0021	18	66.02	100	2	6.13	3		
114.0026	19	2.91	10	-	1.24			

Key: C=context: <>=sample number; WF= weight of flot(g): VF= volume of flot (ml); CPR= count of charred plant remains; Ch= charcoal (g); CBM= ceramic building material (g); PP=prehistoric pottery actual count

Table 4 Wessex Flots and Finds Information

		Flots				Finds					
C	<>	WF	VF	CPR	Ch	Ch	CPR	PP	Glass	IW	MM
22020	22001	7.9	60	1	0.2	2					<1
22012	22003	53.8	200	-	7.59	5	2				19
22016	22004	51.5	200	-	-	19		9			5
22018	22005	31.5	100	-	3.61	5					11
22014	22006	84.5	200	-	-	<1			1		9
22007	22007	4.7	20	-	0.17	3					3
22005	22008	3.1	10	1	0.13	<1					2
22026	22009	27.7	100	-	0.62	93		<1			<1
22028	22010	120.5	400	-	70.71	20				31	2

Key: C=context: <>=sample number; WF= weight of flot(g): VF= volume of flot (ml); CPR= count of charred plant remains; Ch= charcoal (g); PP= actual count of prehistoric pottery; Gl= count of glass sherds; IW= industrial waste (g); MM= magnetic material (g)

Appendix VIII

AB1703 Wylfa Newydd Early Clearance Works

Hotspot 11-13 Geoarchaeological Assessment

AEA 425: HOTSPOT 11-13, WYLFA, ANGLESEY

Geoarchaeology and outline palaeo-environmental potential of the 'colluvial' sequence

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AEA 425: HOTSPOT 11-13, WYLFA, ANGLESEY
Geoarchaeology and outline palaeo-environmental potential of the 'colluvial' sequence

Three profiles along the same section were sampled in the field by the archaeologists. Each profile was sampled with a series of small (13cm) overlapping or contiguous monoliths (Fig 3). A series of 16 monoliths (along with some site and contextual data) was supplied for geoarchaeological recording, interpretation and subsampling for palaeo-environmental proxies (ie, pollen and diatoms) and radiocarbon datable material if available.

The site is located low on a westerly slope on the edge of marshy land 700m northwest of Tregele, and revealed a number of prehistoric pits, a stone-lined oven/furnace and a wall, all of which were sealed by 'colluvium'. The excavator recorded 'a lot of prehistoric burning activity … in both spread deposits and contained within features', and a colluvium was reported to contain a number of prehistoric sherds (Wessex Archaeology 2016), probably Beaker sherds (Parry *et al*. 2019, 13). A number of early medieval graves and an enclosure were cut into the colluvium (Parry *et al*. 2019). The geology is recorded as superficial diamicton deposits (Devensian Till), over mica schist and psammite of the New Harbour Group (Parry *et al.* 2019, 4). Occupying the marshy land was a small stream (possibly formerly much larger) running next to the site (Fig. 1).

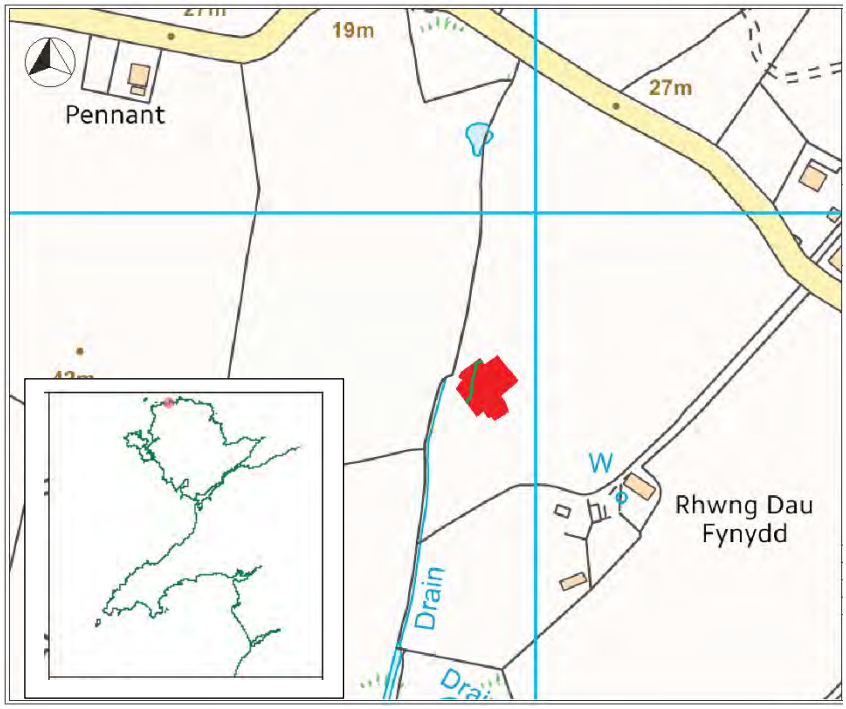


Figure 1. Location of Hotspot 11-13 excavation marked in red (from Parry *et al.* 2019, fig. 1), the green line marks the south-western edge of the colluvial deposits (see Fig. 2)

Sampled 'Colluvial' Sequence

The colluvium was reported to have two colluvial layers separated by a burning horizon; the upper of which contained sparse charcoal and 11 sherds of prehistoric pottery of potentially Early Neolithic date. No artefacts were recovered from the lower colluvium but it 'contained abundant charcoal' (Wessex Archaeology; Parry *et al.* 2019, 11). Further, Parry *et al.* (2019, 8) hint at the presence of alluvium, as a post hole and the possible prehistoric enclosure 'pre-date an alluvial deposit (Wessex Archaeology 2016)'. The colluvial deposits were limited to the western area of the excavation (Fig. 2). All of the pits in this area were reported to be filled with a 'mid red-brown silt clay with occasional charcoal inclusions' which was similar to the colluvium that sealed the prehistoric features (Parry *et al.* 2019, 12).

As numerous distinct colluvial layers, some containing significant amounts of charcoal, were observed in the western and south-western baulks, three profiles were sampled in a series of small monoliths (Figs 2 & 3; Table 1). Samples were taken principally to provide an insight into the formation of these layers (Parry *et al*. 2019, 13).

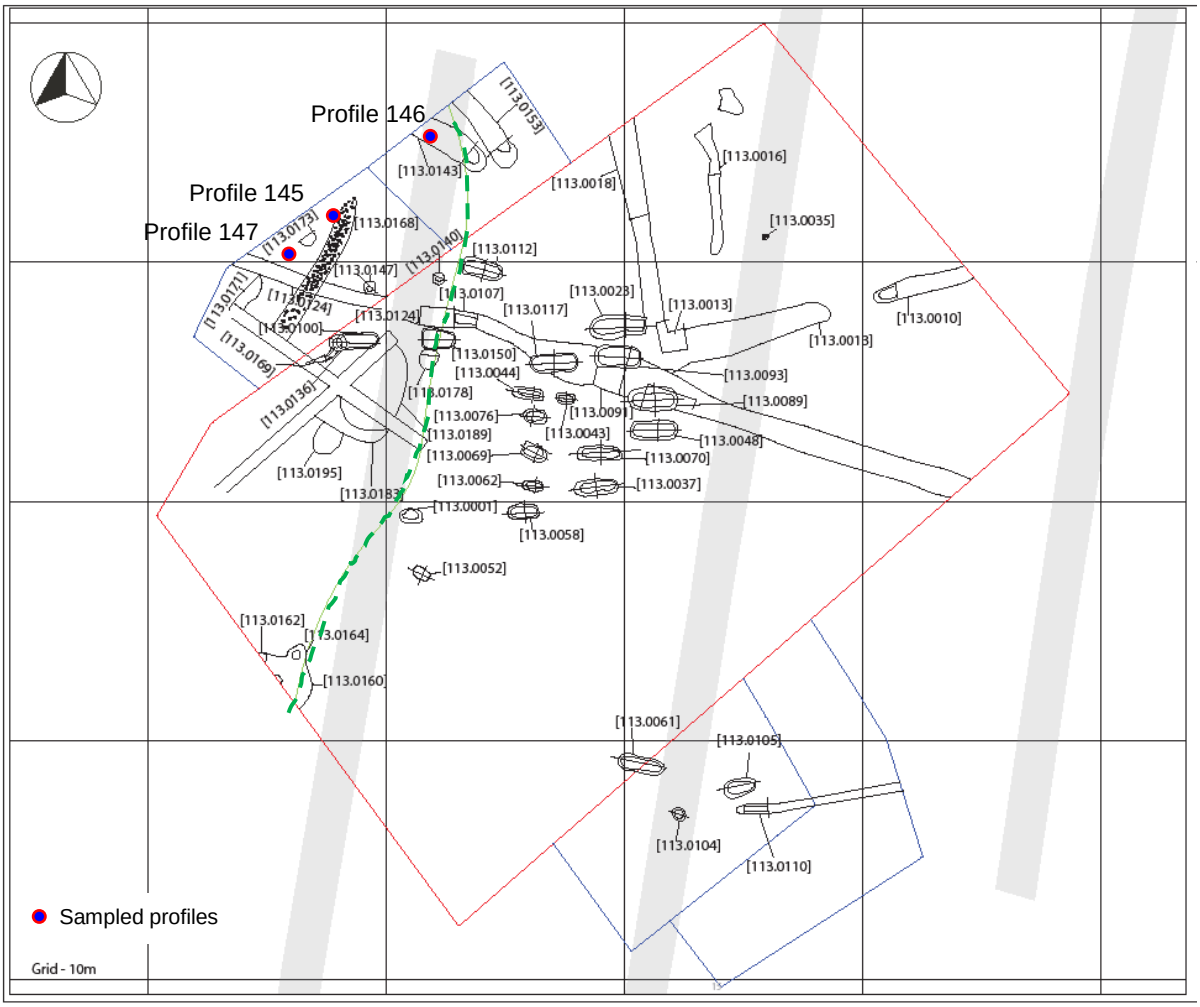


Figure 2. Site plan of the excavations at Hotspot 11-13, the southern extent of the colluvium is marked by the green broken line. Note grid = 10m (from Parry *et al.* 2019, fig. 2)

Three profiles (147, 145 and 146) were sampled by the archaeologists from the colluvium (Figs 2 & 3). In each case small 13cm overlapping or contiguous monolith samples were used to sample each profile with, from south to north; 5 tins, 6 tins and 5 tins being used. These were accompanied by photographs and sketch section drawings of each sampled profile (Figs 3a & 3b), but no composite section drawing. The section drawings were largely diagrammatic (Fig. 3a), as they in many cases did not record the context divisions, nor did they accurately record the sample tins. The records included standard and brief archaeological descriptions for most contexts.

Archaeologists Description	*Profile 147*	*Profile 145*	*Profile 146*
Colluvium	004	004	004
Colluvium (=148)	028	028	028
Burning lens in colluvium	-	027	-
Colluvium (=208)	-	148	148
Hillwash and levelling	?182	182	182
Natural	-	210	210

List of the colluvial contexts in the south western baulk (see Fig. 2)

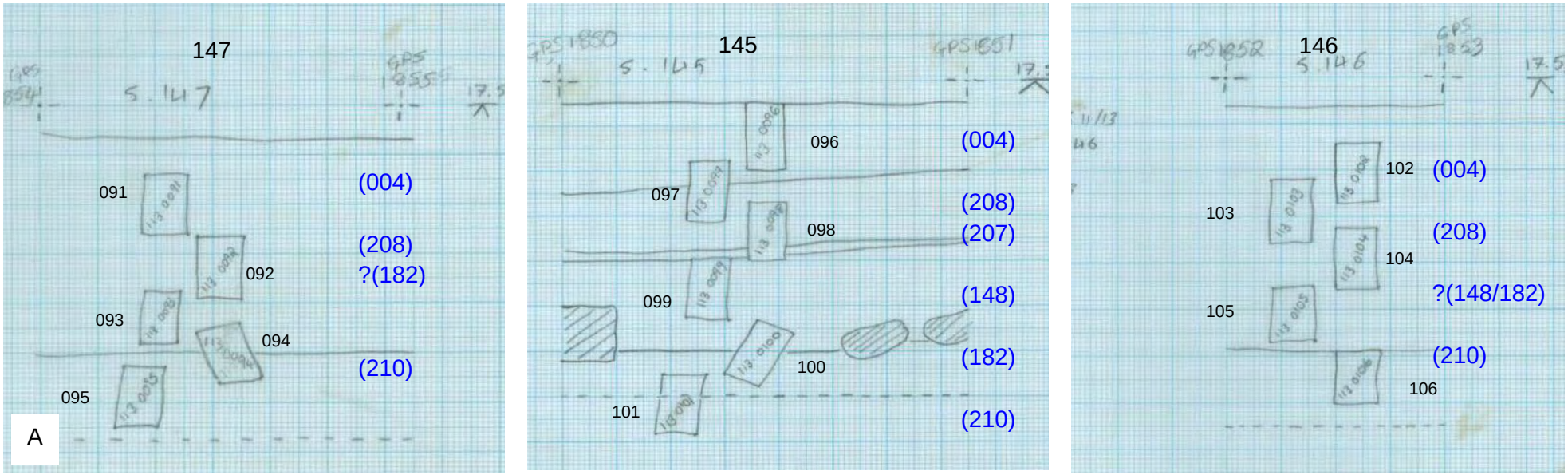
Aims

The monolith samples provided by the archaeologists, facilitated subsampling for relevant palaeo-environmental proxies, principally pollen and diatoms, and geoarchaeological description to provide information and interpretation of the taphonomy and depositional environment of the phases colluvial deposits (cf. Allen 1988; 1991; 1992; Bell 1981). The geoarchaeological description of the monolith samples, each of which only has a narrow window of 7 x 13cm on to the sediments, each cannot, however, necessarily enable identification nor differentiation between some colluvial deposits; description and interpretation of which are better served by on-site geoarchaeological records.

Methods and subsampling

In each case the small monoliths were unwrapped, the exposed faces cleaned and moistened, and then laid out in precise sample orientation. Tins from each profile were laid out as accurately as possible (to within ±5mm) reconstructing or recreating each sampled profile, after which they were photographed and described (Appendix 1). Each set of monoliths was subsampled as a single profile / section. Descriptions followed standard pedological terminology (Hodgson 1997), with munsell colours recorded moist in daylight conditions. Context allocation was difficult as some deposits were difficult to differentiate in these small samples. Most of the contexts were not recorded on the section drawings (Fig. 3a), nor recorded on the monolith tins themselves. The most context-complete profile (145) was selected for subsampling and was undertaken as a single composite series. Subsampling for pollen and diatoms was at 10mm bandwidths and was at 40mm intervals, and on completion the monolith samples were discarded. A total of 21 subsamples were removed; 17 pollen samples, 3 diatom samples, and one of charcoal (Appendix 1.2).

One profile was selected for more detailed examination and subsampling for palaeo-environmental proxies. This was profile 145 containing not the deepest colluvial deposits, but the most complete stratigraphic record (Tables 1 & 2; Fig. 3).



Profile 147

Profile 145

Profile 146

Figure 3. Hotspot 11-13; sampled sections: a) Profile section drawings and b) photographs (from Brython Archaeology)

Profile	*Contexts*	*No of tins*	*Monolith number*
S147	004, 208, 182, (210)	5	091-095
S145	004, 208, 207, 148, 182, 210	6	096-101
S146	004, 208, 148/182, 182, 210	5	102-106

Table 1. Record of contexts in each profile and the monolith samples

The monolith samples

The samples tins are small kubiena-sized electrical boxes at 7 x 4.5 x 13cm. It is clear from the conditions of some of the samples that these had been forcibly hammered into the section rather than carefully cut into the excavation face (cf. French 2015; Appendix 2, 93-4). Consequently some of the tins were heavily deformed and some of the sediments loose and heavily disturbed making them almost useless for additional description and clearly negating the possibility of any subsampling. One tin in particular virtually only contained loose disturbed crumbs of soil (Appendix 2).

		Monolith samples		
Context	*Description*	*Profile 147*	*Profile 145*	*Profile146*
004	Colluvium	091, 092, 093	096, 097	102, 103, 104
208	Colluvium (=148)	?093, ?094	097, 098	-
207	Burning lens in colluvium	-	098, 099	-
148	Colluvium (=208)	094, 095	099, 100	-
182	Hillwash and levelling	-	100, 101	?104, ?105, ?106
210	Parent material (‘geology’)	-	101	106

Table 2. The samples (091-106) Indicating he profile and layers they are thought to sample

The geoarchaeology and humic activity associated the ‘colluvial’ profile

The colluvial profile comprised a lower greyer alluvial layer, initial colluvium, charcoal-rich horizon and the upper colluvium. Full descriptions are given in Appendix 1.1 – 1.3. A number of context ascriptions were given to the deposits and these are retained in the detailed descriptions (Appendix 1), but additional or revised interpretations are provided as a result of geoarchaeological examination. This may be further revised after assessment and analysis of the diatoms and pollen evidence. Following description a provisional interpretation has been advanced from which a narrative of the sediment accumulations and its anthropogenic relevance has been provided. A buried soil and two clear sediment origins have been identified as well as divisions in the colluvium.

004	Colluvium	Upper colluvium	Brown to dark yellowish brown silt loam rare stones, massive the medium blocky structure Colluvial B (colluvial brown earth)
208	Colluvium = 148	Upper colluvium	Yellowish brown to brown silt to silt loam, rare small stones, weak structure, mottled, fine charcoal Colluvium
207	Burning lens	Charcoal layer (no *in situ* burning)	Very dark greyish brown silt, charcoal fragments and charcoal dust, no soil reddening sharp/abrupt boundary
148	Colluvium	Basal colluvium developed in alluvium	Brown to light yellowish brown silt, largely stone-free
182	Hillwash + levelling	Alluvial soil	Grey to greyish brown and dark greyish brown silt and few stones, blocky structure charcoal fragments and charcoal dust
210	Parent material	Till	Light yellowish brown to pale brown massive cemented silt stone-free

Over the parent material Till ('natural'), which comprised a light yellowish brown to pale brown dense well-sorted silt (210) into which the prehistoric features were cut, was a greyish to greyish brown silt with few stones (182). The colour and texture, as well as lenses with the deposits recorded on site, suggest alluvial, rather than Colluvial, sedimentation. This could be overbank floodplain alluvium from an adjacent water course probably now surviving as the small stream (Fig. 1). Alluviation could have been the consequence of local vegetation removal, increasing run-off, and leading to increased overbank flooding. The deposit also displayed a small weak ped structure indicating soil formation. The abrupt boundary with the Till suggests that soil formation in the alluvium was limited, and that there was no deep weathering and pedogenesis of the underlying parent material prior to it being engulfed by colluvium. This alluvial horizon was thought by the archaeologists to be associated with deliberate levelling; it is possible that the archaeological features were cut from this surface. The initial or lower colluvium (148) is a brown to light yellowish brown largely stone-free silt and may represent admixing with overbank floodplain alluvial soil, but the fact a soil structure is preserved, suggests that this initial colluviation was relatively rapid, contrary to the slow and gradual formation of most colluvial facies (cf. Allen 1988; 1991; Bell 1981). A charcoal-rich lens (207) contained charcoal pieces and a mass of fine charcoal dust. No soil reddening could be detected indicating *in situ* burning, though the sample was very small and only 7cm of the contact sampled. Nevertheless a lack of reddening may indicate that the charcoal is a result of a local burning event and had blown onto an exposed land surface which was later sealed by colluvium, rather than evidence of fires at the sampling location. It may also suggest a stasis in colluviation. The overlying upper colluvium (208 and 004) is a yellowish brown to brown silt loam with few stones and is lightly mottled. It may be the result of tillage upslope, the mottling represent gleying and fluctuating groundwater tables. The subsequent context (004) does not represent a different sedimentary layer, but the differentiation is due to soil formation; ie, it is the base of the current colluvial soil, and thus, technically, is not a different context.

The presence of colluvium indicates disturbance of the in the soil cover, typically by woodland clearance or tillage (Dimbleby 1976; 1984; Bell 1981; 1982; 1983; Allen 1988; 1991; 1992; 2017a; 2017b). The archaeological features cutting the parent material ('natural') was taken to indicate pre-colluvial activity. If correct the colluvium would be more likely to

represent tillage than initial woodland clearance. However the assertion that the features only cut the Devensian till is far from certain. It has not been demonstrated that the features do not cut through the lower alluvial soil, or colluvial layers. Although these cuts are notoriously difficult to recognise, even in weathered sections, no attempt seems to have been made to examine this crucial and critical relationship, even though the majority was lost as most of the deposits above the Devensian till were removed by machine. Importantly and significantly it cannot, therefore, be demonstrated that any of the prehistoric features were wholly beneath the deposits and pre-dated earlier deposits. Whilst the prehistoric features cut the Devensian till (natural), it has not be demonstrated whether they post-date (ie, cut through) the lower deposits and they may, therefore, directly relate to the events causing both alluviation and colluviation. The loss of this significant and critical information removes the possibility of firmly tying the prehistoric activity to the alluviation, the buried soil, and the colluvial deposits recorded and sampled in the south-western baulk.

Nevertheless we can identify three main events:

1. Clearance of the woodland and removal of the initial soil (no physical evidence), which resulted in increased run off and local alluviation (possibly associated with Beaker activity)

2. Stasis and soil formation – some archaeological activity in the form of 'levelling', possibly associated with the cut features

3. Local soil destabilisation as a result of either local hillside vegetation clearance or tillage leading to colluviation during which burning was being undertake locally

More tentatively we can suggest a land-use history based on the sediment record and attempt to link this with the known archaeological activity

Deposit	*Deposit formation and associated activity*	
Graves & enclosure	Early medieval cemetery and settlement	
Colluvial soil (004)	Soil formation within the existing colluvium (208) of pre-early medieval to modern date	
	Early medieval activity cut into the colluvium	
Upper Colluvium (208)	Tillage (late Iron Age or Romano-British) on the adjacent slope	
Charcoal layer (207)	Charcoal burning in the locality (no soil reddening)	
Initial / lower colluvium (148)	Prehistoric (?Bronze Age) colluviation; tillage of the adjacent slopes	Prehistoric cut features
Alluviation and soil formation (182)	"Human activity– levelling". Soil formation in alluvium – blocky ped structure	
Alluviation and soil formation (182)	Beaker alluviation possibly caused by clearance leading to increase run-off and alluviation	
Truncation	Loss of former post-glacial soil	
Devensian Till (210)	Cold stage deposits of the last glaciation (also known as Boulder Clay)	

Palaeo-environmental subsampling
Profile 145 was selected for subsampling being the having the most complete stratigraphy. Samples were removed from the whole sequence for pollen at 40mm intervals. Subsampling for diatoms was restricted to the greyer alluvial deposits and adjacent contexts; the weathered parent material, the alluvial soil, and the initial colluvium. These samples were at 80mm intervals. One sample of charcoal (*c*. 4mm) from the alluvial soil (148) was retained, but this is not suitable for radiocarbon dating is it has no direct nor functional relationship with the deposit and could well be residual. A total of 21 samples were removed; 15 for pollen, 3 for diatoms and 1 of charcoal (Appendix 1.2, and see Potential palaeo-environmental significance).

Potential Palaeo-environmental significance
The advantage of the two palaeo-environmental proxies (pollen and diatoms) is that they provide both site-/feature-specific and local/subregional palaeo-environmental interpretation. Episodes of woodland clearance, pasture and tillage may be identified, and crop processing (if occurring on site) should be detected. The nature and character of the alluvial input can be enhanced by evidence from diatoms, if they survive. These are algal growth living in water (and soils). They can indicate the presence of standing water, its depth and nutrient status (ie, fresh vs stagnant), and assist in confirming the alluvial component identified in the profiles.

The most important elements are i) they indicate the human land-use and resources, and ii) that this record accumulates over a long period of time enabling changes in land-use history to be documented. The presence of pollen enables a vegetation history to be provided which covers the earliest deposits, and probably the entire archaeological history of the site. It can provide information on the local site-based vegetation and activities such as cereal crop processing, grazed grassland and pasture, trampling and indicate the nature of the wetter and water-side environments. At an extra-site and sub-regional scale it can provide evidence of changing land-use, watery (river) environments and of drier woodland and its changing composition in the near and medium distance. The combination of these data can provide a detailed land-use history to accompany the archaeological activity on the site. The combination, therefore, of the geoarchaeological record, diatoms and pollen, provide a strong basis for a documenting a long land-use history, for the site, possibly even identifying activities or episodes (eg, localised abandonment) not recognised in the more standard cultural and artefactual archaeological record.

Soil micromorphology
Two interpretations could be clarified and amplified by soil micromorphological analysis. These are the presence of a stasis represented by the surface on which charcoal layer 207 rests, and the alluvial and pedogenic nature of the ‘alluvial soil’ 148. To address these points samples 098 (and possibly 099) of the contact of the charcoal-rich layer (2017) and colluvium (148), and samples 099 and 100 of the alluvial soil the soil be implemented and soil thin sections manufactured facilitating soil micromorphological analysis.

Assessment Programme
Subsamples were removed for pollen and diatoms from the six small monolith tins in profile 145, the potential of which is outlined above. A selection of samples from this should be assessed to define the presence and preservation of pollen and diatoms, and then assess

their assemblage character, changes through time and the ability of the assemblages to contribute to the understanding of the site, its setting, land-use history and potential exploitable resources. Eight pollen samples and 3 diatom samples are suggested (Table 3; Appendix 1.2).

Pollen samples (cm depth)	*Diatom samples (cm depth)*
8, 16, 24, 32, 40, 48, 56, & 64	44, 56, 68

Table 3. Provisional list of samples selected for pollen and diatom assessment from profile 145

Assessment of pollen and diatoms could not be undertaken at the time of this geoarchaeological assessment and subsampling due to lock down of university laboratories as a result of the coronavirus/covid-19 situation. Nor can soil thin section slides be manufactured in the UK currently. Assessment of pollen and diatoms are to be undertaken at a subsequent stage, as well as sol thin section slide manufacture, if approved.

The costs of the pollen and diatom assessment have been presented previously, but soil thin section requirements had not been identified, and thus a revised assessment cost are presented separately

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APPENDIX 1: Profile Descriptions and photographic record

Appendix 1.1 Profile 147 (samples 091, 092, 093, 094 and 095)
Appendix 1.2 Profile 145 (samples 096, 097, 098, 099, 100 and 101)
Appendix 1.3 Profile 146 (samples 102, 103, 104, 105 and 105)

Appendix 1.1 Profile 147 (samples 091, 092, 093, 094 and 095)

Profile 4147; samples 91-95

Depth (cm)	*Context*	*Sample*	*Description*
4147			
0-9	004		
9-30	004		Dark yellowish brown (10YR 4/4) silt loam, some small stones, clear to abrupt indistinct boundary Colluvium / colluvial soil B horizon
30-36	208		Brown (10YR 5/3) silt to silt loam, massive, stone free, rare small charcoal fragments and charcoal dust, abrupt boundary Colluvium
36-45	?182		Dark grey (10YR 4/1) to dark greyish brown (10YR 4/2) silt, many small charcoal fragments, common v small stones, abrupt boundary Hillwash and levelling
45-56	?182		Dark greyish brown to brown (10YR 4/2-3) silt, stone-free, ?weak incipient structure, abrupt boundary Hillwash and levelling Possible soil and possible alluvial input
56-60+	210		Light yellowish brown to pale brown (10YR 6/4-3) massive, dense stone-free silt, common very small and small stones Parent Material (aka 'Natural')

Small monolith samples arranged and orientated as sampled, top is to the left

Monolith sample depths

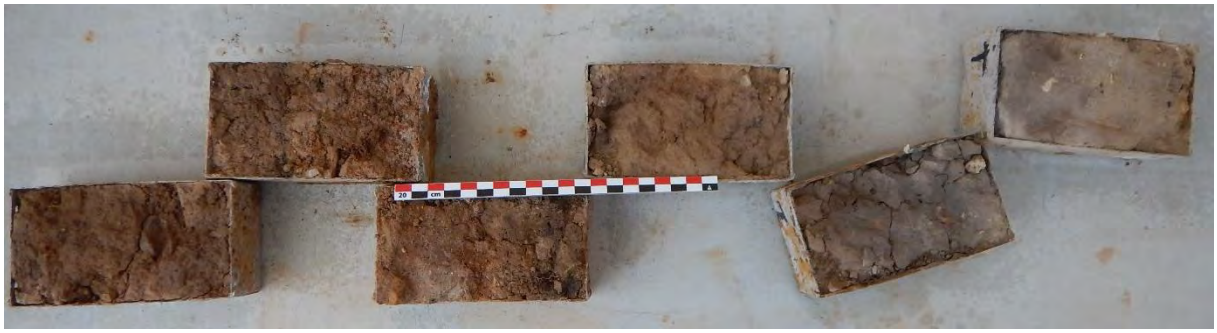
91 9-22cm
92 21-34cm
93 32-45cm
94 37-50cm
95 47-60cm

Appendix 1.2 Profile 145 (samples 096, 097, 098, 099, 100 and 101)

Profile 5145; samples 96-100

Depth (cm)	*Context*	*Sample*	*Description*
4145			
0-15	004	4 **8** 12	Brown to dark yellowish brown (10YR 5/4-4/4) silt to silt loam, rare small stones, ?medium, ?blocky structure, with small blocky structure at boundary (12-15cm), abrupt boundary Colluvium / colluvial soil B horizon
15-31	208	**16** 20 **24** 28	Brown (10YR 5/4) to greyish brown, stiff silty loam, rare small stones, weak incipient structure, many fine charcoal fragments below upper boundary, local Fe staining (mottles) on pore and inter-ped faces, abrupt boundary Colluvium
31-35	207	**32**	Very dark greyish brown (10YR 3/2) silt and charcoal dust (no fragments readily observable), rare small stones, no soil-reddening, abrupt to sharp boundary Burning lens
35-51	148	36 **40** 44 **D** **48**	Brown to light yellowish brown (10YR 5/4-6/4) stone-free firm massive silt, abrupt boundary Colluvium
51-62	182	52 **56 D** 60	Grey (10YR 5/1) to greyish brown (10YR 5/2) stone-free well-sorted silt, small blocky structure, some fine charcoal inclusions, abrupt boundary Charcoal @56cm Hillwash and levelling bA/B horizon (soil) and possible alluvial input
62-73+	210	**64** 68 **D**	Light yellowish brown to pale brown (10YR 6/4-3) massive, cemented stone-free silt Parent Material (aka 'Natural')

Samples in bold are suggested for assessment



Small monolith samples arranged and orientated as sampled, top is to the left

Monolith sample depths

96 0-13cm
97 11-24cm
98 20-23cm
99 33-46cm
100 46-59cm
101 59-73cm

Appendix 1.3 Profile 146 (samples 102, 103, 104, 105 and 105)

Profile 4146; samples 102-106

Depth (cm)	*Context*	*Sample*	*Description*
4146			
0-9	004		
9-30	004		Dark yellowish brown (10YR 4/4) silt loam, rare medium stones, dense, massive, clear to gradual boundary Colluvium / colluvial soil B horizon
30-44	208		Yellowish brown (10YR 5/4) to brown (10YR 5/3) silt, massive, rare fine Fe mottles, rare small charcoal fragments, abrupt boundary Colluvium
44-50	148/182		Dark greyish brown (10YR 4/2) silt with charcoal dust and common fine and small charcoal pieces, few small/medium stones, abrupt boundary Colluvium /Hillwash (with stones) and burning
50-59	182		Greyish brown (10YR 5/2) silt to silt loam, dense, rare small and medium stones, possible structure (but sample too small to confirm) Hillwash – possible alluvial input
69-60+	210		Light yellowish brown to pale brown (10YR 6/4-3) massive, cemented stone-free silt (few very small/small stones) Parent Material (aka 'Natural') (Rw)

Small monolith samples arranged and orientated as sampled, top is to the left

Monolith sample depths

102 9-22cm
103 16-29cm
104 26-39cm
105 38-51cm
106 51-64cm

Appendix 2. Notes on sample condition

Ingeniously the samples tins are small kubiena-sized electrical boxes measuring 7 x 4.5 x 13cm. It is clear, however, than in some instances, particularly in profile 147, that the tins were forcibly hammered into the section deforming the tins and disrupting the soil. In some cases this rendered the samples almost useless for further geoarchaeological description and certainly rending them unsuitable for any subsampling for palaeo-environmental proxies. In two cases, in the same sample profile, the orientation of the tin was not clear in one instance, and was unrecorded in a second. With such small tins (13cm) the variation in the sediments at the top and the bottom can be difficult to discern so orientation can remain problematic and unresolved.

Sample 92	21-34cm	poorly sampled – loose disturbed sediment
Sample 94	37-50cm	orientation not clear
Sample 95	47-60cm	no orientation indicated

Two examples of sampling leaving unsuitable or unusable are sample are 091 and 092.

Sample 091, showing an example of a severely deformed tin at the top as clear evidence of hammering the sample into the section …. clear disruption of the soil in the top right hand corner of the sample is noted

Sample 92 showing essentially a sample of just loose broken soil … the very loose crumbs have been discarded leaving no sample left in some places and the back of the tin showing in the bottom left hand corner

Appendix IX

AB1703 Wylfa Newydd Early Clearance Works

Hotspot 11-13 Radiocarbon Dating Results

BetaCal 3.21

Calibration of Radiocarbon Age to Calendar Years

(High Probability Density Range Method (HPD): INTCAL13)

(Variables: d13C = -24.0 o/oo)

Laboratory number **Beta-553500**

Conventional radiocarbon age **3750 ± 30 BP**

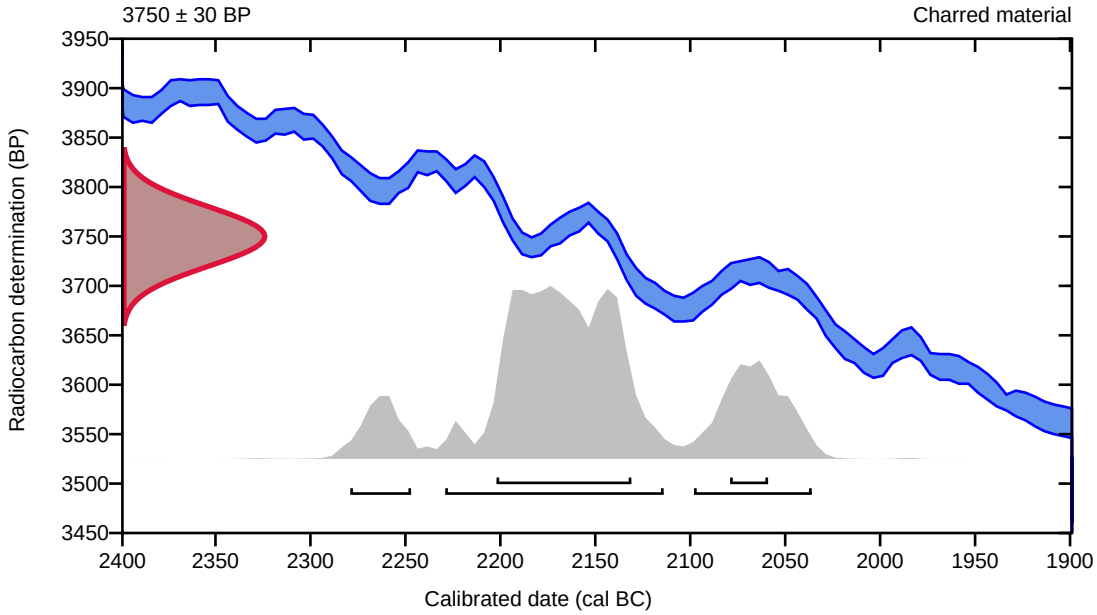
95.4% probability

(66.7%)	2231 - 2116 cal BC	(4180 - 4065 cal BP)
(21%)	2100 - 2038 cal BC	(4049 - 3987 cal BP)
(7.7%)	2281 - 2249 cal BC	(4230 - 4198 cal BP)

68.2% probability

(58.3%)	2204 - 2133 cal BC	(4153 - 4082 cal BP)
(9.9%)	2081 - 2061 cal BC	(4030 - 4010 cal BP)

HS11-13_(113.0002)_< 0001 >



Database used

INTCAL13

References

References to Probability Method

Bronk Ramsey, C. (2009). Bayesian analysis of radiocarbon dates. Radiocarbon, 51(1), 337-360.

References to Database INTCAL13

Reimer, et.al., 2013, Radiocarbon55(4).

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BetaCal 3.21

Calibration of Radiocarbon Age to Calendar Years

(High Probability Density Range Method (HPD): INTCAL13)

(Variables: d13C = -28.3 o/oo)

Laboratory number **Beta-553498**

Conventional radiocarbon age **180 ± 30 BP**

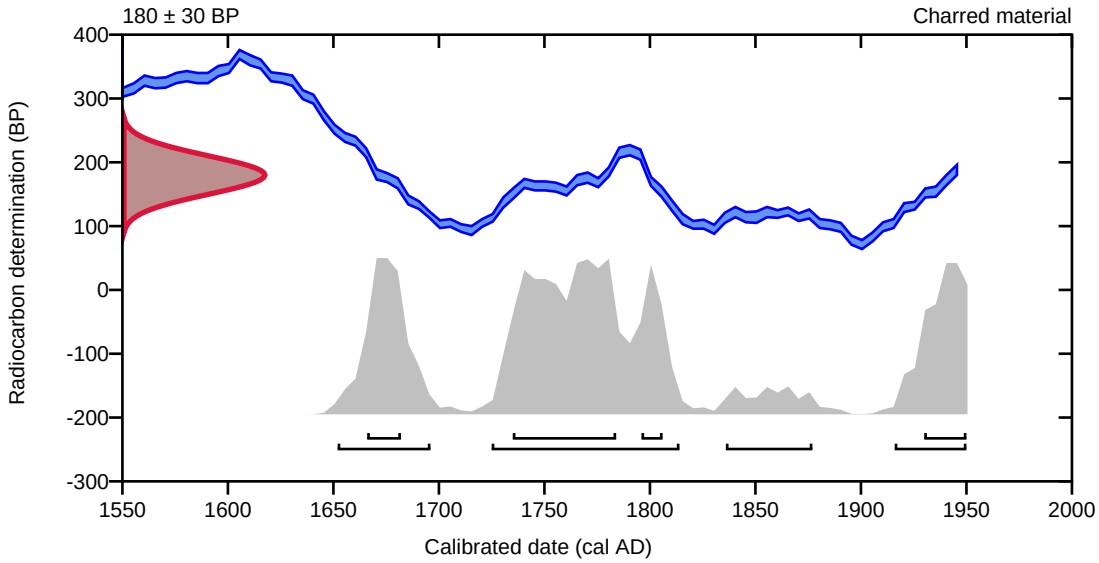
95.4% probability

(53.4%)	1725 - 1814 cal AD	(225 - 136 cal BP)
(19.7%)	1652 - 1696 cal AD	(298 - 254 cal BP)
(17.9%)	1916 - Post cal AD 1950	(34 - Post cal BP 0)
(4.5%)	1836 - 1877 cal AD	(114 - 73 cal BP)

68.2% probability

(35.4%)	1735 - 1784 cal AD	(215 - 166 cal BP)
(14.1%)	1930 - Post cal AD 1950	(20 - Post cal BP 0)
(12.2%)	1666 - 1682 cal AD	(284 - 268 cal BP)
(6.4%)	1796 - 1806 cal AD	(154 - 144 cal BP)

HS11-13_(113.0007)_< 0002 >



Database used

INTCAL13

References

References to Probability Method

Bronk Ramsey, C. (2009). Bayesian analysis of radiocarbon dates. Radiocarbon, 51(1), 337-360.

References to Database INTCAL13

Reimer, et.al., 2013, Radiocarbon55(4).

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BetaCal 3.21

Calibration of Radiocarbon Age to Calendar Years

(High Probability Density Range Method (HPD): INTCAL13)

(Variables: d13C = -21.1 o/oo)

Laboratory number **Beta-554184**

Conventional radiocarbon age **1880 ± 30 BP**

95.4% probability

(95.4%)	66 - 222 cal AD	(1884 - 1728 cal BP)

68.2% probability

(59.3%)	74 - 140 cal AD	(1876 - 1810 cal BP)
(5.9%)	196 - 208 cal AD	(1754 - 1742 cal BP)
(3%)	159 - 166 cal AD	(1791 - 1784 cal BP)

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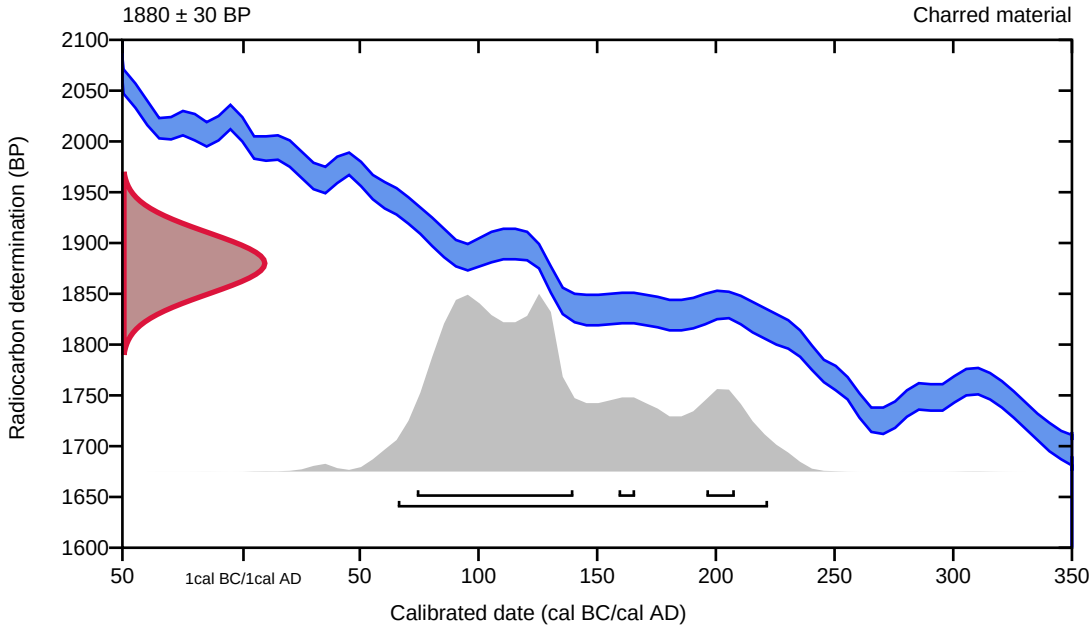

Database used

INTCAL13

References

References to Probability Method

Bronk Ramsey, C. (2009). Bayesian analysis of radiocarbon dates. Radiocarbon, 51(1), 337-360.

References to Database INTCAL13

Reimer, et.al., 2013, Radiocarbon55(4).

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BetaCal 3.21

Calibration of Radiocarbon Age to Calendar Years

(High Probability Density Range Method (HPD): INTCAL13)

(Variables: d13C = -22.3 o/oo)

Laboratory number **Beta-554183**

Conventional radiocarbon age **670 ± 30 BP**

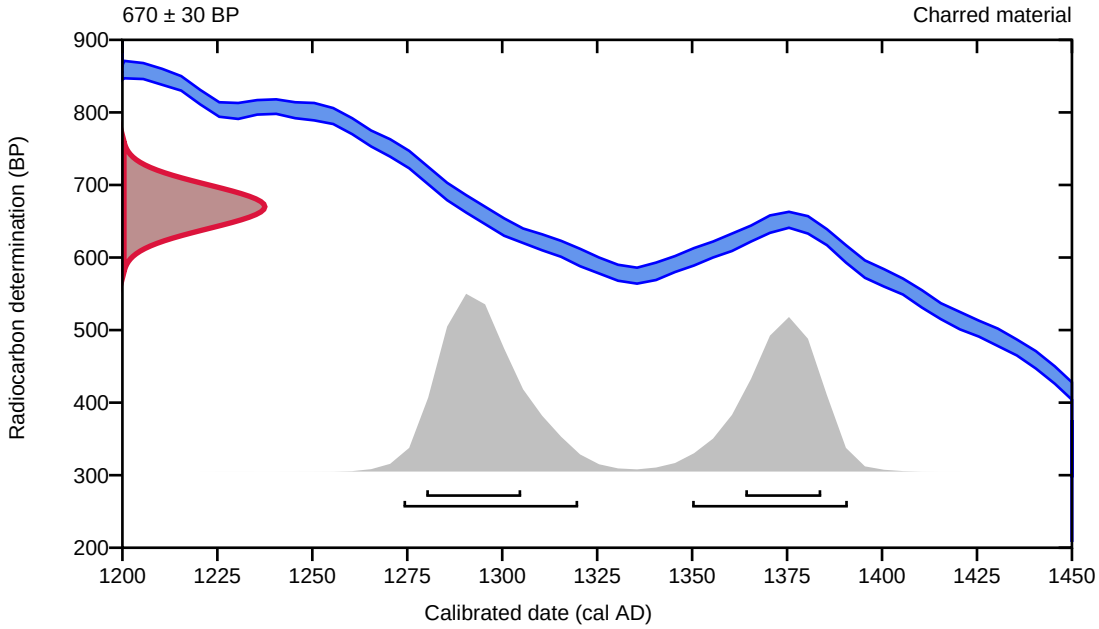
95.4% probability

(53.1%)	1274 - 1320 cal AD	(676 - 630 cal BP)
(42.3%)	1350 - 1391 cal AD	(600 - 559 cal BP)

68.2% probability

(38.5%)	1280 - 1305 cal AD	(670 - 645 cal BP)
(29.7%)	1364 - 1384 cal AD	(586 - 566 cal BP)

HS11-13_(113.0055)_< 31 >



Database used

INTCAL13

References

References to Probability Method

Bronk Ramsey, C. (2009). Bayesian analysis of radiocarbon dates. Radiocarbon, 51(1), 337-360.

References to Database INTCAL13

Reimer, et.al., 2013, Radiocarbon55(4).

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BetaCal 3.21

Calibration of Radiocarbon Age to Calendar Years

(High Probability Density Range Method (HPD): INTCAL13)

(Variables: d13C = -25.5 o/oo)

Laboratory number **Beta-553497**

Conventional radiocarbon age **140 ± 30 BP**

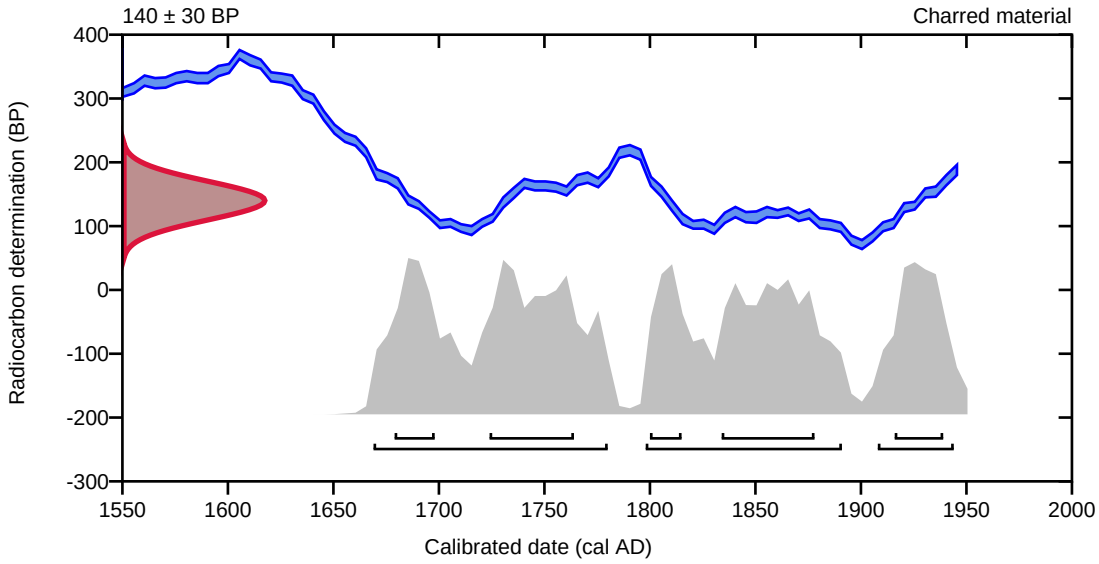
95.4% probability

(43.1%)	1669 - 1780 cal AD	(281 - 170 cal BP)
(36.8%)	1798 - 1891 cal AD	(152 - 59 cal BP)
(15.5%)	1908 - 1944 cal AD	(42 - 6 cal BP)

68.2% probability

(19.8%)	1834 - 1878 cal AD	(116 - 72 cal BP)
(19.5%)	1724 - 1764 cal AD	(226 - 186 cal BP)
(12%)	1916 - 1939 cal AD	(34 - 11 cal BP)
(9.6%)	1679 - 1698 cal AD	(271 - 252 cal BP)
(7.3%)	1800 - 1815 cal AD	(150 - 135 cal BP)

HS11-13_(113.0080)_< 0048 >



Database used

INTCAL13

References

References to Probability Method

Bronk Ramsey, C. (2009). Bayesian analysis of radiocarbon dates. Radiocarbon, 51(1), 337-360.

References to Database INTCAL13

Reimer, et.al., 2013, Radiocarbon55(4).

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BetaCal 3.21

Calibration of Radiocarbon Age to Calendar Years

(High Probability Density Range Method (HPD): INTCAL13)

(Variables: d13C = -24.5 o/oo)

Laboratory number **Beta-553499**

Conventional radiocarbon age **4860 ± 30 BP**

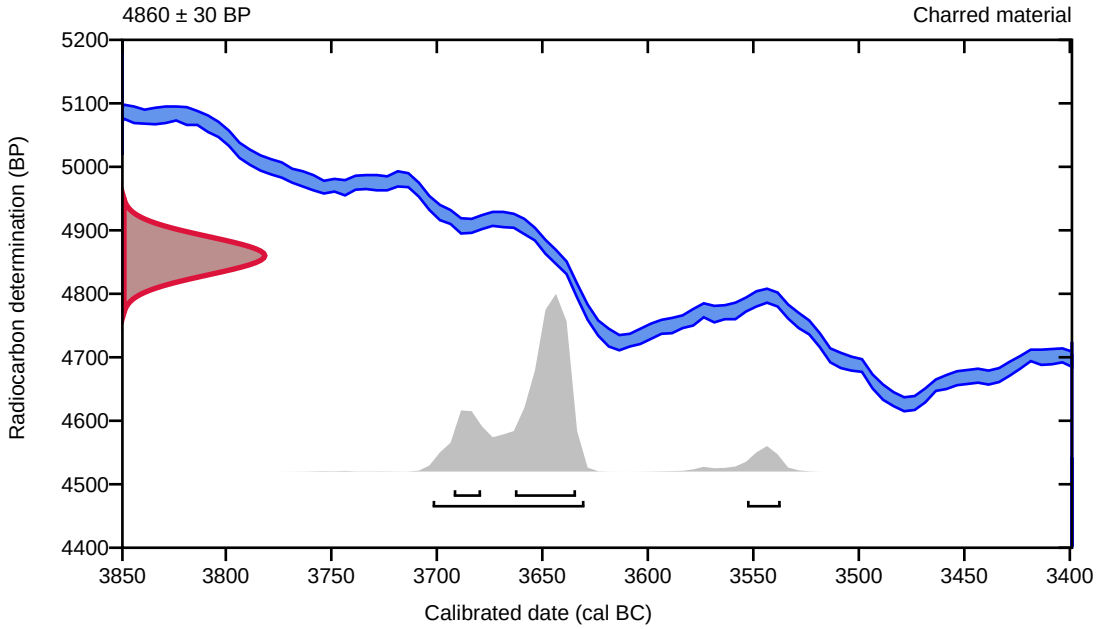
95.4% probability

(89.8%)	3704 - 3632 cal BC	(5653 - 5581 cal BP)
(5.6%)	3555 - 3539 cal BC	(5504 - 5488 cal BP)

68.2% probability

(56.7%)	3665 - 3636 cal BC	(5614 - 5585 cal BP)
(11.5%)	3694 - 3681 cal BC	(5643 - 5630 cal BP)

HS11-13_(113.0182)_< 0090 >



Database used

INTCAL13

References

References to Probability Method

Bronk Ramsey, C. (2009). Bayesian analysis of radiocarbon dates. Radiocarbon, 51(1), 337-360.

References to Database INTCAL13

Reimer, et.al., 2013, Radiocarbon55(4).

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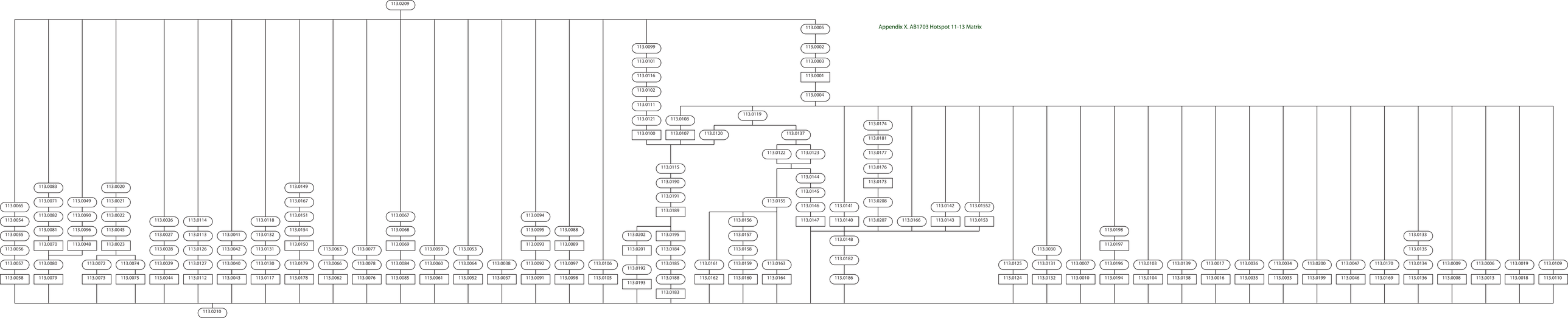
Appendix X

AB1703 Wylfa Newydd Early Clearance Works

Hotspot 11-13 Harris Matrix


Appendix X. AB1703 Hotspot 11-13 Matrix
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Appendix XI

AB1703 Wylfa Newydd Early Clearance Works

Post Excavation Method Statement

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ENERGY AND CLIMATE CHANGE
ENVIRONMENT AND SUSTAINABILITY
INFRASTRUCTURE AND UTILITIES
LAND AND PROPERTY
MINING AND MINERAL PROCESSING
MINERAL ESTATES
WASTE RESOURCE MANAGEMENT

HORIZON

WYLFA NEWYDD

POST EXCAVATION ASSESSMENT METHOD STATEMENT

APRIL 2019

wardell armstrong

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DATE ISSUED: April 2019

JOB NUMBER: **CL12271**

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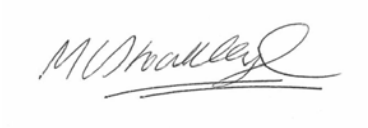

Lynne Gardiner — Senior Environmental Archaeologist

APPROVED BY:

Frank Giecco — Technical Director

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WYLFA NEWYDD POST EXCAVATION ASSESSMENT METHODOLOGY

Introduction

This document has been prepared to provide the client with an explanation of the Post Excavation Assessment (PXA) process and to provide Wardell Armstrong's own technical team, with clear guidance on undertaking the PXA for the Wylfa Newydd archaeological mitigation works. Post Excavation Assessment (PXA) is the first stage of a process of post-excavation analysis, publication and archive deposition. It provides quantification and initial assessment of the archive resulting from excavation and provides a framework to inform further investigation and publication. It is designed to ensure that Horizon Nuclear Power meet their requirements to secure discharge (by the two primary stakeholders: Gwynedd Archaeological Planning Service (GAPS) and CADW) of the early works archaeological mitigation programme at Wylfa Newydd.

It is based on the requirement described in the Written Scheme of Investigation for Trial Trenching and Excavation (2015) and Written Scheme of Investigation for Strip Map and Sample Excavation and Paleoenvironmental Assessment (2016). It is informed by the following guidance, Association of Local Government Archaeological Officers (ALGAO) Advice Note for Post-Excavation Assessment (2015), Conservation principles for the sustainable management of the historic environment in Wales CADW (2011), Chartered Institute for Archaeologists (CIfA) Standard and Guidance for Archaeological Excavation (2014) sections 3.4 to 3.6, and for human remains The British Association of Biological Anthropology and Osteoarchaeology Human Bones from Archaeological Sites. In addition, GAPS require reference to Society of Museum Archaeologists (1993), Selection, Retention and Dispersal of Archaeological Collections: Guidelines for use in England, Wales and Northern Ireland, as well as Welsh Office Circular 60/96, (1996), Planning and Historic Environment: archaeology.
This current document identifies the stages of the PXA process, then describes the broad tasks required for each stage. The document concludes with a report template containing individual sections within the PXA report and UPD.

Requirement for and Purpose of the Post Excavation Assessment

The PXA will follow a staged process of post excavation assessment detailed in Written Scheme of Investigation for Trial Trenching and Excavation (2015) and the Written Scheme of Investigation for Strip Map and Sample Excavation and Paleoenvironmental Assessment (2016).

As stated in the ALGAO *Advice Note for Post-Excavation Assessment*, "following the completion of archaeological fieldwork, it is standard practice for a post excavation assessment (PXA) to be undertaken". CIfA describe the purpose of a PXA as a means by which "the findings should be assessed against the original project design to determine the extent to which the original research aims have been met, and the identification of any new research questions to be incorporated in a post-excavation project design". CIfA further state that PXA work "must be carried out by suitably qualified and experienced staff, who must be apprised of the project design before commencing work. The post excavation manager should preferably be a corporate member of CIfA. The level of assessment of records and materials should be appropriate to the aims and purpose of the project".

In brief the PXA process involves cleaning, processing, sorting and cataloguing the finds and environmental samples and the ordering of the documentary site records to create an archive, and then assessment of that archive to focus further analysis and reporting on that archive. The archive consists of two elements, the material archive (finds, processed environmental samples and human remains) and the documentary archive (site records and ancillary research documentation such as notes on archival sources).

Post Excavation Assessment Stages and Outputs

The PXA consists of four separate, largely, though not necessarily, sequential stages; processing of the finds, palaeoenvironmental samples and any human remains (the material archive); archival preparation for data assessment and deposition (both material and documentary archive); data assessment and finally reporting. The outputs are two stand alone documents, although often bound together under a single cover as they will be in this case. The documents are the Data Assessment Report (DAR) which quantifies the data, identifies its significance and potential for further research, and the Updated Project Design (UPD), which scopes the response necessary by achieving the site's research potential and provides the basis for a cost for doing so.

The proposed work described in the UPD is entirely separate from the PXA and will form a future stage of work involving any necessary post-excavation research and leading to the

publication of the results of the excavation. This future stage concludes with the deposition of the entire project archive with the Oriel Museum Anglesey. Funding of the required future research, publication and archive deposition for long-term curation is a requirement to secure final discharge of the 2017-2019 phase of fieldwork at the Wylfa site.

For Wylfa Newydd each site will have a separate DAR and UPD to allow GAPS/CADW and the client, to be fully appraised of the justifications for further analytical work. Each site can then be discussed in relation to its specific significance before arriving at a consensus with regard to further work requirements. There will also be a need for an overview DAR and UPD which will have two functions:

- To succinctly summarise the findings of the individual site DARs and UPDs following consultation and provide a cohesive assessment of the whole project as well as a basis for an overall justified costing for future work requirements.
- To provide a research statement regarding the overall potential of the Wylfa Newydd development area. Clearly many of the sites will not merit the publication of a standalone report. Consequently, the research potential of such sites will be best realised in contributing to period-based volumes that address regional research framework questions.

Stage 1 Processing

A summary of the processing requirements is given below. A more detailed breakdown of the required procedures for finds is contained in appendix 1 and for environmental samples in appendix 2.

Environmental sample processing involves sieving individual 10 litre tubs of soil samples for bulk samples (collected from site) in a purpose-built water filtration tank. The flots (floats) and retents (sinks) are then dried, bagged and labelled. More specialised forms of sample processing may be required for other samples taken such as column samples for insects, pollen monoliths or cores, but these represent only a tiny fraction of the samples collected. Human remains (cremated and non-cremated) require different cleaning methods depending on their state of preservation. Non-cremated articulated and disarticulated human remains in good condition will undergo wet cleaning but without the bones being immersed in water. Human remains in poor condition must not be wet-washed and will have to be dry-brushed to avoid unnecessary damage to the remains.

Bulk finds are cleaned by washing. Small finds are cleaned according to the requirements of the material, this usually but not always involves washing. Following cleaning, most finds will need to be dried and some may require stabilisation to preserve them. Cleaning and stabilisation by material and object will be as described in Watkinson & Neal (1998). Specialist conservation will not be routinely undertaken at this stage as this will involve items being sent away to specialist laboratories and the consequent costs, but the conservation need will be defined by a specialist in conservation. Where an immediate conservation need is identified this will be addressed to ensure item stability.

Stage 2 Archival Preparation

Three tasks are required in stage 2 in relation to the material archive, marking in accordance with Oriel Museum guidelines, X-raying metal objects and boxing the finds and human bones for long term curation. There will be some need to carry out X-ray photography of metal objects to be able to identify them and assess their significance. Finds, mainly pottery, will need to be marked as appropriate. As some Prehistoric and Roman pottery is of a sandy fabric this can sometimes be difficult to place a mark directly on the fabric so clear nail varnish is required to prepare the location of the mark. Following marking the finds will be bagged and boxed. The archive boxes need to be made of acid free cardboard for long term conservation storage and will need to be purchased specifically for the project.

The documentary archive should have been appropriately ordered, indexed and catalogued before it left site, but it will require checking and final cross-referencing before it can be assessed. The checking will involve both digital and paper-based records and include a finalisation of plan and section data, both hand-drawn and recorded through a digital medium. Relevant HER entries will need to be listed in full detail. All records will need security copies. Paper records (drawn plans, sections and record sheets) will be scanned for digital archiving. The digitisation of all hand drawn plans and sections is to be avoided as not cost effective. Drawings for digitisation can be selected in the analysis phase when it is known which drawings will contribute to the publication. This ensures that all digitisation will be 'heads up' and only for the purposes of report illustration rather than 'heads down', thus removing the need for digitisation tablets and increasing efficiency.

Stage 3 Data Assessment

In all cases the assessment begins with a quantification of the items to be assessed, whether it be sample residues, finds or site records. The material archive assessment involves separate

assessments of ecofacts, artefacts and any human remains. Further details of the finds assessment are contained in appendix 3.

Every flot and retent will be examined to establish whether they contain plant macrofossils, zooarchaeological remains, snail shells etc, artefacts or metal working residue. Ecofacts, residues and any artefacts are then extracted and examined. Ecofactual assemblages are identified and characterised. The assessment of individual ecofactual assemblages must be undertaken by a suitably-qualified palaeoenvironmentalist.

The finds assessment involves the quantification, identification and dating of the recovered artefacts. The finds assessment can only be compiled by a suitably-qualified finds specialist who can identify and spot-date the artefacts. Where necessary, specialists with local expertise will be consulted, especially regarding the pottery assemblages.

Radiocarbon dating, or any other form of absolute scientific dating, will be undertaken at the assessment stage, though some samples may need to be sent for testing to identify their suitability for dating. As this is an assessment a full suite of dates suitable for Bayesian analysis will not be undertaken but the potential for such future work will be highlighted in the UPD. The documentary archive assessment involves identifying each site's stratigraphic phases assisted by a Harris Matrix. It is required that this will be done using the Harris Matrix generator software. Duplicate and false contexts will be identified, recorded and discarded.

<u>Stage 4 PXA and UPD Reporting</u>

Stage 4 results in the creation of the PXA report and the UPD. A detailed template for producing these documents follows. The documents produced will be technical grey literature reports and not publication reports.

Report Template

The following report template is laid out in accordance with the desired structure and layout of the report. Sentences in italics refer to the required illustrations whether drawings or photographs.

1. **Non-technical summary, including reasons for work, aims and summary results**

2. **Introduction**

2.1 Site location (include eight digit NGR), site code/ PRN reference, and Event Number

2.2 Scope of the project.

2.3 Dates/duration of fieldwork.

2.4 Outline of the site's character (including topsoil, subsoil and substrata descriptions, past land use impacts on preservation and impact of bioturbation) and how the site fits into the local archaeological landscape.

2.5 Brief summary of previous work including directly relevant nearby sites (i.e. likely to be part of same archaeologically represented activity), geophysical results, metal detecting results and evaluation results.

2.6 Explanation of the purpose of the assessment report and organisation of the report (refer to this report template and include as appendix 1).

2.7 *Site location map related to the development area.*

2.8 *Plan of site and excavated area (usually these will be the same).*

3. **Summary of the excavation methodology**

3.1 Proposals set out in the approved Written Scheme of Investigation for the fieldwork (copy of the Written Scheme of Investigation sections 4 and 5 only as appendix 2).

3.2 Any variations from the Written Scheme of Investigation with justifications.

3.3 Site planning strategy with justifications for the applied methodology.

3.4 A description of any avoidance strategies or re-burial methods used to preserve unexcavated archaeological remains in situ, indicating whether or not these will be subject to a monitoring scheme and, if so, providing a description of it or references to supporting relevant documentation.

4. **Site archive**

4.1 Summary details of the contents and organisation of the project archive

4.2 Quantification of documentary archive (including catalogues and indices) and details of current (give date) location of the paper archive. Details of the digital archive and arrangements for storage security.

4.3 Summary of work carried out on the documentary archive during post-excavation assessment.

4.4 Quantification of material archive (by storage box) and details of current (give date) location.

4.5 Summary of work carried out on the material archive, including nature of processing and cleaning, and any necessary preliminary conservation/stabilisation.

4.6 Details of any samples sent for scientific analysis or dating as a necessary precursor to costing a programme of analysis.

4.7 Agreed destination of the site archive (in all instances this will be the Oriel Museum, Anglesey) with a statement of any receiving repository conditions if necessary.

4.8 OASIS reference supported by completed data collection form as appendix 3.

4.9 *Representative sample photographs of site features that aid understanding of the assessment of stratigraphic data*.

5. Stratigraphic data

5.1 Summary of the nature of the investigated features/deposits described by phase in chronological order (not by individual context or feature), supported by a Harris matrix/matrices in appendix 4 (use context group numbers if appropriate).

5.2 Statement of significance of the stratigraphic data.

5.3 *Final pre-excavation plan.*

5.4 *Either an overall plan for all phases or individual phase plans or both as appropriate to the site's complexity.*

5.5 *Sections of key features with a location plan showing position of sections.*

5.6 *If relevant a more detailed plan of key structures.*

5.7 *Where relevant a structure through motion model illustration(s).*

6. Artefacts

6.1 Quantification (by weight in grams for bulk finds) of finds by type.

6.2 Description of condition, stability and the immediate and longer term conservation and storage needs by artefact group.

6.3 An assessment of the character, range and variety, date, meaning and significance of all recovered artefact groups.

6.4 Statement by a recognised specialist on the research potential of each individual artefact group. If no further work beyond assessment is considered necessary this should be clearly indicated.

6.5 Statement of significance for the retention of material and a proposal for a fully justified discard strategy for low/nil value assemblages, in agreement with GAPS/CADW.

6.6 *Supporting finds illustrations at appropriate scales (for the assessment wherever practicable scaled photographs should be used rather than line drawings).*

7. **Palaeoenvironment**

7.1 Quantification (by weight in grams) of the retents and flots available for analysis. Quantification by sample bucket where further portions of a sample are available and the assessment sub-sample has revealed that further sample processing is worthwhile for the additional data it may reveal. Sub-sampling will have been sufficient to characterise and understand a sample.

7.2 Factual summary of each type of sample (e.g. bulk organic, dendrochronological, monolith), quantity, preservation, post-depositional processes, curation and storage need by ecofact group.

7.3 An assessment of the character, range, variety and significance of all ecofactual groups (likely to include plant macrofossils, pollen, animal bone, shell, snails and insects).

7.4 Statement by a recognised specialist on the research potential of each individual ecofact group, including potential to provide scientific dating. If no further work beyond assessment is considered necessary, this should be clearly indicated.

7.5 Statement of significance for the retention of material and a proposal for a fully justified discard strategy for low/nil value assemblages, in agreement with GAPS/CADW.

7.6 *Representative photographs of key assemblages*.

8. **Human remains**

8.1 For inhumations quantify by number of burials and then summarise information on skeletal completeness in a table divided as >75%, -75%, -50%, <25%. For cremations, bone remains from each context should be quantified by weight in grams.

8.2 Factual data about the bone assemblage, describing the provenance of the skeletal material and the general condition of the remains. The condition of the bone will influence the information that can be gained from the assemblage.

8.3 Statement by a recognised specialist on the research potential of the human remains.

8.4 Note on the long-term arrangements for the curation or reburial of the human remains.

8.5 *Plans showing the location of burials or other deposits of human remains*

8.6 *Photographs and/or drawings of inhumation burials in situ or a structure through motion 3d model.*

9. **Discussion**

9.1 A brief summary of the character and significance of the site as represented through its stratigraphic, artefactual and palaeoenvironmental data. Include where relevant the results of any documentary research. If no further work beyond assessment is considered necessary, this should be clearly indicated. If further work is required then include 9.2, 9.3 and 9.4 below.

9.2 A tabulated list of relevant sources discovered (relevant books, articles, HER data, archival sources) quantity, variety, level of study of sources during post-excavation assessment.

9.3 Indicate applied studies that will be necessary for further analytical work. These might include, for example, comparative analysis, archival and/or cartographic research and intra and inter-site spatial analyses, site morphological studies, absolute dating methods, scientific techniques not covered by the standard suite of applications (e.g. specific chemical analyses, thin sectioning for soils or ceramic research, isotope studies, scanning electron microscopy, specific biological analyses etc).

10. **Statement of potential**

10.1 A summary of the potential of the data in terms of local, regional, national and international importance, referencing as relevant regional and national period and subject specific research agendas. This should include:

- an appraisal of the extent to which the site archive might enable the data to meet the original research aims of the project;
- a statement of the potential of the data in developing new research aims, to contribute to other projects and to advance methodologies;
- an assessment of the relevant level at which the site data might be published e.g. site specific publication, project landscape overview or background contextual data (choose one only).

10.2 An informed strategy for the detailed analysis of some or all data groups as recommended by relevant specialists to enable a reconstruction of the history and use of the site to be developed, in line with the site's relevant research potential

(where no further work is recommended this section is not required). This strategy must include provision to incorporate the results of any earlier phases of archaeological work on a specific site, reappraising materials and artefacts recovered during earlier assessment and evaluation phases and, where appropriate, earlier excavation results - including, where possible, from neighbouring sites

10.3 *Map of the site in context at a regional or local level, showing other relevant sites and where appropriate connections and networks.*

11 Bibliography of sources used in the compilation of the PXA

12. Updated Project Design

12.1 Introduction including purpose of the UPD to provide details of a programme of analysis leading to the appropriate mechanism for the dissemination of the results of the project. Also, to provide a basis for costing the programme of analysis, publication and deposition of the archive.

12.2 Justification for the contents of the proposed programme of analysis and any theoretical approaches to be deployed, in relation to the site's statement of potential and proposal for publication/dissemination as appropriate:

- inclusion of main results in an overall synthetic volume only
- thematic paper on a specific research theme
- internet publishing through journal or proprietary website (stating whether all catalogues will be available and interactive)
- short illustrated site report for a journal
- section/chapter in edited monograph
- fully illustrated site monograph
- popular booklet (additional publication only and not to be the primary publication).

12.3 Proposal for analysis of the stratigraphic data concentrated on key feature groups.

12.4 Detail of illustrations required to support the stratigraphic analysis.

12.5 Detail of retention and discard strategy for the material archive.

12.6 Proposals for scientific dating (potentially an initial suite of dates and a second after provisional results from the artefact and ecofact analysis are received).

12.7 Proposals for a Bayesian analysis to refine chronologies, following consultation with Cadw regarding to the selection of contexts and samples for scientific dating.

12.8 Proposals, where relevant, for other forms of scientific analysis such as lipids, strontium or oxygen isotope analysis.

12.9 Details of illustrations required to support the artefact analysis.

12.10 Requirement for conservation works on material archive.

12.11 Proposals for further research, including archive visits and comparative analysis of other investigated relevant sites in order to contextualise the site data.

12.12 Details of resultant technical/archive report.

12.13 Publication report synopsis where relevant, including any additional illustrations required.

12.14 Proposals for monitoring and continued liaison with GAPS and CADW throughout the post-excavation analytical programme.

12.15 Staged programme and timetable for any proposed further work up to and including publication and archive deposition. Task list and Gantt chart.

Task breakdown for PXA

1. **Processing**

1.1 Environmental sample processing

1.2 Cleaning human remains

1.3 Bulk finds cleaning

1.4 Small finds cleaning

1.5 Artefact stabilisation

2. **Archival preparation**

2.1 Finds marking

2.2 X-raying metal objects

2.3 Archive box purchase

2.4 Boxing

2.5 Site record checking and cross-referencing

2.6 Compilation of list of archival sources

2.7 Records scanning

3. **Data assessment**

3.1 Zooarchaeological remains

3.2 Insects

3.3 Snails

3.4 Shells

3.5 Plant macrofossils

3.6 Pollen

APPENDIX 1 METHOD STATEMENT: STAGE 1 FINDS PROCESSING

Finds processing and assessment summary

At stage 1 the finds will be cleaned (usually but not always involving washing). At stage 2 the finds will marked, bagged and boxed. Once this is done in stage 3 the finds will be quantified and assessed; this involves the creation of an Excel spreadsheet into which are recorded numbers of items, weight and spot-dating and the finds are cross-referenced to the stratigraphic contexts from which they were derived. Having done this in stage 4 a report will be prepared on the assessment results. The work will be solely aimed at identifying significant assemblages for further future analysis as will be detailed in the Updated Project Design.
The following specification allows for the cleaning of bulk finds.

Washing and cleaning

Bulk artefacts (pottery, animal bone, glass, ceramic building material) are bagged up on-site and returned to the post-excavation department. The finds are washed and cleaned using two bowls (one to wash, one to rinse) and toothbrushes. The finds are placed in trays linked with newspaper – the site code, context number and (if applicable) the small find number is written either on the newspaper or on a tag attached to the tray with permanent marker. To increase the efficiency and speed of the finds' drying time, a drip-tray system is employed in

which finds are put on newspaper first before being placed in the tray. This ensures excess water is soaked up (and is particularly useful for large, heavy fragments such as architectural stone and ceramic building material).

Organic finds are processed differently and will depend on whether they have been recovered from waterlogged deposits; leather, shale, jet, wood and worked bone that has been recovered from waterlogged deposits needs to be kept dark, dry and cool. Objects are cleaned primarily with soft wet brushes and they are bagged (with water in the bags) and are put in an organics fridge.

All metalwork (including copper alloy, lead and iron) and oyster shell is dry-brushed. Delicate metal and non-metal small finds are dry-brushed and placed in crystal boxes in trays on acid-free tissue paper. Plaster/mortar are dry-brushed and placed in labelled trays.
Human remains (cremated and non-cremated) are processed differently and will require different cleaning methods depending on their state of preservation. Non-cremated articulated and disarticulated human remains in good condition will undergo the same processing as bulk finds, but the bones are not immersed in water. The human remains will only be marked depending on the requirements of the curator and county repository. Human remains in poor condition must not be wet-washed and will have to be dry-brushed for remains to stabilise.

Time estimates for finds washing and cleaning

It must be emphasised that finds washing is hugely dependent on a wide range of variables, including the original burial environment (acidic soils, different soil types e.g. clay versus sand) and previous activity on the site (agricultural activity such as ploughing may damage the finds).

Find type	**Weight**	**Time**
Prehistoric pottery	1kg	1-2 hours
Roman pottery	1kg	1-1.5 hours
Saxon pottery	1kg	1-1.5 hours
Medieval pottery	1kg	1 hour
Post-medieval pottery	1kg	1 hour
CBM & daub	1kg	1-1.5 hours
Animal bone (good condition)	1kg	1-1.5 hours
Animal bone (bad condition)	1kg	1-2 hours

Human bone (complete skeleton, good condition)	7-8kg	1-1.5 days
Human bone (bad condition)	1kg	1-2 days
Glass	1kg	1-1.5 hours
Metalwork	1kg	1-1.5 hours
Oyster shell	1kg	1-1.5 hours
Flint	1kg	1 hour
Stone	1kg	1 hour
Leather	1kg	1-1.5 hours
Archaeometallurgical waste	1kg	1 hour
Plaster/Mortar	1kg	1-2 hours
Clay Pipe	1kg	1-1.5 hours

APPENDIX 2 METHOD STATEMENT: STAGE 1 ENVIRONMENTAL PROCESSING

Environmental processing and assessment summary

For environmental samples in stage 1 the samples will be processed. In stage 2 this material will be dried, bagged and sorted. In stage 3 this material will be examined to establish whether or not they contain plant macrofossils, zooarchaeological remains, artefacts or metal working residue. Having done this in stage 4 they will be required to prepare a report on the assessment results. They will not be instructed to analyse the materials derived from the flots and retents at the assessment stage. The work will be solely aimed at establishing significant flots and retents for further future analysis as will be detailed in the Updated Project Design. The following specification allows for the processing and assessment of bulk environmental samples and for waterlogged materials from a General Biological Analysis sample (GBA).

General Biological Analysis sample

The colour, lithology, weight and volume of the sample will be recorded on the sample sheet. The sample will be then be processed. All samples will be floated on a 250-300 mm mesh and the heavy residues washed over a 0.5-1 mm mesh as required by SCCAS. The flot should be air dried.

The flot should be 100% sorted with all relevant material being recovered, once this process has been completed, the remaining material may be discarded. Any plant remains should be quantitively recorded. All ecofactual material should be removed as should relevant artefactual material. Earthworm and nematode capsules should be counted but not recovered. If charcoal-rich a 2mm sieve should be used, the resultant material should then be

subject to the same process outlined above. The data from the flot sorting should then be recorded into a spreadsheet (Excel) or database (Access).

Once dried the entire retent residue should be sorted. In order to ease sorting, the dried residues may be passed over a 4mm mesh, this also aids charcoal retention of a suitable size for ID. The dried residues should be described (colour, lithology, weight and volume of the individual fractions).

The <4mm fraction will be scanned with a magnet in order to pick up micro-slags, and 100% sorted for the recovery of artefacts and ecofacts.

The fine fraction will be sorted and any relevant material recovered. The sorted residues can then be discarded. Any resulting artefactual and ecofactual material should be recorded (abundance/actual quantities dependent on material and weighed).

Recording of the Environmental Data

Where possible quantify, counts of over 50 individuals per species can be referred to by levels of abundance, such as +=50-100, ++=100-200, +++=200-500 and ++++ to indicate greater than 500. If identification is not to species level then a distinction between cereals and weeds species (or non-economic taxa) should be made. The presence of chaff should be noted.
For long term storage, the plant remains should be stored in soda glass tubes with sample information, and identification (where relevant) clearly marked using pencil and a Tyvek label placed inside the tube.

Waterlogged Samples

Between 250 and 500ml of a 1l sub sample from the GBA is processed by placing the material in a 500µm sieve and washing the sample through until all of the sediment has been removed. The latter is essential or the fluid in which the sample is stored will become cloudy. Once clean the sample is removed from the sieve to an airtight jar and stored in ethanol (95% alcohol).

Paraffin Flotation

The remaining 9l of the GBA will be placed into a bucket filled with hot water to disaggregate the sample. A handful of the material is then placed in a 300µm sieve and washed until as much of the sediment as possible has been removed. The material is then tipped from the

washing sieve into a further sieve and allowed to drain and dry. Once the sample has been completely processed, it will then be left to dry for an hour. The sample is then tipped back into the bucket and enough paraffin to coat the sample is added –multiple buckets may be required if the sample is large. This will be then allowed to stand for 15 minutes and cold water added to the bucket.

The bucket is then allowed to stand for a further 15 minutes. At this stage any insect sclera should have risen to the surface of the water as the paraffin adheres favourably to the chitin which forms the exoskeleton of the beetle. The top 2cm of bucket is then poured off through a 300µm sieve and this process is repeated twice more.

At the end of this process, the flots within the sieve will be washed using domestic washing up-liquid until all traces of both the paraffin and detergent have been removed. The latter is essential as any trace of either left on the flot will render the storage medium cloudy. The sample is then stored in ethanol (95% alcohol) inside an airtight jar.

METHOD STATEMENT STAGES 2 AND 3 FINDS ASSESSMENT

Summary

The finds assessment involves the quantification, identification, dating and significance assessment of the recovered artefacts. The assessment of significance happens in stage 4 when the context of the finds can be taken into account as their significance is not solely based on the object's intrinsic interest. The finds assessment can only be compiled by a suitably-qualified finds specialist who can identify and spot-date a wide range of artefacts.

The finds assessment will adhere to a number of national guidelines, including CIfA (2017), Historic England, EAC (2014), Brown (2011) and Watkinson & Neal (1998) as well as the specific county museum's own standard requirements plus national and regional fabric codes (prehistoric through to post-medieval pottery). The finds assessment will make recommendations to be included in the UPD (updated project design). These may include further literary research and comparative analysis, AMS C14 dating, strontium or oxygen isotope analysis, Bayesian scientific methods plus illustration / photography.

The following specification allows for the quantification, identification and dating and significance assessment of the finds.

Stage 2

Certain types of find, when dry, are then marked; this can be dependent on the curator and the county repository. Finds, including pottery, CBM, animal bone, glass and clay tobacco pipe, are marked with the site code, context number, small find number and the museum accession number (if applicable). The finds are marked using permanent Indian ink (Winsor & Newton); for finds with rough surfaces (applicable to all types of pre post-medieval pottery), a small patch of acrylic or nail varnish is applied to provide a smoother surface.

Types of finds and ecofactual remains that are not marked include human bone, leather, shale, jet, all metalwork, plaster/mortar, oyster shell, slag and wood.

Once the finds are dry and marked, they are quantified and bagged in zip-lock self-sealable bags and the site code, context number, small find number and museum accession number is written on the bags. For small finds and delicate/fragile artefacts, 2 layers of acid-free ridged

foam is cut and inserted into the bag beforehand and the artefact is sandwiched between the two layers.

The non-metal artefacts, when bagged, are placed in acid-free archive boxes and they are ordered by material type and by context. Boxes should not weigh over 6kg. Metal artefacts and some organic finds are kept in Stewart tubs with a bag of silica gel and humidity strip indicators. WA Ltd's in-house archive labels are then put on the front of the box.

Time estimates for finds marking and bagging and boxing

Marking 30-40 seconds per artefact e.g. per bone, per pot sherd.

Bagging and boxing 1 box at 6 kg full capacity – 30-40 minutes.

Stage 3

Once processed (cleaned and dried stage 1 and marked stage 2) the finds will need to be assessed. In stage 3 preliminary recording and description of the assemblage is undertaken and an Excel spreadsheet is created. This stage is where the artefacts are quantified, weighed, spot-dated and where additional comments / notes are made. The Excel spreadsheet (or Access database) forms a critical part of the finds assessment and every finds report must have one. The preliminary recording is conducted by a suitably-qualified finds specialist, with a proven record and appropriate local knowledge.

Time estimates for preliminary recording

Recording and describing 1 box (6 kg) of finds = 1-3.75 hours dependent on the nature of the items.

Materials costs to be considered to PXA

In addition to the person costs there is a material cost for storage materials, including boxes, silica gel, acid free tissue and zip-lock bags, for the artefacts and the human bone. For example, finds and documentary archive boxes need to be acid free for long term storage. Appropriate temporary storage and monitoring of waterlogged artefacts is required, prior to conservation.

There will be some need to carry out X-ray photography of metal objects to be able to assess their significance.

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