Archaeoleg Brython Archaeology

Post-Excavation Assessment of Potential
Wylfa Hotspot 7-9

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Wylfa Newydd Development, Hotspot 7-9

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 7-9 a gloddiwyd fel rhan o'r gwaith clirio cynnar.

Roedd cloddfa Hotspot 7-9 (NGR SH 34879274; EVENT PRN 46040) yn mesur 904m² ac wedi ei leoli i asesu potensial y safle yn dilyn arolwg geoffisegol ac arolwg ffosi gan Wessex Archaeology. Yn ystod y gwerthusiad nodwyd dwmpath llosg a rhigol gron.

Yn ystod cloddio darganfyddwyd grŵp o dyllau stanc cynhanesyddol, pydewau, cafnau, arwyneb cerrig, ffynnon, trac a thwmpath llosg. Darganfyddwyd nifer o arteffactau gan gynnwys arfau carreg Mesolithig a Neolithig, crochenwaith Oes Efydd, esgyrn anifeiliaid a chrochenwaith ol-ganoloesol. Mae dyddiadau radiocarbon yn awgrymu dyddiad Neolithig i'r grŵp tyllau stanc a dyddiad Oes Efydd Hwyr i'r Oes Haearn Cynnar ar gyfer y twmpath llosg.

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 was 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 7-9, which was excavated during early clearance works.

The excavation area of 904m^2 at Wylfa Hotspot 7-9 (NGR SH 34879274; EVENT PRN 46040) was defined following a geophysical survey and archaeological trial trench evaluation by Wessex Archaeology to address the archaeological potential of the site. During evaluation a suspected burnt mound and ring gully were recorded.

During the excavation the remains of a prehistoric stakehole group, pits, troughs, a stone surface, a well, a trackway, and a burnt mound were revealed. Artefacts recovered include Mesolithic/Early Neolithic lithics, possible Bronze Age pottery, animal bone and post-medieval pottery. Radiocarbon dating of organic material recovered from soil samples suggest a Neolithic date for the stakehole group, and a Late Bronze Age to Early Iron Age date for the burnt mound activity.

1 Introduction

During August 2017 to January 2019, Archaeoleg Brython Archaeology CYF. (ABA), commissioned by HNP, conducted a phased programme of excavation of a burnt mound and associated features at Wylfa Hotspot 7-9, Anglesey (NGR SH34879274) 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 the 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 4640)
- Hotspot 8 (EVENT PRN 46041)
- Hotspots 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 7-9 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, a suspected burnt mound and ring gully were identified. The burnt mound and ring gully deposits contained charred plant remains and charcoal, in addition to burnt stones that were recoded within the gully. No artefacts were recovered. Excavation of Hotspot 7-9 by ABA revealed a burnt mound, likely Late Bronze Age to Early Iron Age in date, and associated troughs. In addition to a Prehistoric stakehole and pit group, an undated trackway, a possible field system, and a stone surface and well.

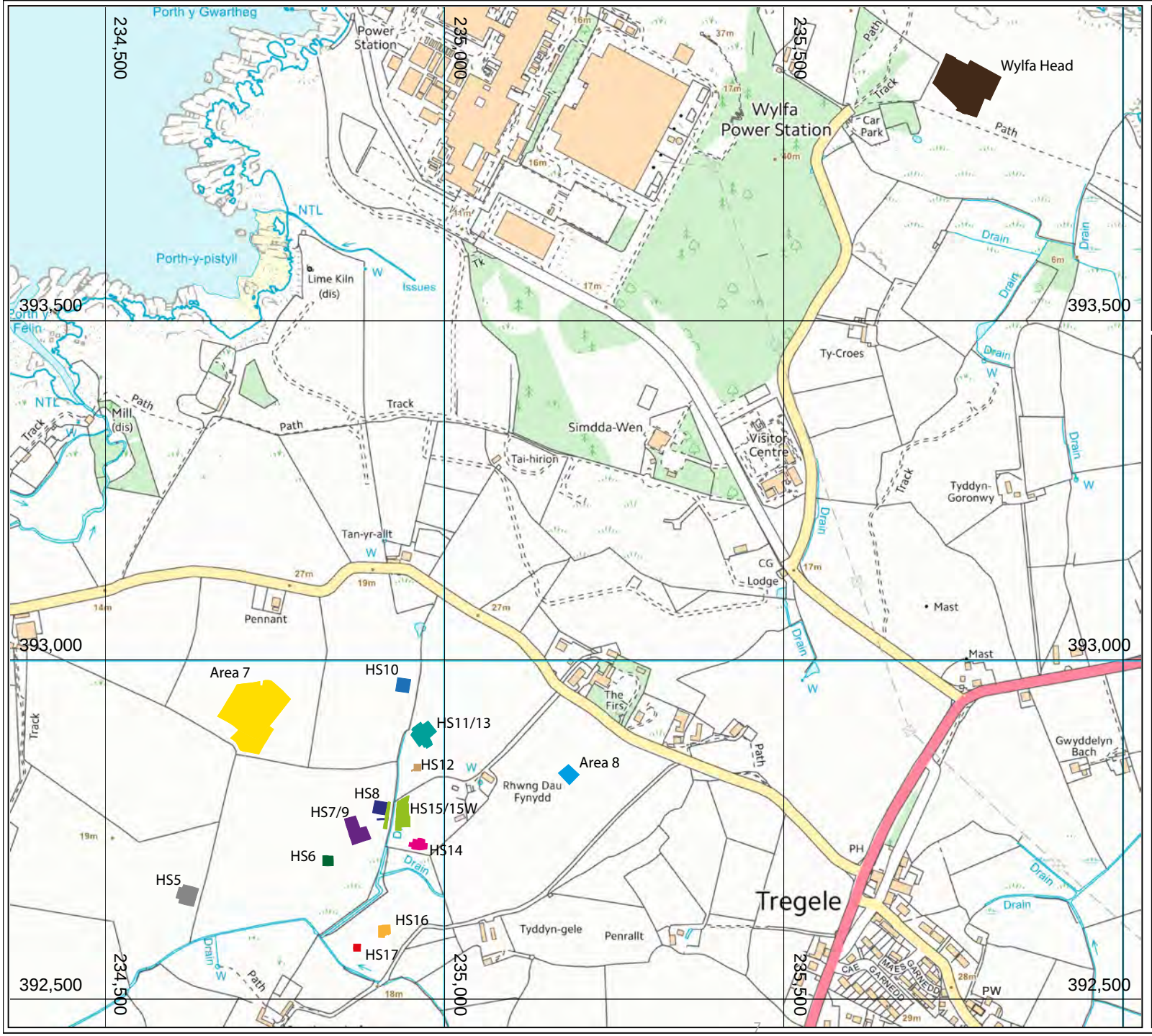
All archaeological works were undertaken in accordance with the Written Scheme of Investigation (WSI [Horizon Nuclear Power, 2016; 2017]), and in line with paragraph 5.8.21 of the overarching National Policy Statement for Energy (EN-1 [Department of Energy and Climate Change, 2011]). The work was monitored by Gwynedd Archaeological Planning Services (GAPS), cultural heritage advisors to the Local Authority. WA have been employed by the 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 7-9, 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 7-9 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 Archaeologist' 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.



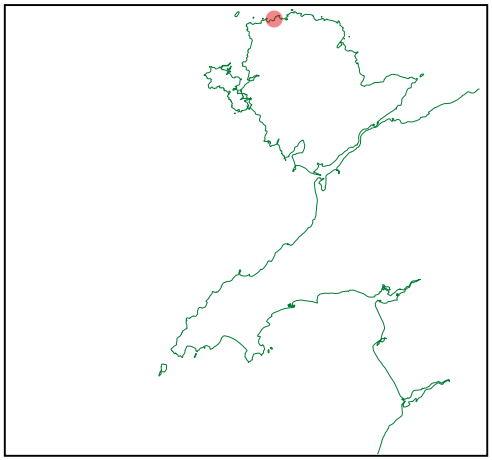


Figure 1
Location plan showing the areas excavated by ABA in the Wylfa Newydd Devleopment Area

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

Due to the proximity of Hotspot 7 and Hotspot 9 to one another, the hotspots were merged to become Hotspot 7-9. Hotspot 7-9 was located in Hotspot Zone 1a, and sits approximately 730m west of Tregele and 980m south of the existing decommissioned Wylfa power station in a south-easterly sloping field on the edge of marsh land (*Figure 2*). The pastural field was previously labelled 'A7' during the archaeological trial trench evaluation. The investigation area was at a height of approximately 17m AOD, centred on NGR SH34879274, and measured approximately 904m^2.

2.2 Geology and Topography

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).

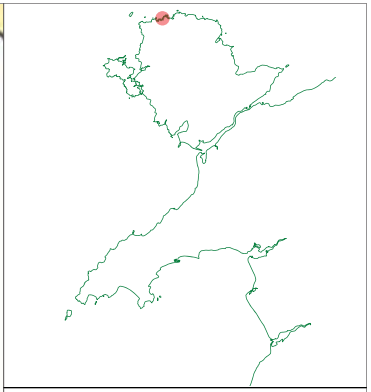

Figure 2
Location Plan, Hotspot 7-9.

Key

Hotspot 7-9

Drawn By:	LWP
Date:	31/01/19
Location:	SH34879274
Project:	AB1703 Hotspot 7-9

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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 burnt mound, troughs, pits or any other archaeological features identified during the excavation of Hotspot 7-9. However, Anglesey is rich in archaeological sites and artefacts dating from the Mesolithic to 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. As well as the burnt mound discovered in Hotspot 7-9 (HER PRN GAT 91846), which is discussed in this report, a further burnt mound was excavated in Hotspot 5 (HER PRN GAT 91839) 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 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 survey potentially showed the presence of a suspected burnt mound 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, in which Field A7 is located. Natural deposits of orange brown sand or clay lay at 0.2-0.8m below ground level. A total of 54 trenches were opened in Field A7, with 26 of those containing recorded archaeology. Of these trenches, 14 contained undated ditches and two contained undated pits. Alluvial deposits of blue grey clay or grey brown sand clay were recorded up to 0.52m deep in Trenches 254, 261, 264 and 1363. A peat deposit of dark grey brown silt with a high organic content was recorded in Trenches 258 and 1357.

Trench 252, which was targeted as the Hotspot 7 excavation, contained a possible ring gully (25212) measuring 0.40m wide and 0.30m deep, with a projected diameter of 4.5m. The deposits included burnt stones, charcoal and charred plant remains. One internal feature in the form of a pit (25219), measuring 0.58m in diameter, was recorded. No dating evidence was recovered but the ring gully lay 17m northwest of a burnt mound in Trench 1345, hinting at a probable contemporary prehistoric date (Wessex Archaeology, 2016).

Trench 1345, which was targeted as the Hotspot 9 excavation, contained a burnt mound (134508) measuring 1.36m by at least 0.36m wide and 0.15m deep. The burnt mound lay approximately 17m south-east of the ring gully (25212). The burnt mound deposits contained low proportions of charred plant remains, dominated by wood charcoal. A possible hearth (134504), measuring 0.5m by 0.42m and 0.1m deep, was located approximately 5m from the burnt mound. The hearth contained heat affected clay above a burnt stone and charcoal deposit (Wessex Archaeology, 2016).

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 so 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/techniques when examining the record/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).
- A Research Framework for the Archaeology of Wales: North West Wales – Medieval c.AD 1100 – 1539 (Longley, 2010).

Due to the identification of a burnt mound during evaluation the following, relevant, research objectives (RO) was identified:

1. The setting of the information gained from archaeological investigation into a broader regional and national (including Britain and Ireland) context

2. 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.
3. Gaining insights into long distance trade (via the analysis of recovered artefacts) especially in such products as pottery, glass and metalwork.

As the excavations revealed a burnt mound and associated troughs, prehistoric stakeholes and pits, a field system, stone surface and well, the following archaeological research questions were identified in the WSI for Strip, Map and Sample areas (Horizon Nuclear Power, 2017).

Prehistoric;

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

Q.2. Are the burnt mounds/spreads the by-product of a specific function and what is that function?

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?

Additionally, there are seven farmsteads within the Wylfa Newydd Development Area (Jacobs, 2015: Assets 119, 146, 154, 173, 225, 263, 286). Land drains and enclosure ditches associated with these farmsteads, as well as other agricultural features and artefacts of a post medieval to modern date not directly associated with these assets were identified in both SMS zones. Therefore, the following questions should also be addressed:

Q.11. What can the ditches and land drains tell us about the process of enclosure and land improvement in the post-medieval to the modern periods in the SMS zones?

Q.12. What evidence is there for the types of farming and land use in this area in the post-medieval and modern periods in the SMS zones?

Q.13. What can artefacts indicative of the material culture of the medieval, post-medieval and modern periods, in these zones, tell us about the connections between this area and the wider world through trade and consumption?

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).

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.

2.7.2 Excavation and Sampling

2.7.2.1 Mechanical Excavation

All mechanical excavation and 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. 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 Paleoenvironmental 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):

- 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.

2.7.3 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 distribute to stakeholders. Printed versions will only be produced if specifically requested. ABA will hold a digital version of the archive indefinitely.

3 Excavation Results

Excavation of Hotspot 7-9 (EVENT PRN 46040) revealed a burnt mound and associated troughs, a series of intercutting pits, postholes and stakeholes, ditches, gullies and a probable stone built well (*Figure 3*). At the western edge of Hotspot 7-9 a large bedrock outcrop was identified, which appeared to have been quarried at some point during the past. The results of the excavation were first described in the ABA 2018 site summary report.

3.1 Quantification of Excavation Data

Data Category	Number
Context	230 (10 voided)
Small finds	27 (1398.5g - 1.398kg)
Environmental samples	93 (3 voided) - (2433 litres / 257 buckets)
Digital photographs	244 JPEG / 244 NEF
Rectified photographs	21.3GB
GPS surveyed digital data	4.68MB
Hand drawn plans	6
Hand drawn sections	87

Allocated PRNs

PRN	Feature
HER PRN GAT 91845	Stakeholes and Pits
HER PRN GAT 91846	Burnt Mound
HER PRN GAT 91847	Possible Working Area
HER PRN GAT 91848	Pits and Gullies
HER PRN GAT 91849	Ditch
HER PRN GAT 91850	Possible Quarrying
HER PRN GAT 91851	Trackway
HER PRN GAT 91852	Pits

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 is included as Appendix VIII. A total of 230 contexts (*Appendix III*) were identified during the Hotspot 7-9 excavation. Upon investigation ten contexts were found to not be of archaeological interest. The physical relationships between features excavated at the site suggest eight potential groupings and/or phases withing the limits of the Hotspot 7-9:

1. Ancient natural processes;
2. Period 2 - stakeholes of a potential prehistoric structure;
3. Period 3 (phase 1) - a mid-phase consisting of features predating the burnt mound;
4. Period 3 (phase 2) - burnt mound activity and abandonment, likely Late Bronze to Early Iron Age in date;
5. Period 3/4 - possible industrial activity dated to the Late Iron Age and Romano British period;
6. A late phase of possible field clearance activity;
7. Period 8 Modern field drains; and
8. 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	

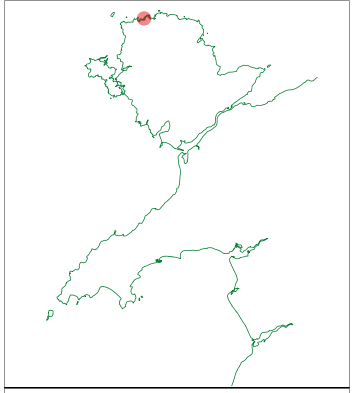

Figure 3
Site Plan, Hotspot 7-9.

Key

- Limit Of Excavation
- Bedrock
- Natural Features
- Neolithic Features
- Late Bronze Age - Early Iron Age Features
- Late Iron Age - Early Roman Features
- Undated Features
- Modern Truncation

Stakehole Context Numbers (Inset)

1. [109.0111]	11. [109.0099]	21. [109.0013]	31. [109.0020]
2. [109.0115]	12. [109.0022]	22. [109.0047]	32. [109.0072]
3. [109.0117]	13. [109.0018]	23. [109.0060]	33. [109.0070]
4. [109.0010]	14. [109.0016]	24. [109.0058]	
5. [109.0091]	15. [109.0119]	25. [109.0041]	
6. [109.0030]	16. [109.0049]	26. [109.0039]	
7. [109.0024]	17. [109.0121]	27. [109.0037]	
8. [109.0028]	18. [109.0043]	28. [109.0093]	
9. [109.0012]	19. [109.0045]	29. [109.0035]	
10. [109.0014]	20. [109.0056]	30. [109.0095]	

Drawn By: DPN (edits by KM)

Date: 18/12/18 (last edited 09/04/20)

Location: SH34879274

Project: AB1703 Hotspot 7-9

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3.2.1 Ancient Natural Processes

A potential shallow tree throw [109.0180], located in the south-eastern section of the burnt mound area and within the limits of the excavation, consisted of an irregular shaped depression measuring 1.6m in length, 0.8m wide and 0.26m deep, and contained a large amount of waterlogged organic material. The tree throw contained three fills: a friable black silt with inclusions of charcoal and small stones (109.0184), that was situated on top of a friable orange brown sand clay (109.0182), which overlaid a plastic dark brown peat clay deposit with occasional inclusions of small stones (109.0181). Alluvial deposits of plastic dark brown peat and clay (109.0183); (109.0160); (109.0183); (109.0191), and a soft mid grey brown clay (109.0155) covered the feature.

3.2.2 Period 2 - Prehistoric Stakeholes and Pits (HER PRN GAT 91845)

A small pit and 35 stakeholes (Group number 109.0101) were excavated approximately 7m to the north of the burnt mound. The stakeholes may have formed part of a wind break or fence structure, possibly defining a small working area around pit [109.0052]. Two struck fragments of chert (SF004 and SF005) were recovered from stakehole [109.0091]. Radiocarbon dating of organic material recovered from the fill of stakehole [109.0045] returned a Neolithic/Early Bronze Age date of *c*. 2031-1887 BC.

To the south-east of the stakehole group, pit [109.0109] was identified that may be contemporary. Pit [109.0109] measured 1.37m in diameter and 0.37m deep and was cut into bedrock. The base of the pit contained a charcoal rich deposit (109.0108) which had been sealed by (109.0107), a deposit of mottled grey orange silt sand which was similar in appearance to the nearby glacial deposits. A later deposit containing fire-cracked stones (109.0106) and a grinding stone (SF008) was sealed by a silt deposit (109.0100), which contained a fragment of prehistoric pottery (SF002), likely Bronze Age in date, and a Mesolithic/Early Neolithic flint scraper (SF003).

Pit [109.0135], sealed with bunt mound material (109.0154), was sub-circular and measured 1.75m in length, 1.47m in breath and 0.53m deep. The two fills, (109.0133) and (109.0134), consisted of a loose dark grey brown clay silt and compact mid brown grey silt clay. This pit predates the burnt mound but may not be related to the Neolithic/Early Bronze Age features.

Pit [109.0125], located south of pits [109.0202] and [109.0204], and to the south-east of the burnt mound is likely contemporary with the earlier activity due to lack of burnt mound deposits within the pit. The pit was oval shaped and measured 3.50m in length, 1.63m wide and 0.55m deep and was filled with loose, grey brown silt sand and clay, with inclusions of charcoal. A worked pebble (SF018), identified as a possible roughout axe or unifacial pointed hand axe, was recovered from fill (109.0123). The pit was truncated by a modern field drain [109.0127].

3.2.3 Period 3 – Burnt Mound (HER PRN GAT 91846)

3.2.3.1 Phase 1

A spread of burnt mound material (109.0154) [identified as bunt mound (134508) during the excavation of evaluation Trench 1345], measuring 20m in length, 10m wide and 0.15m deep, stretched across the southern central part of the excavation area. It consisted of soft friable black silt with inclusions of heat altered stones. A spindle whorl (SF020) and Mesolithic/Neolithic worked chert fragments (SF021) were recovered from this deposit. Though several troughs and pits associated with the spread suggest that the burnt mound (Group number 109.0136) was formed in several phases this could not be confidently identified during excavation. The deposit is likely to have been disturbed by later ploughing, which may have resulted in evidence of phasing being lost.

Trough [109.0190], oriented north-south and located towards the southern edge of the excavation area, was rectangular in shape and measured 3.9m in length, 1.8m in width and 0.25m deep. The trough was filled by a slightly concreted pale orange sand silt, (109.0188) and (109.0189), with inclusions of heat altered stones. The trough was truncated by a circular pit [109.0187]. Trough [109.0171], oriented east-west and measuring 2.75m in length, 1.5m wide and 0.42m deep, was located towards the northern edge of the burnt mound, and north of trough [109.0190]. Within the trough was a rectangular wooden lining or tank (109.0179) measuring 1.8m in length, 1.10m wide and 0.4m deep. The lining appeared to be formed of planks, the shape of which were still identifiable against the edge of the trough (*Plate 1*). Fragments of the wooden lining were retained as sample <78> and identified as oak during environmental sample processing. Deposits (109.0169) and (109.0170) were a mixture of grey orange silt and sand clay, which had been placed between the wooden structure and the edges of the trough during construction. The trough was filled with burnt mound material (*Figure 4*) consisting of soft, friable dark brown black silt with inclusions of charcoal fragments and frequent heat altered stones. Radiocarbon dating of organic material recovered from both fills returned a Late Bronze Age date of *c*. 1219 BC to 973 BC.

Plate 1. Section of trough [109.0171], with visible remains of wooden lining (109.0179). View from the North-West, 2m scale.

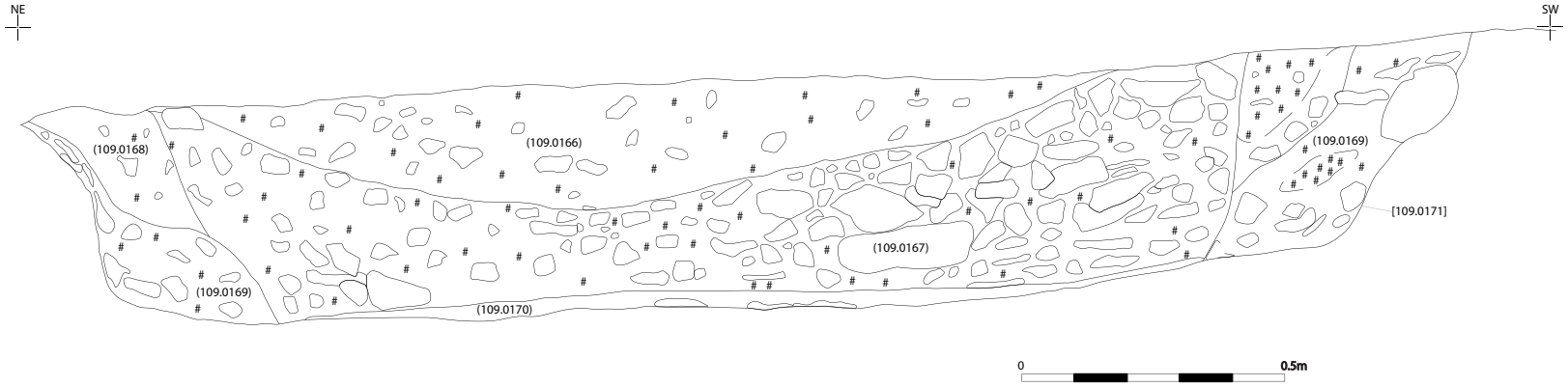


Figure 4
NW facing Section of trough [109.0171].

Key

\# Charcoal

Drawn By: KM

Date: 28/02/20 (last edits 10/03/21)

Location: SH34879274

Project: AB1703 Hotspot 7-9

Archaeoleg Brython Archaeology

3.2.3.2 Phase 2

Pit [109.0187], which truncated trough [109.0190], may have been deliberately dug into the ground water table for use as a water source. The pit measured 1m in diameter and 0.5m deep and was backfilled with burnt mound material consisting of a dark black grey clay, with inclusions of a large amount of fire cracked stones. The pit was sealed by the main deposit of burnt mound material (109.0154). Two other pits likely associated with the burnt mound and sealed by deposit (109.0154) include pit [109.0161] and [109.0163]. Pit [109.0161] was sub-circular in shape and filled by black silt (109.0162), similar to the burnt mound material (*Plate 2*). Pit [109.0163] was cut into bedrock and measured up to 1.4m in diameter and 0.14m deep. The primary fill (109.0165) consisted of a compacted stony grey clay and was overlain by a charcoal rich deposit containing heat affected stones (109.0164).

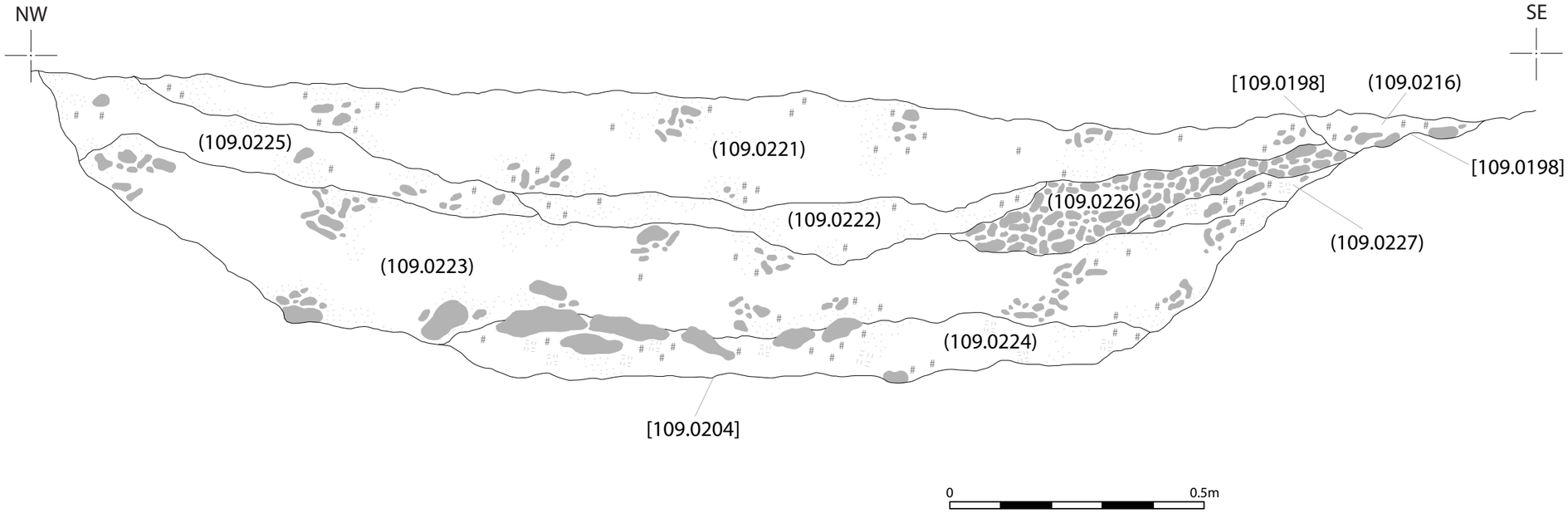
The burnt mound materials were covered by a mid-grey silt (109.0137), dark grey brown silt sand (109.0139) – in which flint (SF019) and chert fragments (SF022) were found - and mid-grey brown grey clay silt deposit (109.0147). These deposits likely formed after abandonment of the burnt mound.

Plate 2. Section of pit [109.0161] sealed by burnt mound material (109.0154). View from the East, 0.5m scale.

3.2.4 Period 3/4 - Possible Industrial Activity/ Working Area (HER PRN GAT 91847)

At the southeast corner of the excavation area several deposits were identified which appeared to be associated with a possible structure. Deposit (109.0143), a stone spread, comprised of relatively large poorly sorted stones which appeared to be consistent with demolition material from a wall or structure. Upon removal of the deposit it became apparent that although no evidence of a

structure was present within the excavation area a probable well [109.0214] was identified (*Plate 3*). The well consisted of a stone structure of schist slabs (109.213) within a cut, the base of which was below the current ground water table. Between the stone lining and the cut was a packing or lining fill (109.0228) of plastic dark brown clay with frequent inclusions of fine pebbles. The well was filled by (109.0212), a deposit of green grey fine pebbles held in a matrix of silt. A compacted stone surface (109.0210) abutted the stones of the well and was likely contemporary. These features may have been associated with the Iron Age and/or Romano-British settlement identified in Hotspot 15 (ABA, 2021d), located approximately 67m to the northeast of Hotpot 7-9. The Hotspot 7-9 stone surface was also similar to the stone surface (108.0041) identified in Hotspot 8, a possible six post structure site located 50 northeast, with evidence of possible industrial and domestic activity (ABA, 2021b). Situated northwest of the well, two pits, [109.0202] and [109.0204], connected by a small shallow gully [109.0203] may be evidence of some sort of skimming or settling process. Pit [109.0202] was oval in shape, measuring 1.94m in diameter and 0.34m deep. The three fills, (109.0217); (109.0218); (109.0219), consisted of loose light brown grey clay silt to mid yellow brown sand silt with frequent inclusions of charcoal. Gully [10.0203] measured 0.34m long 0.26m wide and had a depth of 0.10m. it had a U-shaped profile. Due to its gradient liquid would have flowed from pit [109.202] into pit [109.0204]. Pit [109.0204] was circular in shape, measuring 2.83m in diameter and 0.56m deep. The pit contained seven clay to sand silt fills (*Figure 5*) with charcoal inclusions: (109.0221), (109.0222), (109.0223), (109.0224), (109.0225), (109.0226) and (109.0227). Radiocarbon dating of organic material recovered from fill (109.0222) returned a Late Iron Age to Early Roman date of *c*. 106 BC to 58 AD. However, much of the dated plant material is thought to be present due to backfilling, and likely intrusive (*Appendix VI*).



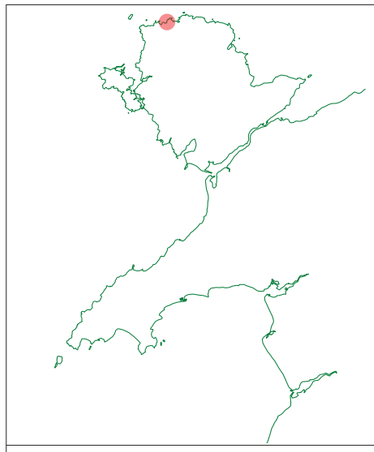


Figure 5
South-west facing section through pit [109.0204].

Key

- Label lines
- Sandy silt
- Clay
- Charcoal
- Stones

Drawn By: KM

Date: 11/03/21

Location: SH34719289

Project: AB1703 Hotspot 7-9

Archaeoleg Brython Archaeology

Plate 3. Stone lined (109.0213) well [109.0214]. View from the South-East, 1m scale.

3.2.4.1 Pits, Gullies and Ditches (HER PRN GAT 91848) – possible later activity

Several features of indeterminate function were identified within the excavation area. Linear gully [109.0130], oriented northwest-southeast and cutting through the north western section of the burnt mound, measured 2.66m in length, 0.45m wide and 0.14m deep. The fill consisted of dark brown grey silt clay with occasional inclusions of charcoal fragments and small stones (109.0129). A recut of the gully [109.0132], running along the same alignment and extending beyond the northwest terminus, measured 3.26m in length, 0.65m wide and 0.18m deep. The fill (109.0131) consisted of moderately compact dark brown grey silt with occasional inclusions of charcoal fragments and angular and sub-angular small stones. Ditch [109.0152], truncating silt layer (109.0147) and possibly a continuation of gully [109.0132], contained a soft mid-brown mid-grey silt fill (109.0151).

Two ditches, [109.0198] and [109.0207], and a pit [109.0205] cut the earlier double pits i.e. [109.0202] and [109.0204]. Ditch [109.0198] was orientated north-east to south-west and measured 4.7m long, 0.7m wide and 0.05m deep and cut pit [109.0204] and ditch [109.0207]. The fill (109.0216) consisted of loose dark grey brown sand silt and contained a piece of worked flint (SF026). Ditch [109.0207], orientated northeast to southwest measured 2.38m in length, 0.75m wide and 0.10m deep. The fill (109.0208) consisted of compact grey silt clay. Pit [109.0205], located southwest of the ditches and within the burnt mound area was sub-rectangular in shape, measuring 2.4m in length, 1.6m wide and 0.15m deep. It was filled with compacted silt clay with inclusions of small stones which were not heat affected. The shallow nature of the feature and the fact that it did not contain burnt mound material suggests that the feature relates to activity to the east rather than the burnt mound itself.

3.2.5 Period 8 (Modern activity)

Modern activity was identified by three field drains: [109.0127], [109.0159] and [109.0193]. Field drain [109.0127], located in the south-eastern section of the excavation area, measured over 4m in length, 0.55m wide and 0.27m deep, and truncated pit [109.0125] in its south west section. The drain fill (109.0126) consisted of compact red sand with inclusions of well sorted stones. Field drain [109.0159], located within the central area of the burnt mound, measured up to 0.14m deep and 0.4m wide. The fill (109.0158) consisted of a fine grey silt with inclusions of small stones. Field drain [109.0193], located in the south eastern section of the excavation area and intercutting stone surface (109.0210), measured approximately 6.4m in length and 0.35m wide. The fill (109.0194) consisted of small to medium sized stoned, likely built to improve drainage (*Plate 4*).

Plate 4. Stony fill (109.0194) of modern field drain [109.0193] intercutting stone surface (109.0210), with well [109.0214] to the left. View from the North-East, 2m scale.

3.2.6 Unphased features

Several features of indeterminate function and/or phasing were identified within the excavation area and include ditches, a possible trackway and pits. Ditch [109.0008] (HER PRN GAT 91849), located at the northern end of the excavation area was of similar dimensions to ditch [109.0130], and measured 0.68m wide and 0.24m deep. The ditch continued beyond the limits of excavation and was orientated north-east to south-west, terminating immediately north of the bedrock outcrop, which showed signs of possible tools marks indicating that it might have been quarried at some point during the past (HER PRN GAT 91850). The bedrock outcrop with tool marks were similar to the natural schist outcrop with possible tool marks identified in Hotspot 12, located approximately 120m northeast (ABA, 2021c). No secure date range could be given for this activity, however it was suggested that the activity at Hotspot 12 was possibly contemporary with the Romano-British stone-built structured identified in Hotspot 15 and Area O5 South (excavated by Wessex Archaeology and located approximately 330 south). Ditch [109.008] was intercut in its mid-section by ditch [109.0076] and contained a light-yellow brown sand silt layer located just below the sub-soil. Ditch [109.0080], located at the southern edge of [109.0008] measured 1.6m in length, 0.8m wide and 0.26m deep. The ditch contained four fills, (109.0183); (109.0184); (109.0182) and (109.0181), of dark brown peat clay, friable black silt, orange brown clay sand and dark brown clay peat respectively. Located south east of the ditches, and directly east of the bedrock outcrop, ditch [109.0078] measured 2.21m wide, 0.23m deep, and consisted of a naturally formed alluvium clay.

Two features recorded as ring gullies during the excavation of evaluation Trench 252, [109.0004] and [109.0053] – reclassified as ditches - were identified close to the bedrock outcrop. Feature [109.0004] correlates with feature [25212] excavated during the evaluation phase and identified as a ring gully. It was situated immediately north of the outcrop and was cut by ditch [109.0008] which was identified as pit [25219] during the evaluation phase. The feature appeared to respect the outline of the outcrop and measured 4.8m in length, 0.4m wide and 0.14m deep. Ditch [109.0053], located directly east of the bedrock outcrop was smaller than [109.0004], measuring 2.2m in length, 0.4m wide and 0.1m deep. The two features did not appear to be associated with any structures and may be associated with quarrying of the outcrop.

A probable trackway [109.0085] (HER PRN GAT 91851) was identified at the southwestern corner of the excavation area (*Plate 5*). The feature consisted of a shallow cut or depression [109.0085], which had been filled with a compacted deposit of small to large sub-angular stones in a clay silt matrix; (109.0103), (109.0104) and (109.0105). The feature was 1.65m wide and 0.1m deep, a length of 7m was identified within the trench but it continued to the southwest beyond the excavation area. It is possible that this was part of the same trackway identified in Hotspot 6 (ABA, 2021a), a site with evidence of Neolithic to Early Bronze Age activity and possible medieval square enclosures, located approximately 64m southwest of Hotspot 7-9.

Seven other unphased and/or unrelated pits (HER PRN GAT 91852) were excavated within Hotspot 7-9: [109.0002], [109.0006], [109.0026], [109.0063] and [109.0065] in the northern section of the excavation area; [109.0073] east of the bedrock outcrop; and [109.0196] to the east of the burnt mound. The pits located in the northern section of the excavation area contained a yellow brown clay silt fill, with pit [109.0006] intercutting ditch [109.0008], and pit [109.0026] containing a mid-grey brown clay silt. Pit [109.0073] contained a mid-grey brown silt sand, and pit [109.0196] contained a mid-brown sand clay. No small finds were recovered from these pits.

Plate 5. Section of trackway [109.0105]. View from the South, 1m scale.

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 a total of 27 small finds (SF) were allocated to 33 artefacts, weighing 1,486g. The finds assessment was compiled by Sue Thompson, and lithic artefacts were assessed by Miguel Gonzalez. The full Finds Assessment Report is included as Appendix IV. The Prehistoric pottery was assessed by Frances Lynch, this report is included as Appendix V.

4.1.1 Pottery

4.1.1.1 Prehistoric Pottery

A single fragment of pottery, SF002 (3g), was recovered from the fill (109.0100) of pit [109.0109]. The featureless sherd (26 x 18 x 6mm) had a dark grey core with a pink-beige outer and inner surface. The inner surface was smooth. The outer surface was roughened by an even spread of small (1mm) grits, presumably stone. The fragment was soft-low-fired but not crumbly.

The colour and roughened surface of the sherd would suggest a Later Bronze Age date but the softness of the fabric and the thin wall are not typical of Later Bronze Age assemblage of such pottery from EV9 which is less than a kilometre away to the east. The piece, which is certainly not fresh, was associated with a flint scraper. The sherd is likely to be residual and I would advise that any dating of the activity at this site should be based upon radiocarbon dates. No further analysis was recommended.

4.1.1.2 Post-Medieval Pottery

A single fragment of post-medieval pottery, SF009 (1g), was recovered from unstratified deposits. The sherd comprised a small fragment of refined white earthenware bowl or plate, with traces of internal brown hand-painted decoration (REFW PNTD), typical of late post-medieval to modern tableware and likely dates to the late 19th to 20th century. No further analysis was recommended.

4.1.2 Lithics

A total of 21 (263g) lithics were recovered during the excavation. The material was rapidly assessed, quantified and assigned to broad categories. Detailed technological attribute analysis was not undertaken.

The raw materials exploited consisted largely of flint from secondary derived sources, mostly pebbles (78.9%), black local chert (10.5%) and shale (10.5%). The condition of the assemblage was good, with no signs of recortification and displaying only some degree of edge damage. Taken as a whole, the assemble was chronologically mixed and there was a good deal of variability in the condition and technological traits of individual pieces.

Mesolithic and/or Early Neolithic materials were represented by three blade-based removals and two small thumbnail scrapers built over tertiary flakes (SF003 and SF021), and one end scraper knapped on a small blade (SF017). The remainder of the assemblage consisted of flake-based material, likely Neolithic in date. The material included flakes of varied morphology, the majority hard hammer stuck from simple unprepared striking platforms.

Two core preparation flakes (SF005 and SF019) were recovered from stake hole [109.0091] and unstratified material.

Small find SF018, recovered from the fill of pit [109.0125], was a subtriangular, rounded shale pebble with a retouched apex. The retouch was steep, deep, direct and continuous on one side only, and appears to be a roughout axe abandoned at a very early stage, or an unclassifiable pointed hand axe on a pebble.

An additional 3g of flint fragments were recovered from three environmental samples, <41>, <54> and <59>. Further work on the lithic assemblage may be warranted.

4.1.3 Stone

Four stone finds (1,215g), in moderate condition, were recovered from five contexts. The finds include: a large flat circular spindle whorl (SF020), likely Roman in date; a granite quern stone (SF008); a unworked fire-cracked fragment of soft sandstone (SF014); and a rounded flat pebble (SF007) which is likely natural.

A dished fragment of fine-grained stone was also recovered from environmental sample <92>. The fragment has a flat base and smooth sides and is likely the base for a small grinding stone or mortar of prehistoric date. Further work on the works stone artefacts may be warranted.

4.1.4 Animal Bone

Two small fragments (2g) of animal bone fragments were recovered during the excavation. Small find SF001, recovered from the fill of ditch [109.0087], comprised of two tooth fragments. Small find SF010, recovered from unstratified materials, comprised of tiny unidentifiable fragments. No evidence of butchery was observed. No further analysis was recommended.

A further 8g of animal bone and teeth fragments were recovered from four environmental samples <2>, <24>, <25> and <54>. The fragments represent medium to large-sized ungulate mammals. Frequent tooth fragments were identified

4.2 Palaeoenvironmental Assessment

A total of 90 environmental samples were taken during the excavation of Hotspot 7-9, which included two waterlogged wood samples. Eighty-eight bulk samples, weighing 2779kg were processed by WA, in addition to assessment of the two waterlogged samples. Samples were processed according to guidelines stipulated in the Wardell Armstrong LLP. Technical Manual No.

2 (2018) and Wardell Armstrong (2019) [*Appendix VI*]. 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 (*Appendix VI*). The full report by Freddie Sisson is included as Appendix VII. No shell material was recovered from the environmental samples.

4.2.1 Results

Overall, the samples were dominated by silt sand sediment matrix. Artefactual material recovered from the dried residues was minimal and include pieces of flint, industrial waste and worked stone. The material recovered from the flots are outlined below.

4.2.1.1 Charred Plant Remains (CPR)

CPR, in a poor state of preservation, was recovered from six environmental samples, of which two yielded more than ten examples of CPR: sample <1> from ditch terminus [109.0004] contained 21 examples of CPR identified as indeterminate cereal grains; and sample <2> from the fill of pit [109.0006] contained 50 CPR, of which two were identified as *Avena* sp. (oats) with the remainder being indeterminate cereal grains.

The CPR is in such a small quantity (81 examples in total) that it cannot be attributed to specific human activity and cannot inform us of crop husbandry practices in Wales. No further analysis was recommended.

4.2.1.2 Charcoal

Seventy-eight environmental samples yielded charcoal that was identified as being in poor conditions. Of these samples, 24 contained more than 5g of charcoal: sample <3> from pit [109.0026]; sample <6> and <7> from pit [109.0063]; sample <21> and <66> from trackway [109.0085]; sample <30> from ditch terminus [109.0085]; sample <31>, <32>, <33> and <34> from pit [109.0109]; samples <60>, <61>, <62> and <63> from burnt mound [109.0136]; samples <67>, <68> and <71> from pits associated with the burnt mound [109.0136]; sample <72> from pit [109.0163], sample <75> from pit [109.0187]; sample <76> from pit [109.0190]; sample <73> from tree throw [109.0180]; and sample <87> from pit [109.0204].

The large amount of charcoal could give us an insight into the types of species being exploited for burning activities during the human occupation at Hotspot 7-9. Focus can be given to sample **<3>, <6>** and **<7>** as the three largest individual assemblages as well as the combined assemblage from the burnt mound **[109.0136].**

4.2.1.3 Magnetic Material

The magnetised material recovered from the dried retents was examined under a microscope for microslags but none were present, with the magnetic material comprising only of small stones that are of no archaeological significance.

4.2.1.4 Bone

The bone recovered from the environmental samples consist of 5g of unidentifiable fragments. No further analysis was recommended.

4.2.1.5 Wood

Poorly preserved wood remains were recovered from three samples: sample <42> and <43> from pit [109.0125]; and sample <73> from tree throw [109.0180].

The wood from samples **<42>** and **<43>** is unlikely to be of any use as both samples came from pit back fills and unsuitable for dating the feature. The wood from **<73>** is likely to be a natural deposit due to being found in a tree throw and will not provide any further insight into the feature.

Waterlogged wood sample <78> from fill (109.0179) of pit [109.0171] consisted of extremely fragile and friable wood fragments. The largest fragment measured 280 x 75 x 4mm at its widest points. No evidence of tooling was observed, however, this may be due to adhering silt being present. A small section of wood was taken for identification purposes on three of the fragments and they were deemed to be oak (*Quercus* sp.).

Waterlogged wood sample <93> from fill (109.0212) consisted of a small fragment 52 x 17 x 4mm) of indeterminate wood that was heavily distorted, likely due taphonomic factors. No attempt was made at cleaning either sample as they were incredibly friable.

The wood from any of the samples were limiting in scope beyond informing us of the species employed for the lining of the trough and no further work is required on any of the wood recovered from this site.

4.3 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 four 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 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 VI*). The results are presented in Appendix VII, and summarised below:

Sample	Context	Material	Date (probability %)	Period
15	109.0044 – fill of stakehole	Oak	2031-1887 cal BC (95.4%)	Neolithic/Early Bronze Age
68	109.0169 – fill of trough	Rose	1131-973 cal BC (88.7%)	Late Bronze – Early Iron Age

71	109.0170 – base of trough	Rose	1219-1026 cal BC (95.4%)	Late Bronze – Early Iron Age
87	109.0222 – fill of pit	Barley	106 cal BC – 58 cal AD (95.4%)	Late Iron Age – Early Roman

5 Discussion and Statement of Potential

Hotspot 7-9 was targeted for excavation due to the identification of a suspected burnt mound and ring gully during evaluation trenching. Due to the small number of datable archaeological material identified during the excavation of Hotspot 7-9 the information gained from the assessment is limited. However, the excavation and assessment 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.

Based on the nature of the archaeology and matrix, several groupings and/or phases of activity was suggested. To fully address questions related to chronological development of the site, however, multiple dates from the same, stratigraphically sound, context is needed. The finds recovered from Hotspot 7-9 are largely Prehistoric in date and further work may be required on the Mesolithic/Neolithic lithics and stone finds. Regrettably, the plant remains consisting largely of poorly preserved indeterminate cereals and a small quantify of oats does not allow for any meaningful interpretation but does improve understanding of the economy of the area. Detailed analysis of the charcoal is recommended, in particular to identify wood species, to gain a better understanding of the local landscape and economy during the Neolithic to Early Iron Age.

5.1 Prehistoric features

Stakehole group (109.0101), a potential structure such as a wind break and/or fence was dated to the Neolithic/Early Bronze Age. Similar stakehole patterns have been recorded on numerous sites in North West Wales, including one at Parc Bryn Cegin, Llandegai, located approximately 33km south east of Hostpot 7-9, where a small stakehole structure around a pit were associated with hot stone technology (Kenney, 2008). Relatively little heat affected/fractured stones were associated with this group of features identified at Hotspot 7-9, suggesting that they were not associated with the main burnt mound. Radiocarbon dating of organic materials recovered from stakehole [109.0045] suggest a Neolithic/Early Bronze Age date. Though some burnt mounds have been dated to the Late Neolithic, the majority of burnt mounds in North West Wales date to the Bronze Age (Kenney, 2012).

5.2 Later Bronze Age to Early Iron Age burnt mound activity

The burnt mound was a sub-oval shaped mound of heat affected stone with two associated troughs and three pits. The presence of these features indicates that the burnt mound was probably in use for a considerable length of time, although based on evidence from other burnt mound examples its use may not have been continuous (Kenney, 2012). A spindle whorl (SF020) and Mesolithic/Neolithic worked chert fragments (SF021) were recovered from the burnt mound deposit. Trough [109.0190] was fairly standard and did not reveal any evidence of lining material suggesting that it naturally held water due to being below the ground water table. Trough [109.0171] was different in that a wooden tank (of which fragments were identified as oak) had been constructed within the cut. Other examples of timber lined troughs have been found throughout North West Wales (Kenney, 2012), with one found at Porth Neigwl, Pwllheli, (HER PRN GAT 29933) located approximately 66km south west of Hotspot 7-9. The discovery of timber lined troughs is therefore not unusual, and this feature could be useful in future studies on why some troughs were constructed this way. No evidence of a hearth was identified in association with the burnt mound and no feature was seen at the location of the possible hearth (134504) identified during the excavation of evaluation trench 1345. It is possible that once a mound of burnt stone had formed it could have been a favoured location for a hearth as it would have been raised from

the surrounding marshy ground. However, any evidence of hearths within the mound material is likely to have been lost due to general erosion and ploughing during more recent times. Based on the material remains the function of this burnt mound is unclear, and the function of burnt mounds in general is widely debated with suggestions including sweat lodges, cooking or washing sites, and/or for plant processing and brewing. What is accepted though, is that burnt mounds are formed as the result of heating water, and it is possible that the sites had multiple functions based on the same technology. Radiocarbon dating of organic material recovered from trough [109.0171] suggests a Late Bronze Age to Early Iron Age date for the burnt mound activity.

5.3 Possible industrial activity dated to the Late Iron Age and Romano British period

The possible demolition material identified at the southeast corner of the excavation area is likely to be associated with settlement activity which was not located within the limits of the excavation. The stone surface (109.0143) and well [109.0214] are similar to examples identified at Hotspot 15 to the northeast of the site, and Area O5 South, located to the east, which were associated with Iron Age and/or Romano-British roundhouse settlements. The stone surface was also similar to the stone surface identified in Hotspot 8, located northeast. Though no associated structures were identified with the Hotspot 7-9 excavation area it is possible that a structure was located nearby. Radiocarbon dating indicate a Late Iron Age to Early Roman date for pit [109.0204].

5.4 Late phase, Modern and Undated activity

Later activity was identified by a number of gullies, ditches and pits of unknown function which cut earlier features. Due to ploughing and land improvement several excavated features could not be confidently attributed to any of the defined phases of activity. Although relationships cannot be confirmed it is possible that ditches and gullies [109.0008], [109.0066], [109.0198] and [109.0207] could be forming part of a field system.

The trackway is likely to be associated with activity relating to one of the identified feature groups but as no datable artefacts were recovered during its excavation, and no physical relationships were identified, this cannot be determined without radiocarbon dating. It is likely that the trackway was used to traverse the edge of the wetland to the south, and may be the same trackway identified in Hotspot 6, located southwest.

The bedrock outcrop with possible tool marks appears similar to the natural schist outcrop with possible tool marks identified in Hotspot 12 to the northeast.

No datable artefacts were recovered from the remaining unphased pits, gullies and ditches.

5.5 Conclusion and Realisation of Original Aims and Objectives

The original aims and objectives stated in section 2.6 has largely been met in that material was recovered during the Hotspot 7-9 excavation in order to date evidence of past activities, and samples were collected to better understand the past environment and land use. During the excavation a burnt mound, likely Late Bronze Age to Early Iron Age in date, and associated troughs, one of which was timber lined, were revealed. In addition to a Late Neolithic to Early Bronze Age stakehole and pit group, an undated trackway, a possible field system, and a stone surface and well, likely to be associated with nearby settlement activity identified in Hotspot 15,

Hotspot 12, Hotspot 8 and Hotspot 6. Artefacts recovered included Mesolithic/Neolithic lithics, Prehistoric pottery (likely Bronze Age in date), animal bone and post-medieval pottery. 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 an examination of the stratigraphy and contextual analysis of the finds, and comparative study of similar finds and features identified at nearby sites.

Due to the identification of a burnt mound during evaluation the following, relevant, research objectives (RO) was identified:

4. The setting of the information gained from archaeological investigation into a broader regional and national (including Britain and Ireland) context.
5. 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.
6. Gaining insights into long distance trade (via the analysis of recovered artefacts) especially in such products as pottery, glass and metalwork.

Prehistoric;

1. Are the possible structural features associated with isolated structures or part of a larger settlement?
2. Are the burnt mounds/spreads the by-product of a specific function and what is that function?
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')?
4. What relationships or patterns, if any, can been seen between these Prehistoric features and their wider landscape setting?
5. What evidence do the ditch features provide for Prehistoric landscape organisation and enclosure?
6. What types of artefacts are present in the SMS zones?
7. What relationships or patterns, if any, can been seen between these potential Prehistoric features and their wider landscape setting?
8. What can these artefacts tell us about daily life and ritual activity?
9. What can these artefacts tell us about daily life and ritual activity?
10. Were those artefacts, which may be found in the SMS Zones, produced locally?

Post-Medieval;

1. What can the ditches and land drains tell us about the process of enclosure and land improvement in the Post-Medieval to the Modern periods in the SMS zones?
2. What evidence is there for the types of farming and land use in this area in the Post-Medieval and Modern periods in the SMS zones?
3. What can artefacts indicative of the material culture of the Medieval, Post-Medieval and Modern periods, in these zones, tell us about the connections between this area and the wider world through trade and consumption?

4.

6 Proposal for Further work

The results from the investigation of the Prehistoric assemblage is 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 and VI*) are produced.

- Lithics – Further analysis may be warranted
- Stone – Further analysis of the worked stone may be warranted
- Charcoal – Species identification could provide insight into the types of species being exploited for burning activities. Focus can be given to sample <3>, <6> and <7>, as well as the combined assemblage from the burnt mound [109.0136].

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 Horizon Nuclear Power 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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Stuart Elder

Thomas Eley

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]

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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.

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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.

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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 XX Context Register

Appendix III. Hotspot 7-9 Context Register

Context #	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
109.0001	FILL	PIT	1.43	0.88	0	0.15	MODERATELY COMPACT MID YELLOW BROWN CLAY SILT WITH SUB ANGULAR AND ROUNDED STONES (<0.15M)
109.0002	CUT	PIT	1.43	0.88	0	0.15	NORTH TO SOUTH SUB OVAL WITH GRADUALLY SLOPING SIDES LEADING GRADUALLY TO A SLIGHTLY CONCAVE BASE
109.0003	FILL	GULLY	0.90	0.40	0	0.14	LOOSE DARK GREY BROWN SILT WITH COMMON SMALL SUB ANGULAR AND SUB ROUNDED STONES AND RARE CHARCOAL FLECKS
109.0004	CUT	GULLY	0.90	0.40	0	0.14	NORTH WEST TO SOUTH EAST ROUNDED TERMINUS OF A CURVED LINEAR WITH STEEPLY SLOPING SIDES LEADING GRADUALLY TO A CONCAVE BASE
109.0005	FILL	PIT	1.87	1.64	0	0.21	LOOSE MID YELLOW BROWN CLAY SILT WITH OCCASIONAL SMALL TO LARGE SUB ANGULAR STONES
109.0006	CUT	PIT	1.87	1.84	0	0.21	SUB CIRCULAR WITH GRADUALLY SLOPING SIDES LEADING GRADUALLY TO A BASE WHICH SLOPES EAST
109.0007	FILL	DITCH	1.00	0.68	0	0.24	LOOSE MID YELLOW BROWN CLAY SILT WITH MODERATE SMALL TO MEDIUM STONES
109.0008	CUT	DITCH	1.00	0.68	0	0.24	NORTH EAST TO SOUTH WEST LINEAR WITH GRADUALLY SLOPING SIDES LEADING TO A CONCAVE BASE
109.0009	FILL	POST HOLE	0	0	0.17	0.13	VERY LOOSE DARK GREY BROWN SAND SILT WITH <5% CHARCOAL
109.0010	CUT	POST HOLE	0	0	0.17	0.13	CIRCULAR WITH STEEP SIDES LEADING SHARPLY TO A CONCAVE BASE
109.0011	FILL	STAKE HOLE	0	0	0.07	0.07	VERY LOOSE DARK BROWN GREY SAND SILT WITH 5% CHARCOAL
109.0012	CUT	STAKE HOLE	0	0	0.07	0.07	CIRCULAR WITH STEEP SIDES LEADING SHARPLY TO A FLAT BASE
109.0013	FILL	STAKE HOLE	0	0	0.08	0.04	VERY LOOSE DARK GREY BROWN SAND SILT WITH 10% CHARCOAL
109.0014	CUT	STAKE HOLE	0	0	0.08	0.04	CIRCULAR WITH STEEP SIDES LEADING SHARPLY TO A CONCAVE BASE
109.0015	FILL	STAKE HOLE	0	0	0.09	0.06	LOOSE DARK GREY BROWN SAND SILT WITH 40% CHARCOAL
109.0016	CUT	STAKE HOLE	0	0	0.09	0.06	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE

Context #	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
109.0017	FILL	STAKE HOLE	0	0	0.10	0.11	VERY LOOSE DARK BROWN SAND SILT WITH ORANGE FLECKS AND 10% CHARCOAL
109.0018	CUT	STAKE HOLE	0	0	0.10	0.11	CIRCULAR WITH STEEP SIDES LEADING TO A SHARPLY POINTED BASE
109.0019	FILL	POST HOLE	0	0	0.10	0.13	LOOSE DARK ORANGE BROWN SAND SILT WITH 5% CHARCOAL
109.0020	CUT	POST HOLE	0	0	0.10	0.13	CIRCULAR WITH STEEP SIDES LEADING TO A SHARPLY POINTED BASE
109.0021	FILL	STAKE HOLE	0	0	0.08	0.07	LOOSE DARK GREY BROWN SAND SILT WITH 30% CHARCOAL
109.0022	CUT	STAKE HOLE	0	0	0.08	0.07	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE
109.0023	FILL	STAKE HOLE	0	0	0.11	0.13	LOOSE DARK GREY BROWN SAND SILT WITH <5% CHARCOAL
109.0024	CUT	STAKE HOLE	0	0	0.11	0.13	CIRCULAR WITH STEEP SIDES LEADING SHARPLY TO A FLAT BASE
109.0025	FILL	PIT	0.80	0.73	0	0.10	LOOSE MID GREY BROWN CLAY SILT WITH FREQUENT SMALL TO MEDIUM ROUND STONES AND CHARCOAL
109.0026	CUT	PIT	0.80	0.73	0	0.10	SUB CIRCULAR WITH GRADUALLY SLOPING SIDES LEADING GRADUALLY TO A CONCAVE BASE
109.0027	FILL	STAKE HOLE	0	0	0.09	0.09	LOOSE DARK GREY BROWN SAND SILT WITH 5% CHARCOAL
109.0028	CUT	POST HOLE	0	0	0.09	0.09	CIRCULAR WITH STEEP SIDES LEADING SHARPLY TO A CONCAVE BASE
109.0029	FILL	POST HOLE	0	0	0.12	0.12	VERY LOOSE DARK GREY BROWN SAND SILT WITH 5% CHARCOAL
109.0030	CUT	POST HOLE	0	0	0.12	0.12	CIRCULAR WITH STEEP SIDES LEADING TO A SHARPLY POINTED BASE
109.0031	FILL	GULLY	0.75	0.40	0	0.15	QUITE LOOSE DARK BLACK BROWN SILT WITH OCCASIONAL SMALL SUB ANGULAR AND SUB ROUNDED STONES, AND COMMON CHARCOAL FLECKS
109.0032	FILL	GULLY	0.50	0.20	0	0.04	LOOSE PALE GREY ORANGE SILT WITH OCCASIONAL CHARCOAL FLECKS
109.0033	CUT	GULLY	0.75	0.40	0	0.15	SOUTH TERMINUS OF A CURVED LINEAR WITH STEEPLY SLOPING SIDES LEADING GRADUALLY TO A CONCAVE AND UNDULATING BASE
109.0034	FILL	STAKE HOLE	0	0	0.07	0.07	LOOSE DARK GREY BROWN SAND SILT WITH 40% CHARCOAL
109.0035	CUT	STAKE HOLE	0	0	0.07	0.07	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE

Context #	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
109.0036	FILL	STAKE HOLE	0	0	0.10	0.10	LOOSE DARK GREY BROWN SAND SILT WITH 40% CHARCOAL
109.0037	CUT	STAKE HOLE	0	0	0.10	0.10	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE
109.0038	FILL	STAKE HOLE	0	0	0.10	0.09	LOOSE DARK GREY BROWN SAND SILT WITH 40% CHARCOAL
109.0039	CUT	STAKE HOLE	0	0	0.10	0.09	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE
109.0040	FILL	STAKE HOLE	0	0	0.10	0.10	LOOSE DARK GREY BROWN SAND SILT WITH 40% CHARCOAL
109.0041	CUT	STAKE HOLE	0	0	0.10	0.10	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE
109.0042	FILL	STAKE HOLE	0	0	0.07	0.06	LOOSE DARK GREY BROWN SAND SILT WITH 40% CHARCOAL
109.0043	CUT	STAKE HOLE	0	0	0.07	0.06	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE
109.0044	FILL	STAKE HOLE	0	0	0.09	0.15	LOOSE DARK GREY BROWN SAND SILT WITH 50% CHARCOAL
109.0045	CUT	STAKE HOLE	0	0	0.09	0.15	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE
109.0046	FILL	STAKE HOLE	0	0	0.07	0.06	LOOSE DARK GREY BROWN SAND SILT WITH 40% CHARCOAL
109.0047	CUT	STAKE HOLE	0	0	0.07	0.06	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE
109.0048	FILL	STAKE HOLE	0	0	0.09	0.06	LOOSE DARK GREY BROWN SAND SILT WITH 40% CHARCOAL
109.0049	CUT	STAKE HOLE	0	0	0.09	0.06	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE
109.0050	FILL	PIT	0	0	0.61	0.17	LOOSE MID GREY BROWN SAND SILT WITH 30% SUB ROUNDED AND SUB ANGULAR STONES, AND 15% CHARCOAL
109.0051	FILL	PIT	0	0	0.42	0.06	COMPACT LIGHT-YELLOW BROWN SAND SILT WITH 50% SUB ROUNDED AND SUB ANGULAR STONES, AND 20% CHARCOAL
109.0052	CUT	PIT	0	0	0.61	0.18	CIRCULAR WITH GRADUALLY SLOPING SIDES LEADING GRADUALLY TO A FLAT BASE
109.0053	CUT	DITCH	0.40	0.40	0	0.10	ROUNDED WEST TERMINUS OF A CURVED LINEAR WITH IRREGULAR

Context #	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
							SIDES LEADING TO A CONCAVE BASE
109.0054	FILL	DITCH	0.40	0.40	0	0.10	FRIABLE DARK GREY BROWN SILT SAND WITH WELL SORTED PEBBLES AND SMALL STONES
109.0055	FILL	STAKE HOLE	0	0	0.09	0.06	LOOSE DARK GREY BROWN SAND SILT WITH 40% CHARCOAL
109.0056	CUT	STAKE HOLE	0	0	0.09	0.06	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE
109.0057	FILL	STAKE HOLE	0	0	0.04	0.04	LOOSE DARK GREY BROWN SAND SILT WITH 40% CHARCOAL
109.0058	CUT	STAKE HOLE	0	0	0.04	0.04	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE
109.0059	FILL	POST HOLE	0	0	0.18	0.06	LOOSE MID YELLOW BROWN SAND SILT WITH 30% CHARCOAL
109.0060	CUT	POST HOLE	0	0	0.18	0.06	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE
109.0061	FILL	PIT	1.15	1.03	0	0.22	MODERATELY LOOSE MID YELLOW BROWN CLAY SILT WITH OCCASIONAL SMALL CHARCOAL FRAGMENTS AND SUB ANGULAR STONES
109.0062	FILL	PIT	0.63	0.95	0	0.03	LOOSE MID BLACK BROWN CLAY SILT WITH FREQUENT CHARCOAL AND OCCASIONAL SMALL TO MEDIUM SUB ANGULAR STONES
109.0063	CUT	PIT	1.15	1.03	0	0.25	SUB CIRCULAR WITH STEEP SIDES LEADING SHARPLY TO A SLIGHTLY CONCAVE BASE
109.0064	FILL	PIT	0	0	0.38	0.18	LOOSE MID YELLOW BROWN CLAY SILT WITH OCCASIONAL SMALL SUB ANGULAR STONES
109.0065	CUT	PIT	0	0	0.38	0.18	CIRCULAR WITH NEAR VERTICAL SIDES LEADING GRADUALLY TO A CONCAVE BASE
109.0066	CUT	DITCH	1.42	0.26	0	0.08	EAST TO WEST LINEAR WITH GRADUALLY SLOPING STRAIGHT SIDES LEADING GRADUALLY TO A FLAT BASE
109.0067	FILL	DITCH	0.80	0.26	0	0.08	LOOSE MID BROWN SAND SILT WITH OCCASIONAL SCHIST FRAGMENTS AND CHARCOAL
109.0068	FILL	DITCH	0.28	0	0	0.14	LOOSE MID BROWN SAND SILT WITH OCCASIONAL SCHIST

Context #	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
							FRAGMENTS AND CHARCOAL
109.0069	FILL	STAKE HOLE	0	0	0.13	0.09	LOOSE DARK GREY BROWN SAND SILT WITH 40% CHARCOAL
109.0070	CUT	STAKE HOLE	0	0	0.13	0.09	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE
109.0071	FILL	STAKE HOLE	0	0	0.09	0.08	LOOSE DARK GREY BROWN SAND SILT WITH 40% CHARCOAL
109.0072	CUT	STAKE HOLE	0	0	0.09	0.08	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE
109.0073	CUT	PIT	0.65	0.70	0	0.22	CIRCULAR WITH VERY STEEP SIDES, WITH A SLIGHT STEP ON THE WEST SIDE, LEADING GRADUALLY TO A FLAT BASE
109.0074	FILL	PIT	0.65	0.70	0	0.22	FRIABLE MID GREY BROWN SILT SAND WITH WELL SORTED PEBBLES AND STONES
109.0075	FILL	DITCH	1.00	0.66	0	0.33	MODERATELY LOOSE MID GREY BROWN CLAY SILT WITH FREQUENT SMALL TO LARGE SUB ANGULAR STONES AND RARE CHARCOAL FLECKS
109.0076	CUT	DITCH	1.00	0.66	0	0.33	NORTH TO SOUTH LINEAR WITH STEEP SIDES LEADING SHARPLY TO A SLIGHTLY CONCAVE BASE
109.0077	FILL	DITCH	0.44	0.50	0	0.08	FRIABLE DARK GREY BROWN SILT SAND WITH WELL SORTED PEBBLES AND SOME STONES
109.0078	CUT	DITCH	0.44	0.50	0	0.08	ROUNDED EAST TERMINUS OF A CURVED LINEAR WITH IRREGULAR SIDES LEADING GRADUALLY TO A CONCAVE BASE
109.0079	FILL	DITCH	0.68	0.80	0	0.25	FRIABLE LIGHT GREY BROWN SILT SAND WITH POORLY SORTED PEBBLES AND STONES
109.0080	CUT	DITCH	0.68	0.80	0	0.25	NORTH EAST TO SOUTH WEST LINEAR WITH VERTICAL SIDES LEADING GRADUALLY TO A CONCAVE BASE
109.0081	FILL	DITCH	1.10	0.43	0	0.27	LOOSE DARK BROWN SAND SILT WITH OCCASIONAL FLECKS OF CHARCOAL AND SUB ANGULAR STONES
109.0082	CUT	DITCH	1.10	0.43	0	0.27	EAST TO WEST LINEAR WITH VERTICAL STRAIGHT SIDES LEADING GRADUALLY TO A FLAT BASE

Context #	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
109.0083	CUT	DITCH	0.40	0.40	0	0.30	EAST TO WEST LINEAR WITH STEEP STRAIGHT SIDES LEADING GRADUALLY TO A FLAT BASE
109.0084	FILL	LINEAR	1.00	0.58	0	0.04	COMPACT MID BROWN GREY CLAY SILT WITH 60% SMALL TO MEDIUM STONES
109.0085	CUT	LINEAR	1.00	0.80	0	0.14	NORTH EAST TO SOUTH WEST LINEAR WITH GRADUALLY SLOPING SIDES AND A ROUGHLY FLAT BASE
109.0086	FILL	DITCH	0.87	0.50	0	0.25	FRIABLE MID GREY BROWN SILT SAND WITH POORLY SORTED PEBBLES AND STONES
109.0087	CUT	DITCH	0.87	0.50	0	0.25	NORTH WEST TO SOUTH EAST LINEAR WITH STEEPLY SLOPING LEADING GRADUALLY TO A CONCAVE BASE
109.0088	VOID						VOID
109.0089	VOID						VOID
109.0090	FILL	STAKE HOLE	0	0	0.10	0.05	LOOSE DARK GREY BROWN SAND SILT
109.0091	CUT	STAKE HOLE	0	0	0.1	0.05	CIRCULAR WITH STEEP SIDES LEADING TO A ROUNDED POINT BASE
109.0092	FILL	STAKE HOLE	0	0	0.11	0.06	LOOSE DARK GREY BROWN SAND SILT WITH 45% CHARCOAL
109.0093	CUT	STAKE HOLE	0	0	0.11	0.06	CIRCULAR WITH VERTICAL SIDES LEADING TO A ROUNDED POINT BASE
109.0094	FILL	POST HOLE	0	0	0.21	0.08	LOOSE DARK GREY BROWN SAND SILT WITH 40% CHARCOAL
109.0095	CUT	POST HOLE	0	0	0.21	0.08	CIRCULAR WITH GRADUALLY SLOPING SIDES LEADING SHARPLY TO A ROUNDED POINT BASE
109.0096	VOID						VOID
109.0097	VOID						VOID
109.0098	FILL	STAKE HOLE	0	0	0.08	0.14	LOOSE DARK GREY BROWN SAND SILT WITH 40% CHARCOAL
109.0099	CUT	STAKE HOLE	0	0	0.08	0.14	CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A ROUNDED POINT BASE
109.0100	FILL	PIT	0	0	0.73	0.15	FIRM GREY BROWN SAND SILT WITH OCCASIONAL MIXED STONES AND CHARCOAL FLECKS
109.0101	GROUP	GROUP	0	0	0	0	GROUP OF STAKE AND POST HOLES

Context #	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
109.0102	FILL	LINEAR	1.00	0.80	0	0.10	LOOSE MID BROWN GREY CLAY SILT WITH OCCASIONAL SMALL TO LARGE SUB ANGULAR STONES
109.0103	FILL	LINEAR	1.00	1.86	0	0.20	LOOSE MID ORANGE BROWN CLAY SILT WITH MODERATE SMALL TO LARGE SUB ANGULAR STONES
109.0104	FILL	LINEAR	1.00	1.65	0	0.10	LOOSE MID BROWN GREY CLAY WITH 50% SMALL TO LARGE SUB ANGULAR STONES
109.0105	CUT	LINEAR	1.00	2.06	0	0.30	NORTH TO SOUTH CURVED LINEAR WITH GRADUALLY SLOPING SIDES LEADING GRADUALLY TO A FLAT BASE
109.0106	FILL	PIT	0	0	1.11	0.22	FIRM DARK BLACK BROWN SAND SILT WITH 20% BURNT FRAGMENTED STONES AND COMMON CHARCOAL
109.0107	FILL	PIT	0	0	1.35	0.15	FIRM MOTTLED GREY AND ORANGE SILT SAND WITH OCCASIONAL SMALL MIXED STONE AND RARE CHARCOAL FLECKS
109.0108	FILL	PIT	0	0	0.68	0.05	FIRM MOTTLED GREY AND BLACK SAND SILT WITH 20% SMALL FIRE CRACKED STONE AND 10% CHARCOAL
109.0109	CUT	PIT	0	0	1.35	0.37	CIRCULAR WITH STEEP SIDES LEADING IMPERCEPTIBLY TO A CONCAVE BASE
109.0110	FILL	STAKE HOLE	0	0	0.10	0.09	LOOSE DARK GREY BROWN SAND SILT WITH 30% CHARCOAL
109.0111	CUT	STAKE HOLE	0	0	0.10	0.09	CIRCULAR WITH VERTICAL SIDES LEADING TO A ROUNDED POINT BASE
109.0112	FILL	STAKE HOLE	0	0	0.08	0.10	LOOSE DARK GREY BROWN SAND SILT WITH 30% CHARCOAL
109.0113	CUT	STAKE HOLE	0	0	0.08	0.10	CIRCULAR WITH VERTICAL SIDES LEADING TO A ROUNDED POINT BASE
109.0114	FILL	STAKE HOLE	0.11	0.10	0	0.18	LOOSE DARK GREY BROWN SAND SILT WITH OCCASIONAL CHARCOAL AND SMALL SUB ANGULAR STONES
109.0115	CUT	STAKE HOLE	0.11	0.10	0	0.18	SUB CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A CONCAVE BASE
109.0116	FILL	STAKE HOLE	0.11	0.09	0	0.18	LOOSE DARK GREY BROWN SAND SILT WITH OCCASIONAL CHARCOAL AND SMALL SUB ANGULAR STONES

Context #	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
109.0117	CUT	STAKE HOLE	0.11	0.09	0	0.18	SUB CIRCULAR WITH VERTICAL SIDES LEADING SHARPLY TO A CONCAVE BASE
109.0118	FILL	STAKE HOLE	0	0	0.08	0.12	LOOSE DARK GREY BROWN SAND SILT WITH 40% CHARCOAL
109.0119	CUT	STAKE HOLE	0	0	0.08	0.12	CIRCULAR WITH VERTICAL SIDES LEADING TO A ROUNDED POINT BASE
109.0120	FILL	STAKE HOLE	0	0	0.10	0.18	LOOSE DARK GREY BROWN SAND SILT WITH 30% CHARCOAL
109.0121	CUT	STAKE HOLE	0	0	0.1	0.18	CIRCULAR WITH VERTICAL SIDES LEADING TO A ROUNDED POINT BASE
109.0122	FILL	PIT	2.33	1.63	0	0.17	FIRM GREY BROWN SILT CLAY WITH OCCASIONAL CHARCOAL FLECKS
109.0123	FILL	PIT	1.80	1.63	0	0.40	LOOSE DARK BROWN BLACK SILT SAND WITH FREQUENT SMALL TO MEDIUM STONES AND ROOTS, WITH OCCASIONAL FLECKS OF CHARCOAL
109.0124	FILL	PIT	1.33	1.63	0	0.33	LOOSE LIGHT GREY SAND WITH FREQUENT ROOTS AND MEDIUM STONES, AND OCCASIONAL CHARCOAL FLECKS
109.0125	CUT	PIT	3.50	1.63	0	0.55	OVAL WITH STEEP SIDES, STEPPED TO THE NORTH EDGE, LEADING GRADUALLY TO A CONCAVE BASE
109.0126	FILL	LINEAR	4.00	0.55	0	0.27	COMPACT WELL SORTED MEDIUM STONES WITH OCCASIONAL RED SAND
109.0127	CUT	LINEAR	4.00	0.55	0	0.27	NORTH WEST TO SOUTH EAST LINEAR WITH VERTICAL SIDES LEADING SHARPLY TO A FLAT BASE
109.0128	LAYER	LAYER	12.00	1.70	0	0	EAST TO WEST STONE RUBBLE LAYER WITH SUB ROUNDED BOULDERS WITH NO BONDING WITH SUB SOIL SILTED BETWEEN THEM
109.0129	FILL	GULLY	5.40	0.50	0	0.14	FIRM DARK BROWN GREY CLAY SILT WITH MOTTLED YELLOW BROWN, OCCASIONAL CHARCOAL FLECKS, SUB ANGULAR STONES (<0.11M) AND RARE BURNT STONE (<0.06M)
109.0130	CUT	GULLY	5.40	0.50	0	0.14	NORTH WEST TO SOUTH EAST LINEAR WITH STEEP UNEVEN SIDES LEADING SHARPLY TO A MOSTLY FLAT BASE
109.0131	FILL	GULLY	13.00	0.65	0	0.48	MODERATELY COMPACT DARK BROWN GREY SILT WITH MODERATE

Context #	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
							ANGULAR AND SUB ANGULAR STONE (<0.06M), WITH RARE ORANGE BURNT STONE (<0.01M) AND CHARCOAL FLECKS
109.0132	CUT	GULLY	13.00	0.65	0	0.18	NORTH WEST TO SOUTH EAST LINEAR WITH STEEP SIDES LEADING SHARPLY TO A FLAT BASE
109.0133	FILL	PIT	1.75	1.47	0	0.37	LOOSE DARK GREY BROWN CLAY SILT WITH 75% SMALL TO LARGE SUB ANGULAR STONES
109.0134	FILL	PIT	0	1.47	0	0.21	COMPACT MID BROWN GREY SILT CLAY WITH OCCASIONAL SMALL TO LARGE STONES
109.0135	CUT	PIT	1.75	1.47	0	0.53	SUB CIRCULAR WITH STEEP SIDES LEADING GRADUALLY TO A CONCAVE BASE
109.0136	GROUP	GROUP	0	0	0	0	GROUP NUMBER FOR BURNT MOUND DEPOSITS
109.0137	LAYER	LAYER	16.20	3.50	0	0.25	MODERATELY COMPACT MID GREY SILT WITH OCCASIONAL ANGULAR AND SUB ANGULAR STONE (<0.11M), AND CHARCOAL FLECKS
109.0138	LAYER	LAYER	0.90	0.68	0	0.24	COMPACT MID GREY BROWN CLAY SILT WITH SMALL TO LARGE SUB ANGULAR STONE WITH SOME BURNT
109.0139	LAYER	LAYER	11.64	11.29	0	0.20	COMPACT DARK GREY BROWN SILT SAND WITH PEBBLES AND STONES
109.0140	VOID						VOID
109.0141	VOID						VOID
109.0142	FILL	GULLY	2.30	0.30	0	0.07	FIRM MIXED BROWN GREY AND YELLOW BROWN SILT WITH MODERATE ANGULAR SCHIST (<0.10M) AND REDEPOSITED NATURAL
109.0143	LAYER	LAYER	7.84	10.41	0	0	STONY RUBBLE CONSISTING OF POORLY SORTED MEDIUM TO LARGE SUB ANGULAR AND SUB ROUNDED SCHIST AND SLATE (<0.40 X 0.30M)
109.0144	FILL	PIT	0	0	0.77	0.11	LOOSE DARK GREY BROWN SAND SILT WITH 60% SMALL TO MEDIUM SUB ANGULAR AND SUB ROUNDED STONES (<0.08)
109.0145	FILL	PIT	0	0	1.00	0.11	COMPACT MID BROWN GREY SAND SILT WITH 30% SMALL SUB

Context #	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
							ROUNDED AND SUB ANGULAR STONES
109.0146	CUT	PIT	0	0	1.66	0.11	SEMI CIRCULAR WITH IRREGULAR SIDES LEADING IMPERCEPTIBLY TO AN IRREGULAR BASE
109.0147	LAYER	LAYER	3.25	2.50	0	0.25	SOFT MID BROWN GREY CLAY SILT WITH OCCASIONAL SUB ANGULAR STONE (<0.10M) AND CHARCOAL FLECKS
109.0148	LAYER	LAYER	0	5.30	0	0.27	FIRM MID GREY CLAY SILT WITH COMMON CHARCOAL FLECKS AND ANGULAR TO SUB ANGULAR SCHIST AND LIMESTONE (<0.14M), AND OCCASIONAL BURNT ANGULAR STONE (<0.30M)
109.0149	LAYER	LAYER	0	3.20	0	0.20	COMPACT LIGHT GREY COARSE CLAY SILT AND VERY FINE SAND WITH OCCASIONAL MOSTLY FLAT SUB ANGULAR SCHIST (<0.24M)
109.0150	LAYER	LAYER	0	1.75	0	0.15	FIRM MID BROWN ORANGE CLAY WITH FLECKS OF MANGANESE AND IRON PANNING
109.0151	FILL	DITCH	13.00	0.65	0	0.22	MODERATELY COMPACT MID BROWN GREY SILT WITH COMMON CHARCOAL FLECKS AND OCCASIONAL SUB ANGULAR STONE (<0.08M)
109.0152	CUT	DITCH	13.00	0.65	0	0.22	EAST TO WEST LINEAR WITH STEEP SIDES LEADING GRADUALLY TO A SLIGHTLY CONCAVE BASE
109.0153	LAYER	LAYER	10.00	9.00	0	0.20	MODERATELY COMPACT MID BROWN GREY CLAY SILT WITH OCCASIONAL CHARCOAL FLECKS AND ANGULAR TO SUB ANGULAR SCHIST (0.11M) AND SMALL MIXED STONES (<0.08M) WITH SOME BEING BURNT
109.0154	LAYER	LAYER	20.00	10.00	0	0.15	SOFT BLACK SILT WITH VERT COMMON ANGULAR HEAT AFFECTED STONE (0.12M) AND CHARCOAL
109.0155	LAYER	LAYER	0	7.75	0	0.20	MODERATELY COMPACT MID GREY BROWN CLAY WITH RARE ANGULAR STONE AND CHARCOAL FLECKS
109.0156	VOID						VOID
109.0157	VOID						VOID
109.0158	FILL	LINEAR	0	0.40	0	0.14	FINE GREY SILT WITH 90% MEDIUM (<0.10M) SUB ANGULAR STONES
109.0159	CUT	LINEAR	0	0.40	0	0.14	NORTH EAST TO SOUTH WEST LINEAR WITH VERTICAL SIDES LEADING

Context #	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
							SHARPLY TO A FLAT BASE
109.0160	LAYER	LAYER	0	1.70	0	0.20	PLASTIC DARK BROWN PEAT CLAY WITH OCCASIONAL SMALL STONES
109.0161	CUT	PIT	0.85	0.82	0	0.14	SUB CIRCULAR WITH STEEP SIDES LEADING GRADUALLY TO A SLIGHTLY CONCAVE BASE
109.0162	FILL	PIT	0.85	0.82	0	0.14	FRIABLE BLACK SILT WITH VERY COMMON SMALL TO MEDIUM BURNT STONES AND CHARCOAL
109.0163	CUT	PIT	1.40	1.00	0	0.14	IRREGULAR OVAL WITH GRADUALLY SLOPING SIDES LEADING GRADUALLY TO A CONCAVE BASE
109.0164	FILL	PIT	0.50	0.90	0	0.10	FRIABLE DARK GREY BLACK SILT SAND WITH POORLY STONES AND PEBBLES
109.0165	FILL	PIT	1.25	1.00	0	0.14	COMPACT LIGHT BROWN GREY CLAY WITH FREQUENT WELL SORTED STONES AND PEBBLES
109.0166	FILL	PIT	1.80	0.80	0	0.25	FRIABLE DARK BROWN BLACK SILT WITH FAIRLY WELL SORTED VERY COMMON CHARCOAL FRAGMENTS AND SUB ANGULAR TO ANGULAR HEAT FRACTURED STONES (<0.08M)
109.0167	FILL	PIT	2.05	0.80	0	0.28	VERY FRIABLE DARK GREY SILT WITH 70% POORLY SORTED HEAT FRACTURED STONES (<0.20M) AND MODERATE ANGULAR AND SUB ANGULAR GRAVEL
109.0168	FILL	PIT	2.50	1.50	0	0.40	SOFT DARK BLACK GREY SILT WITH WELL SORTED COMMON CHARCOAL AND HEAT CRACKED STONES (<0.08M), WITH MODERATE ANGULAR GRAVELS
109.0169	FILL	PIT	2.75	0	0	0	MODERATELY COMPACT MIXED GREY AND ORANGE CLAY SILT WITH FAIRLY WELL SORTED HEAT FRACTURED STONES (<0.11) AND COMMON CHARCOAL FLECKS
109.0170	FILL	PIT	1.80	1.10	0	0.03	SOFT MID BROWN GREY SILT SAND WITH OCCASIONAL CHARCOAL, SILT LENSES AND BURNT STONE
109.0171	CUT	PIT	2.75	1.50	0	0.42	NORTH EAST TO SOUTH WEST OVAL WITH NEAR VERTICAL UNEVEN SIDES LEADING GRADUALLY TO A FLAT BASE

Context #	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
109.0172	LAYER	LAYER	0.43	0.41	0	00.06	COMPACT DARK GREY BLACK SAND SILT WITH 85% CHARCOAL AND SMALL SUB ROUNDED AND SUB ANGULAR STONES (<0.01M)
109.0173	LAYER	LAYER	1.54	1.00	0	0.17	LOOSE DARK GREY BROWN SAND SILT WITH 90% SUB ANGULAR AND SUB ROUNDED STONES AND OCCASIONAL CHARCOAL
109.0174	LAYER	LAYER	3.25	1.00	0	0.24	COMPACT MID YELLOW GREY SILT CLAY WITH 15% SMALL SUB ANGULAR AND SUB ROUNDED STONES AND 10% CHARCOAL
109.0175	LAYER	LAYER	1.16	1.00	0	0.07	LOOSE MID BROWN SAND SILT WITH 10% CHARCOAL
109.0176	LAYER	LAYER	1.00	0.39	0	0.25	COMPACT LIGHT YELLOW BROWN SAND SILT WITH NO INCLUSIONS
109.0177	LAYER	LAYER	1.10	1.00	0	0.17	COMPACT MID YELLOW GREY SILT CLAY WITH 30% MANGANESE AND 10% SMALL SUB ANGULAR AND SUB ROUNDED STONES
109.0178	LAYER	LAYER	2.21	1.00	0	0.23	COMPACT MID BLUE GREY CLAY AND NO INCLUSIONS
109.0179	FILL	PIT	2.00	1.10	0	0.40	EAST TO WEST RECTANGULAR PLANK BUILT WOODEN LINING
109.0180	CUT	TREE THROW	1.60	0.80	0	0.26	IRREGULAR WITH GRADUALLY SLOPING SIDES AND AN IRREGULAR BASE
109.0181	FILL	TREE THROW	0.70	0.14	0	0.20	PLASTIC DARK BROWN CLAY PEAT WITH OCCASIONAL SMALL STONES
109.0182	FILL	TREE THROW	0.74	0.40	0	0.06	FRIABLE ORANGE BROWN CLAY SAND WITH OCCASIONAL SMALL STONES
109.0183	FILL	TREE THROW	0.80	1.60	0	0	PLASTIC DARK BROWN PEAT CLAY WITH OCCASIONAL SMALL STONES
109.0184	FILL	TREE THROW	0.65	0.40	0	0.08	FRIABLE BLACK SILT WITH VERY FREQUENT CHARCOAL AND OCCASIONAL SMALL STONES
109.0185	FILL	PIT	0	0	0.60	0.05	FIRM AND PLASTIC DARK BLACK GREY CLAY WITH COMMON SMALL TO MEDIUM ANGULAR HEAT AFFECTED STONE AND CHARCOAL
109.0186	FILL	PIT	0	0	1.00	0.50	DARK BLACK GREY SILT WITH 90% SMALL TO MEDIUM (<0.25M) ANGULAR AND SUB ANGULAR STONES AND OCCASIONAL CHARCOAL FLECKS
109.0187	CUT	PIT	0	0	1.00	0.50	CIRCULAR WITH STEEP SIDES LEADING SHARPLY TO A CONCAVE BASE
109.0188	FILL	PIT	3.90	1.80	0	0.15	VERY COMPACT ORANGE GREY SAND SILT WITH 90% SMALL TO MEDIUM (<0.30M) POORLY SORTED SUB ANGULAR AND ANGULAR

Context #	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
							HEAT FRACTURED STONE AND OCCASIONAL CHARCOAL FLECKS
109.0189	FILL	PIT	3.90	1.80	0	0.11	VERY COMPACT ORANGE SAND SILT WITH 80% SUB ANGULAR AND HEAT CRACKED STONES
109.0190	CUT	PIT	3.90	1.80	0	0.25	NORTH TO SOUTH RECTANGULAR CUT WITH ROUNDED CORNERS AND GRADUALLY SLOPING SIDES LEADING GRADUALLY TO AN UNDULATING BASE WHICH SLOPES DOWN TO THE SOUTH
109.0191	LAYER	LAYER	0	0	0	0	PLASTIC DARK BROWN PEAT CLAY WITH OCCASIONAL SMALL STONES
109.0192	VOID						VOID
109.0193	CUT	LINEAR	6.40	0.35	0	0	NORTH EAST TO SOUTH WEST LINEAR WITH STEEP SIDES LEADING GRADUALLY TO A CONCAVE BASE
109.0194	FILL	LINEAR	6.40	0.35	0	0	HARD GREY SMALL TO MEDIUM STONES
109.0195	FILL	PIT	2.11	0.35	0	0.08	MODERATELY COMPACT MID BROWN WELL SORTED SAND CLAY
109.0196	CUT	PIT	2.11	0.35	0	0.08	OVAL WITH GRADUALLY SLOPING SIDES AND A CONCAVE BASE
109.0197	LAYER	LAYER	4.60	4.00	0	0.25	MODERATE TO SOFT MID GREY BROWN SAND SILT WITH GRAVEL AND VERY COMMON LARGE SUB ANGULAR SLABS
109.0198	CUT	LINEAR	5.00	0.70	0	0.05	EAST TO WEST LINEAR WITH GRADUALLY SLOPING SIDES LEADING IMPERCEPTIBLY TO A FLAT BASE
109.0199	FILL	LINEAR	5.00	0.70	0	0.05	COMPACT MID GREY SILT CLAY WITH OCCASIONAL SMALL STONES
109.0200	CUT	LINEAR	2.38	0.50	0	0.05	EAST TO WEST LINEAR WITH GRADUALLY SLOPING SIDES LEADING GRADUALLY TO A FLAT BASE
109.0201	FILL	LINEAR	2.38	0.50	0	0.05	COMPACT MID GREY SILT CLAY WITH OCCASIONAL SMALL STONES
109.0202	CUT	PIT	0	0	1.94	0.34	NORTH EAST TO SOUTH WEST OVAL WITH STEEP SIDES LEADING IRREGULARLY TO AN IRREGULAR BASE
109.0203	CUT	GULLY	0.34	0.26	0	0.10	NORTH EAST TO SOUTH WEST LINEAR WITH STEEP SIDES LEADING GRADUALLY TO A POINTED BASE
109.0204	CUT	PIT	0	0	2.83	0.56	CIRCULAR WITH GRADUALLY SLOPING SIDES LEADING GRADUALLY TO A SLIGHTLY IRREGULAR BASE
109.0205	CUT	PIT	2.40	1.60	0	0.15	EAST TO WEST SUB RECTANGULAR WITH ROUNDED CORNERS AND

Context #	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
							GRADUALLY SLOPING SIDES LEADING TO A FLAT BASE
109.0206	FILL	PIT	2.40	1.60	0	0.10	COMPACT GREY SILT CLAY WITH OCCASIONAL SMALL TO MEDIUM STONES
109.0207	CUT	LINEAR	2.38	0.75	0	0.10	EAST TO WEST LINEAR WITH GRADUAL SIDES LEADING GRADUALLY TO A FLAT BASE
109.0208	FILL	LINEAR	2.38	0.75	0	0.10	COMPACT GREY SILT CLAY WITH OCCASIONAL SMALL STONES
109.0209	FILL	PIT	1.20	0.80	0	0.12	COMPACT GREY BROWN CLAY SILT WITH OCCASIONAL SMALL STONES
109.0210	LAYER	LAYER	18.82	13.25	0	0	METTLED STONE SURFACE WITH MEDIUM (<0.20M) ROUNDED STONES PRESSED INTO NATURAL SANDS AND GRAVELS
109.0211	VOID						VOID
109.0212	FILL	PIT	0.70	0.80	0	0.60	LOOSE PALE GREEN GREY PEA GRIT AND GRAVEL MOTTLED WITH PATCHES OF PALE ORANGE GREY FINE SILT, WITH COMMON WELL SORTED SMALL TO MEDIUM SUB ANGULAR AND SUB ROUNDED STONES, AND OCCASIONAL POORLY PRESERVED WOOD
109.0213	FILL	PIT	1.15	0.91	0	0.60	RECTANGULAR SLATE LINING OF PIT
109.0214	CUT	PIT	1.30	1.10	0	0.25	SUB SQUARE WITH NEAR VERTICAL SIDES LEADING SHARPLY TO A FLAT BASE
109.0215	CUT	LINEAR	1.00	0.68	0	0.08	EAST TO WEST LINEAR WITH GRADUAL SIDES LEADING GRADUALLY TO AN IRREGULAR BASE
109.0216	FILL	LINEAR	1.00	0.68	0	0.08	LOOSE DARK GREY BROWN SAND SILT WITH 15% CHARCOAL AND 10% SUB ROUNDED STONES
109.0217	FILL	PIT	0	0	1.24	0.17	LOOSE LIGHT BROWN GREY CLAY SILT WITH 20% SUB ANGULAR AND SUB ROUNDED STONES AND 15% CHARCOAL
109.0218	FILL	PIT	0	0	0.09	0.20	COMPACT DARK BROWN GREY CLAY SILT WITH 35% SUB ROUNDED AND SUB ANGULAR STONES, AND 5% CHARCOAL
109.0219	FILL	PIT	0	0	1.57	0.19	LOOSE MID YELLOW BROWN SAND SILT WITH 55% SUB ROUNDED AND SUB ANGULAR STONES, AND 5% CHARCOAL

Context #	Category	Feature type	Length (m)	Breadth (m)	Diameter (m)	Depth (m)	Context description
109.0220	FILL	GULLY	0.34	0.26	0	0.10	LOOSE MID GREY BROWN SAND SILT WITH 10% SUB ROUNDED AND SUB ANGULAR STONES, AND 10% CHARCOAL
109.0221	FILL	PIT	0	0	2.34	0.22	LOOSE MID GREY BROWN SAND SILT WITH 30% CHARCOAL AND 15% SUB ROUNDED AND SUB ANGULAR STONES (<0.05M)
109.0222	FILL	PIT	0	0	1.04	0.12	LOOSE DARK GREY BROWN CLAY SILT WITH 25% CHARCOAL
109.0223	FILL	PIT	0	0	2.37	0.26	LOOSE MID YELLOW BROWN SAND SILT WITH 45% SUB ROUNDED AND SUB ANGULAR STONES, AND 15% CHARCOAL
109.0224	FILL	PIT	0	0	1.39	0.12	LOOSE DARK BROWN CLAY SILT WITH 30% SUB ROUNDED AND SUB ANGULAR STONES (<0.05M), AND 20% CHARCOAL
109.0225	FILL	PIT	0	0	0.97	0.17	LOOSE MID YELLOW BROWN SAND SILT WITH 15 CHARCOAL AND 15% SUB ROUNDED AND SUB ANGULAR STONES (<0.02M)
109.0226	FILL	PIT	0	0	0.80	0.14	COMPACT DARK GREY BROWN CLAY SILT WITH 09% SUB ROUNDED AND SUB ANGULAR STONES (<0.02M) AND CHARCOAL
109.0227	FILL	PIT	0	0	0.42	0.06	LOOSE MID YELLOW BROWN SAND SILT WITH 30% CHARCOAL AND 15% SUB ROUNDED STONES
109.0228	FILL	PIT	0.70	0.80	0	0.60	PLASTIC DARK BROWN CLAY WITH VERY COMMON SMALL TO MEDIUM SUB ANGULAR STONES AND GRAVEL
109.0229	LAYER	TOPSOIL	0	0	0	0	TOPSOIL
109.0230	LAYER	GEOLOGY	0	0	0	0	NATURAL

Appendix IV

AB1703 Wylfa Newydd Early Clearance Works

Hotspot XX Finds Assessment

Appendix IV. AB1703 Hotspot 7-9 Finds Assessment

WYLFA HOT SPOT 7/9: FINDS ASSESSMENT

Introduction

A total of 27 Small Find numbers were allocated to 33 artefacts, weighing 1,486g, recovered from 10 deposits and as unstratified material on an archaeological investigation at Hot Spot 7/9. The finds assemblage was transferred to Carlisle and assessed by Wardell Armstrong. It was noted at this point that the **SF26** was not present among 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 / Hot Spot 7-9 / 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/areanorthwest.html).

The finds assessment was compiled by Sue Thompson. Lithic artefacts were assessed by Miguel Gonzalez. The prehistoric pottery was assessed by Frances Lynch.

Quantification of bulk finds by material and context is given in Table 1; quantification of lithics is given in Table 2. Quantification of finds recovered from the environmental samples is given in Table 3.

Prehistoric Pottery

This is one of five trenches – Hotspots 7-15 – lying in the bottom of a wet shallow valley near the farm of Rhwng Dau Fynydd. This trench contained a large burnt mound with 5 or 6 troughs under and around it, one with a wood lining. There were also a number of stakeholes and pits in the area between the burnt mound and an exposed rock outcrop.

One of these pits, 109.0109, 1.37m in diameter and 0.37m deep cut into the bedrock, must have been the product of a good deal of effort, but contained essentially only burnt stones and charcoal. The upper fill (109.0100) sealing the pit, contained a single sherd of pottery and a flint scraper (SF 002 and 003).

One featureless sherd (26 x 18 x 6mm). Both surfaces are pinky beige with a dark grey core. The inner surface is relatively smooth, the outer one is roughened by an even spread of small

(c. 1mm) grits, presumably stone, but they are difficult to see in the cross section. The piece is quite soft – low–fired, but is not crumbly.

The colour and roughened surface of the sherd would suggest a Later Bronze Age date but the softness of the fabric and the thin wall are not typical of the good assemblage of such pottery from EV9 which is less than a kilometre away to the east. The piece, which is certainly not fresh, was associated with a flint scraper. I don't know to what extent flint scrapers were still in use in the Later Bronze Age when quite a large number of metal blades would have been available.

Whatever date this sherd is, and I can't honestly say, it is likely to be residual and I would advise that any dating of the activity at this site should be based upon radiocarbon dates.

Post-medieval Pottery

A single sherd of post-medieval pottery **SF9**, weighing 1g, was recovered from unstratified deposits.

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 comprised a small fragment of refined white earthenware bowl or plate with traces of internal brown hand-painted decoration (REFW PNTD), typical of late post-medieval to modern tablewares.

A date of late 19th to 20th century is appropriate.

No further analysis is warranted.

Lithics

A total of 21 lithics (263g) was recovered during the archaeological investigation at Hot Spot 7/9 (Table 2).

The assemblage has been rapidly assessed, quantified and individually assigned to a broad category according to debitage, core or tool type with a further distinction made using sub-category field (Andrefsky Jr. 2005). No detailed technological attribute analysis has been undertaken at this stage. Information about burning and breaks was recorded and where the identifiable raw material type was also noted. Where possible dating was attempted.

The raw materials exploited were flint from secondary derived sources, mostly pebbles (78.9%), black local chert (10.5%) and shale (10.5%).

The condition of the assemblage is good, with no signs of re-cortication and displaying only

some degree of edge damage.

Most of the assemblage derives from the fills of cut features, which produced very small assemblages of under four worked flints

Taken as a whole, the assemblage is clearly chronologically mixed and there is a good deal of variability in the condition and technological traits of individual pieces.

Mesolithic/Early Neolithic material is represented by 3 blade-based removals and two small thumbnail scrapers built over tertiary flakes (**SF003**, **SF021**) and one end scraper knapped on a small blade (**SF017**). The remainder of the assemblage consists of flake-based material - some of which must represent a less diagnostic element of Mesolithic and Early Neolithic technologies, but much of which is likely to be of later date, being characteristic of later Neolithic. This material includes flakes of varied morphology, the majority hard hammer struck from simple unprepared striking platforms. No cores were recovered from this site, but two core preparation flakes were retrieved (**SF005**, **SF019**).

An unusual piece (**SF018**) was retrieved in fill (**109.0123**), described as a core tool, is a subtriangular, rounded shale pebble with a retouched apex. The retouch is steep, deep, direct and continuous in one side only. It appears to be a roughout axe abandoned at a very early stage or a unifacial pointed handaxe on a pebble.

Both the technological and typological aspects of the assemblage from HS 7/9 indicate a Mesolithic/Early Neolithic date for the flintwork and there are no clear indications of the presence of later material in the assemblage.

Further work on the lithics assemblage may be warranted.

Stone

Four stone small finds were recovered from five contexts weighing a total of 1,215g, and were in moderate condition.

The stone small finds included a large flat circular spindle whorl **SF20** with a diameter of 43mm and a sub-circular central hole of c.8-9mm.; although it is difficult to date spindle whorls as they were in use over a long period with little change, those with small holes of 4-8mm tend to be Iron Age or Roman in date, while those with larger holes date from the early to high medieval periods (Rogers 1997). Comparison with other spindle whorls recovered during the wider project suggest that this example is Roman in date.

A fragment of likely granite quern stone **SF8** was also recovered. This measured 55mm in thickness with wear on opposing surfaces.

SF14 is a fire-cracked fragment of soft sandstone which does not appear worked, and **SF7** was

a rounded flat pebble which is likely natural and does not appear to be worked or modified in any way.

Further analysis may be warranted on the worked stone artefacts.

Animal Bone

Two small find numbers were assigned to animal bone fragments with a combined weight of 2g.

SF1 was recovered from context (**109.0086**) and comprised two tooth fragments. **SF10** comprised tiny unidentifiable fragments of bone from unstratified deposits. No evidence of butchery was observed.

No further analysis is warranted on the animal bone.

Finds from Environmental Samples

Bone. Roughly 8g of animal bone fragments were recovered from four environmental samples <**2**>, <**24**>, <**25**>, <**54**> (Table 3). The fragments represented medium to large-sized ungulate mammals. Frequent tooth fragments were identified.

Flint. Flint was recovered from three environmental samples (**<41>, <54>, <59>**). Further analysis is warranted on the flint along with those recovered as small finds.

Stone. A dished fragment of fine-grained stone was recovered from <**92**> (**109.0228**). The fragment has a flat base and flat smooth sides, although the upper dished area is rougher. It is possible that this is the base for a small grinding stone or mortar of prehistoric date.

Recommendations. While they need to be considered alongside the bulk finds assemblage, a separate data set is appropriate for the finds from environmental samples, as it represents a separate recovery and quantification strategy for the retrieval of finds.

Statement of Potential

The finds recovered from Hot Spot 7-9 are largely prehistoric in date. Should the project proceed to publication, further work may be warranted on the following artefacts: lithics, stone and prehistoric pottery; the finds from the environmental samples should be taken into consideration.

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Table 1: Quantification of Finds by Trench Number, Material and Context

Context	SF #	Material	Qty	Wgt (g)	Period	Refined Date	Comments
109.0086	1	Bone	2	1			Fragment of animal tooth
109.0100	2	Pottery	1	3	Prehistoric	Bronze Age	Poorly fired, porous
109.0100	3	Lithic	1	5			Flint. Honey coloured
109.0090	4	Lithic	1	10			Chert? Worked?
109.0090	5	Lithic	1	16			Light coloured possible worked?
109.0010	6	Lithic	1	3			Flint? Chert? Worked?
109.0100	7	Stone	1	117			Smooth pebble. Natural?
109.0106	8	Stone	1	451			Quern stone? Fragment - smoothed on opposing surfaces. 65x65x55mm
U/S	9	Pottery	1	1	Post Med	19th-20th	Refined white earthenware, table ware REFW PNTD
U/S	10	Bone	7	1			Tiny fragments
109.0124	11	Lithic	1	3			Flint. Honey coloured
109.0123	12	Lithic	1	7			Flint. Grey coloured
109.0123	13	Lithic	1	2			Flint. Pink
109.0106	14	Stone	1	611			Fire cracked fragment
109.0123	15	Lithic	1	1			Flint. Honey coloured
109.0123	16	Lithic	1	2	Prehistoric		Flint. Mottled grey. Worked
109.0124	17	Lithic	1	10			Flint. Abraded
109.0123	18	Lithic	1	181			Smooth pebble, roughly triangular, worked
109.0139	19	Lithic	1	2			Flint. Pale grey, worked?
109.0154	20	Stone	1	36	Roman-Med		Spindle Whorl. 43mm diameter x 15mm depth. central hole 8 x 9mm
109.0154	21	Lithic	1	4			Chert
109.0139	22	Lithic	1	1			Flint. Honey coloured, worked
109.0168	23	Lithic	1	6			Chert
U/S	24	Lithic	1	2			Flint. Honey coloured. Worked
U/S	25	Lithic	1	2	Prehistoric		Burnt Flint. Blade?
	26	MISSING					MISSING
U/S	27	Lithic	1	8			Chert. Worked?
			33	**1486**			

Table 2: Quantification of worked flint

Context no.	Raw Material							Measures				Class	Category	Subcategory
	Type	Colour	Lustre	Texture	Opacity	Cortex	Patination	L	W	T	Wgt			
109.0100.3	Flint	Beige	Medium	Fine	Opaque	NcoD	None	23.2	23.6	8.9	5.31	Retouched tool	Scraper	Thumbnail scraper over a primary flake
109.0090.4	Flint	Beige	Dull	Fine	Opaque	Nco	None	35.6	23.6	16.6	10.34	Debitage	Primary flake	

109.0090.5	Flint	White	Dull	Fine	Opaque	Nco	None	48.2	35.1	12.4	15.9	Debitage	Core preparation flake	core edge rejuvenation flake
109.0010.6	Flint	White	Dull	Medium	Opaque	Nco	None	19.9	29.1	5.5	2.84	Debitage	Secondary flake	Proximal fragment
109.0100.7	Shale	Grey												Natural pebble.
109.0124.11	Flint	Beige	Shiny	Fine	Opaque	NcoD	None	36.3	16.1	4.8	3.31	Debitage	Primary flake	
109.0123.12	Flint	Grey	Shiny	Fine	Opaque	CoD	None	33.9	16.1	12.2	6.63	Debitage	Primary flake	
109.0123.13	Flint	Red	Shiny	Fine	Opaque	CoD	None	25.2	11.4	4.5	1.41	Debitage	Chip	
109.0123.15	Flint	Beige	Shiny	Fine	Translucid	Nco	None	18.6	11.9	2.1	0.42	Debitage	Chip	
109.0123.16	Flint	Grey	Shiny	Fine	Translucid	Nco	Light	32.5	13.4	5.1	2.3	Debitage	Blade	Bladelet
109.0124.17	Flint	Beige	Medium	Fine	Opaque	Nco	Light	31.7	21.1	13	10	Retouched tool	Scraper	End scraper
109.0139.19	Flint	White	Shiny	Fine	Opaque	Nco	Light	32.2	16.8	5.5	2.54	Debitage	Core preparation flake	Core face preparation flake
109.0154.21	Flint	Black	Shiny	Fine	Opaque	Nco	None	27	22.7	6.8	4.37	Retouched tool	Scraper	Thumbnail scraper over a tertiary flake
109.0139.22	Flint	Beige	Medium	Fine	Opaque	Nco	None	14.5	8.2	1.6	0.26	Debitage	Chip	
U/S.24	Flint	Beige	Medium	Fine	Opaque	Nco	None	27.6	15.1	3.9	1.31	Debitage	Blade	Bladelet
109.0168.23	Chert	Black	Medium	Coarse	Opaque	Nco	None	37.3	33	6.1	5.54	Debitage	Flake	Tertiary flake
U/S.25	Flint	Grey	Medium	Fine	Opaque	Nco	Heavy	25.4	15.4	4.8	2.17	Debitage	Blade	distal fragment blade
U/S.27	Chert	Black	Medium	Coarse	Opaque	Nco	None	32.9	41.8	8.6	8.36	Debitage	Flake	Tertiary flake
109.0123.18	Shale	Grey	Medium	Medium	Opaque	Co	None	106.7	32.4	20.2	180	Retouched tool	Core tool	Roughout axe or unifacial pointed handaxe on a pebble.
109.0129.54	Flint	Beige	Medium	Medium	Opaque	Nco	None	22.4	7	1.4	0.26	Debitage	Sieved chip	Chip
109.0139.59	Flint	Beige	Medium	Medium	Opaque	Nco	None	12.9	10.5	2.6	0.42	Debitage	Sieved chip	Chip

Table 3: *Finds recovered from Environmental Samples*

Context	Sample	Material	Wgt (g)	Comments
109.0005	2	Bone	1	Tiny fragments
109.0075	24	Bone	1	Tiny fragments
109.0086	25	Bone	4	Tiny fragments
109.0129	54	Bone	2	Tiny fragments
109.0124	41	Flint	1	Worked?
109.0129	54	Flint	1	Worked
109.0139	59	Flint	1	Worked
109.0228	92	Stone	831	Dished stone fragment
Total			**842**	

Appendix V

AB1703 Wylfa Early Clearance Works

Hotspot 7-9 Prehistoric Pottery Report

Appendix V. AB1703 Hotspot 7-9 Prehistoric Pottery Report

Hotspot 7-9 Wylfa Estate Pottery Report

This is one of five trenches – Hotspots 7-15 – lying in the bottom of a wet shallow valley near the farm of Rhwng Dau Fynydd. This trench contained a large burnt mound with 5 or 6 troughs under and around it, one with a wood lining. There were also a number of stakeholes and pits in the area between the burnt mound and an exposed rock outcrop.

One of these pits, 109.0109, 1.37m in diameter and 037m deep cut into the bedrock, must have been the product of a good deal of effort , but contained essentially only burnt stones and charcoal. The upper fill (109.0100) sealing the pit, contained a single sherd of pottery and a flint scraper (SF 002 and 003).

One featureless sherd (26 x 18 x 6mm). Both surfaces are pinky beige with a dark grey core. The inner surface is relatively smooth, the outer one is roughened by an even spread of small (c. 1mm) grits, presumably stone, but they are difficult to see in the cross section. The piece is quite soft – low–fired, but is not crumbly.

Comment
The colour and roughened surface of the sherd would suggest a Later Bronze Age date but the softness of the fabric and the thin wall are not typical of the good assemblage of such pottery from EV9 which is less than a kilometre away to the east. The piece, which is certainly not fresh, was associated with a flint scraper. I don't know to what extent flint scrapers were still in use in the Later Bronze Age when quite a large number of metal blades would have been available.

Whatever date this sherd is, and I can't honestly say, it is likely to be residual and I would advise that any dating of the activity at this site should be based upon radiocarbon dates.

Frances Lynch April 24th 2020

Appendix VI

AB1703 Wylfa Newydd Early Clearance Works

Hotspot 7-9 Palaeoenvironmental Assessment

Appendix VI. AB1703 Hotspot 7-9 Palaeoenvironmental Assessment

Palaeoenvironmental assessment

1.1 Introduction

1.1.1 Eight-eight bulk samples were taken during the excavation on Hotspot7-9 at Wylfa Newydd Nuclear Power Plant located in Anglesey, North Wales. A total weight of 2779kg (1776l) of sediment was processed for this stage of works. Further details for each sample can be found in Table 1.

1.1.2 Two samples of waterlogged wood were also submitted for assessment.

1.1.3 The environmental assessment was undertaken by Freddie Sisson and Lynne Gardiner.

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 methodology 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. Table 1. 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. Table 2. 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 magnetised 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).

1.2.6 The wood was retained in the fridge upon receipt at Carlisle and removed for assessment. Any identifications were undertaken using those sources listed in 1.2.5.

1.3 Results

1.3.1 Silty sand dominated the samples' sediment matrix with lesser quantities of sandy/silty clay sediments, further data can be observed in Table 1.

1.3.2 Flot and finds data is presented in Table 2.

1.3.3 Artefactual material recovered from the dried residues were minimal but contained examples of flint, industrial waste and worked stone.

1.3.4 CPR: Six samples yielded charred plant remains (CPR) which were all in a poor state of preservation. Of these samples two yielded more than 10 examples of CPR, these were **(109.0003) <1>** from ditch terminus **[109.0004]** which contained 21 examples of CPR all of which were identified as indeterminate cereal grains. Sample **<2> (109.0005)** taken from pit fill **[109.0006]** contained 50 CPR, of which 2 were identifiable as oat (*Avena* sp.) the rest were all indeterminate cereal grains.

1.3.5 CHARCOAL: Seventy-eight samples yielded charcoal which varied in condition from poor to good across the site; of these samples twenty-four contained more than 5g of charcoal. These are **(109.0025) <3>** from pit fill **[109.0026], (109.0061) <6>** and **(109.0062) <7>** which were, respectively, the upper and primary fill of pit **[109.0063]. (109.0050) <21>** and **(109.0166) <66>** taken from unknown pit fill and **(109.0102) <30>** taken from ditch terminus **[109.0085]**.Four samples came from pit **[109.0109]** which were **(109.0100) <31>, (109.0106) <32>, (109.0107) <33>** and **(109.0108) <34>**. Samples **<60>, <61>, <62>** and **<63>** were all taken from **(109.0154)** which came from the burnt mound **[109.0136]**. samples **(109.0168) <67>, (109.0169) <68>** and **(109.0170) <71>** were all take from a pit or pits unknown associated with the burnt mound. **(109.0164) <72>** came from a black deposit in pit **[109.0163], (109.0186) <75>** came from pit fill **[109.0187]** and **(109.0188) <76>** came from the secondary fill of pit **[109.0190]. (109.0183) <73>** was taken from the fill of tree throe **[109.0180]** and **(109.0222) <87>** came from **[109.0204].** for further information on samples containing charcoal see table 7.2.

1.3.6 SHELL: No shell was recovered from the samples.

1.3.7 BONE: 5g of bone was recovered from the samples but was made up of unidentifiable fragments.

1.3.8 MAGNETISED MATTER: The magnetic material was scanned under a microscope (x45 magnification) no microslags were present and was made up completely of naturally magnetic small stones.

1.3.9 WOOD: Three samples yielded poorly preserved wood remains **(109.0123) <42>** and **(109.0122) <43>** were taken from unknown pit fills and **(109.0183) <73>** was taken from the fill of tree throw **[109.0180]**; see table 2 for further information.

1.3.10 Two samples of waterlogged wood were also examined. A very small fragment (52x17x4mm) of indeterminate wood was assigned a sample number **<93>** and was from **(109.0212).** This

was heavily distorted; probably due to taphonomic factors. No attempt was made at cleaning as it was incredibly friable.

1.3.11 Sample **<78>** from **(109.0179)** consisted of fragments of wood (from a wood-lined trough). No attempt was made at cleaning as they were extremely fragile and friable. The largest fragment measured 280x75x4mm at its widest points (further dimensions available cf. Table 3). On average the width of all the measurable fragments were 4mm. No evidence of tooling was observed, however, this may be due to adhering silt being present. A small section of wood was taken for identification purposes on three of the fragments and they were deemed to be oak (*Quercus* sp.).

1.4 Discussion

1.4.1 The quality of small amount of recovered charred plant remains prohibit any meaningful discussion.

1.4.2 Oak (*Quercus* sp.) charcoal from **<15>** and rose-family (Rosaceae) charcoal **<68>** and **<71>** were the only species observed and identified for the purposes of radiocarbon submission (for expansion see section 1.3.5). The higher charcoal-yielding deposits tended to be those associated with the burnt mound.

1.4.3 The wood from any of the samples were also limiting in scope beyond informing us of the species employed for the lining of the trough.

1.4.4 The paucity of any, or well-preserved, palaeoenvironmental material also prevented discourse.

1.5 Statement of potential and recommendations

1.5.1 The CPR is in such a small quantity (81 examples in total) that it cannot be attributed to specific human activity and cannot inform us of crop husbandry practices in Wales. The material is not suitable to assist with the aims of the medieval or prehistoric regional research agenda for Wales (2017).

1.5.2 The large amount of charcoal could give us an insight into the types of species being exploited for burning activities during the human occupation at Hotspot 7-9. Focus can be given to **<3>, <6>** and **<7>** as the three largest individual assemblages as well as the combined assemblage from the burnt mound **[109.0136]** discussed in 1.3.5. For any assemblage to be suitable for further analysis it must be dated by absolute or typological means.

1.5.3 The wood from samples **<42>** and **<43>** is unlikely to be of any use as both samples came from pit back fills and unsuitable for dating the feature. The wood from **<73>** is likely to be a natural deposit due to being found in a tree throw and will not provide any further insight into the feature. No further work is required on any of the wood recovered from this site.

1.5.4 *Radiocarbon suitability*: The most suitable examples for radiocarbon suitability are the charcoal discussed in 1.3.5. 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*: At this stage all ecofacts should be retained should further work be required and only be discarded as appropriate once initial radiocarbon dates have been obtained and any charcoal analysis work has been undertaken.

1.5.6 The magnetic material from all samples may be discarded as it holds no significance towards the site.

1.6 Acknowledgments

1.6.1 Freddie Sisson supervised the environmental team who consisted of, Megan Lowrie, Katherine Bostock, Jyoti Stuart, Sophia Davies, Saskia Winslow, Charlotte Manning, and Sean Johnson. This report was edited by Lynne F. Gardiner.

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Table 1 Sample Information

C	<>	Cut	Description	TQ	Matrix	PW	PV	SW	SV
109.0003	1	109.0004	Ditch terminus	4	sandy clay	42	33	7422	4360
109.0005	2	109.0006	Pit fill	4	silty sand	41	27	6159	4000
109.0025	3	109.0026	Pit fill	4	silty sand	38	28	6768	4440
109.0054	4		Ditch terminus	4	silty sand	32	22	4692	3000
109.0031	5	109.0033	Ditch terminus	3	sandy silt	28	20	4291	2660
109.0061	6	109.0063	Upper pit fill	4	sandy silt	38	30	5404	3600
109.0062	7	109.0063	Primary pit fill	2	sandy clay	19	16	3175	2300
109.0064	8	109.0065	Pit fill	1	silty sand	10	5	2560	1700
109.0067	9	109.0066	Ditch terminus	3	silty sand	39	23	2921	4000
109.0034	10		Fill of stakehole	1	silty sand	1	1	101	60
109.0036	11		Fill of stakehole	1	silty sand	1	1	85	80

C	<>	Cut	Description	TQ	Matrix	PW	PV	SW	SV
109.0038	12		Fill of stakehole	1	sandy silt	1	1	134	60
109.0040	13		Fill of stakehole	1	sandy silt	1	1	64	40
109.0042	14		Fill of stakehole	1	silty sand	1	1	41	25
109.0044	15		Fill of stakehole	1	silty clay	1	1	143	100
109.0046	16		Fill of stakehole	1	sandy silt	1	1	223	110
109.0048	17		Fill of stakehole	1	sandy clay	1	1	20	10
109.0015	18		Fill of stakehole	1	sandy silt	1	1	105	50
109.0057	19		Fill of stakehole	1	sandy silt	1	1	11	10
109.0059	20		Fill of posthole	1	silty clay	2	2	409	200
109.0050	21		Pit fill	4	sand	56	39	6278	9200
109.0051	22		Pit fill	1	silty clay	15	9	1897	1250
109.0074	23	109.0073	Pit fill	4	silty clay	39	28	4423	3200
109.0075	24	109.0076	Ditch fill	4	sandy silt	40	28	9053	5500
109.0086	25		Related ditches (109.0080/109.0079)	4	silty sand	42	27	5479	2750
109.0081	26	109.0082	Ditch slot	4	silty clay	44	32	4941	4175
109.0098	27		Fill of stakehole	1	sandy silt	1	1	52	40
109.0094	28			1	silty sand	1	1	250	130
109.0081	29	109.0083	Ditch terminus	1	sandy clay	12	9	2012	1400
109.0102	30	109.0085	Fill of terminus	2	silty sand	22	14	3632	2140
109.0100	31	109.0109	Fill of pit	13	clayey silt	156	106	45361	27400
109.0106	32	109.0109	Charcoal layer in pit	4	silty sand	48	33	13400	8000
109.0107	33	109.0109	Mixed material in pit	16	silty sand	187	123	34870	32700
109.0108	34	109.0109	Layer of charcoal in base of pit	2	sandy silt	25	16	11139	7200
109.0103	35	109.0105	Trackway layer	4	silty sand	38	24	6704	4000
109.0104	36	109.0105	Trackway layer	4	silty sand	46	28	13023	7600
109.0110	37		Fill of stakehole	1	silty sand	1	1	114	70
109.0114	39		Fill of stakehole	1	silty sand	1	1	117	80
109.0116	40		Fill of stakehole	1	silty sand	2	1	329	200
109.0124	41		Pit fill	4	sandy clay	60	33	26529	15925
109.0123	42		Pit fill	9	sandy clay	80	72	9364	7000
109.0122	43		Pit fill	6	silty clay	49	42	3031	3100
109.0019	44		Fill of stakehole	1	clayey sand	1	1	193	110
109.0013	45		Fill of stakehole	1	silty sand	1	1	45	20
109.0027	46		Fill of stakehole	1	silty sand	1	1	103	40
109.0011	47		Fill of stakehole	1	clayey sand	1	1	61	30
109.0022	48		Fill of stakehole	1	silty sand	1	1	19	10
109.0092	49		Fill of stakehole	1	silty sand	1	1	69	40
109.0090	50		Fill of stakehole	1	silty sand	1	1	17	10
109.0096	51		Fill of stakehole	1	sandy silt	1	1	7	6
109.0029	52		Fill of stakehole	1	clayey sand	1	1	238	120
109.0023	53		Fill of stakehole	1	clayey sand	1	1	98	50
109.0129	54		Fill of gully	3	silty sand	37	24	7209	4500
109.0140	55		Fill of posthole	1	silty sand	5	2	648	410
109.0133	56	109.0135	Pit fill	4	silty sand	39	19	26160	17700
109.0134	57	109.0135	Pit fill	4	clay	37	23	16026	10200
109.0139	58		Silt layer covering rubble SF109.0143	4	sandy clay	45	35	8655	5800
109.0139	59		Silt layer covering rubble SF109.0143	4	silty clay	48	29	11143	6700
109.0154	60	109.0136	Burnt mound	4	silty clay	50	28	16842	21500
109.0154	61	109.0136	Burnt mound	4	silty clay	50	27	34572	23900
109.0154	62	109.0136	Burnt mound	4	silty clay	49	26	25806	18200

C	<>	Cut	Description	TQ	Matrix	PW	PV	SW	SV
109.0154	63	109.0136	Burnt mound	4	silty clay	54	27	20449	13300
109.0162	64	109.0161	Pit fill	4	sandy silt	49	30	29703	21100
109.0165	65	109.0163	Pit fill	7	clayey sand	70	50	21393	16400
109.0166	66		Burnt pit fill	4	sandy silt	45	35	35382	24300
109.0168	67		Pit associated with burnt mound	1	silty clay	3	2	1247	1100
109.0169	68		Pit associated with burnt mound	4	silty clay	54	31	23492	15400
109.0170	71		Base of pit associated with burnt mound	3	silty clay	40	23	12127	10350
109.0164	72	109.0163	Black deposit from pit	1	sandy silt	6	4	2261	1700
109.0183	73	109.0180	Fill of tree throw	4	silty clay	42	36	8233	9875
109.0182	74	109.0180	Fill	1		5	4	805	1400
109.0186	75	109.0187	Pit fill	4	clayey silt	63	28	43180	28800
109.0188	76	109.0190	Secondary pit fill	4	silty clay	62	25	33493	24000
109.0192	77	109.0171	Deposit over small stone surface	4	sandy silt	58	29	34254	19200
109.0195	79	109.0196	Pit fill	3	sandy clay	35	22	8027	5000
109.0206	80	109.0205	Pit fill	3	silty clay	33	21	2594	1800
109.0208	81		Linear fill	2	sandy clay	22	15	7338	4500
109.0209	82	109.0205	Linear fill	4	silty clay	42	29	5079	3750
109.0217	83	109.0202	Upper fill of stone lined pit	3	sandy clay	37	23	6907	4200
109.0218	84	109.0202	Secondary fill of stone lined pit	3	silty sand	41	24	5723	5250
109.0219	85	109.0202	Primary fill of stone lined pit	4	sandy clay	57	31	42804	14000
109.0221	86	109.0204	Fill of stone lined pit	4	clay	56	34	6233	4000
109.0222	87	109.0204	Fill of stone lined pit	3	silty sand	32	17	6807	3850
109.0223	88	109.0204	Fill of stone lined pit	4	clayey silt	23	34	16838	10100
109.0224	89	109.0204	Fill of stone lined pit	4	silty clay	45	24	9729	6900
109.0216	90	109.0215	Linear fill	2	silty clay	29	17	7135	5100
109.0212	91	109.0214	Fill of stone lined pit	4	silty clay	73	29	28610	16650
109.0228	92	109.0214	Pit fill	4	silty sand	69	25	43264	22500

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

Table 2 Flot and Finds from Samples Information

		Flots				Finds						
C	<>	WF	VF	CPR	Ch	Ch	Bo	Wo	Fl	IW	WS	MM
109.0003	1	19.7	45	21	0.35	<1						2
109.0005	2	137.8	200	50	1.35	<1	<1					<1
109.0025	3	1031.9	3400		766.6	11						10
109.0054	4	0.1	<1			<1						5
109.0031	5	59.4	60		0.68	<1						2
109.0061	6	206.5	620		129.6	7						3
109.0062	7	307	1000		162.2	7						1
109.0064	8	1.97	10		0.16	<1						<1
109.0067	9	19.1	45		3.7	<1						<1
109.0034	10	<0.01	<1		<0.01	<1						<1
109.0036	11	5.5	15		1.36	2						<1

		Flots				Finds						
C	<>	WF	VF	CPR	Ch	Ch	Bo	Wo	Fl	IW	WS	MM
109.0038	12	2.6	11		1.08	<1						<1
109.0040	13	3.6	15		0.81	2						<1
109.0042	14	0.5	1		0.16							<1
109.0044	15	0.2	<1		0.12	<1						<1
109.0046	16	6.1	17		1.68							<1
109.0048	17	0.2	<1		0.13	<1						<1
109.0015	18	2.7	5		<0.01							<1
109.0057	19	0.1	<1		<0.01							<1
109.0059	20	7.9	20		1.1							1
109.0050	21	12.7	33		4.71	7						<1
109.0051	22	65.2	80		2.52	2						<1
109.0074	23	116.9	100		1.91	3				1		1
109.0075	24	59.2	100	7	0.44	<1	1					2
109.0086	25	36.5	50				3					<1
109.0081	26	1.9	5			<1				4		4
109.0098	27	7.4	15			<1						<1
109.0094	28	11.6	20									1
109.0081	29	17	30			<1						<1
109.0102	30	308.3	800		37	<1						<1
109.0100	31	127.8	260		15.3	6						6
109.0106	32	203.9	600		39.7	2						<1
109.0107	33	61.5	100		17.4							<1
109.0108	34	39.1	60			6						1
109.0103	35	11.7	20			<1						4
109.0104	36	<0.01	<1									<1
109.0110	37	0.7	3			<1						<1
109.0114	39	3	5			<1						<1
109.0116	40	58.5	100		0.3							<1
109.0124	41	856.2	3100	1	0.78	2			<1			<1
109.0123	42	94.3	140		0.28			690				
109.0122	43	5.2	10		0.43	6		5				
109.0019	44	<0.01	1		<0.01							<1
109.0013	45	1.5	5		0.29	<1						<1
109.0027	46	2.5	3									<1
109.0011	47	0.5	2		0.43							<1
109.0022	48	0.1	1			<1						<1
109.0092	49	<0.01	1									<1
109.0090	50	0.3	1			<1						<1
109.0096	51	4.5	7		0.58							<1
109.0029	52	1.2	5									<1
109.0023	53	0.4	2									<1
109.0129	54	<0.01	1			5	2		<1			3
109.0140	55	9.6	30		2.38							
109.0133	56	6.7	30		0.5	3						<1
109.0134	57	26.7	80			2						<1
109.0139	58	1.1	15			<1						<1
109.0139	59	8.6	30			<1			<1			1
109.0154	60	2.2	10			5				24		<1
109.0154	61	30.2	100			30						<1
109.0154	62	8.1	25			5						<1
109.0154	63	27.1	100	1	6.16	12						1
109.0162	64	19.5	50		0.43	7						<1

		Flots				Finds						
C	<>	WF	VF	CPR	Ch	Ch	Bo	Wo	Fl	IW	WS	MM
109.0165	65	8.5	23			2				16		<1
109.0166	66	1.5	20			36						1
109.0168	67	7.6	30			33						<1
109.0169	68	3.7	15			68						<1
109.0170	71	64.4	160		39.3	19						<1
109.0164	72	21.6	100			17						<1
109.0183	73	29.9	60			14		17				<1
109.0182	74	0.6	5			4						<1
109.0186	75	51.1	300			12						<1
109.0188	76	9	50			51						<1
109.0192	77	5.4	15									<1
109.0195	79	0.9	5									<1
109.0206	80	11.2	20			<1						<1
109.0208	81	1.6	5			4						<1
109.0209	82	24.1	50			<1						<1
109.0217	83	3.4	10			2						<1
109.0218	84	4.6	15			<1				12		<1
109.0219	85	0.2	1			<1						<1
109.0221	86	29	50			<1						<1
109.0222	87	0.5	2	1	0.21	9						<1
109.0223	88	4.1	5			<1						
109.0224	89	0.2	2			<1						
109.0216	90	34.9	30			<1						<1
109.0212	91	24.7	100			<1						71
109.0228	92	9.4	30								831	<1

C=context; <>=sample number; WF= weight of flot (g); WV= volume of flot (ml); CPR= count of charred plant remains; Ch= charcoal weight (g); Bo= bone (g); Wo= wood (g); Fl= count of flint flakes; IW= industrial waste (g): WS= worked stone (g): MM= magnetic material (g)

Table 3: waterlogged wood samples

Context	Sample	Dimensions (mm)	Species	Comments
109.0212	93	52x17x4	indeterminate	Poorly preserved and heavily squashed
109.0179	78	75x30x9	Oak	Very fragile and silted
109.0179	78	35x35x4	Not taken	Very fragile and silted
109.0179	78	280x75x4	Not taken	Very fragile and silted
109.0179	78	90x40x4	Not taken	Very fragile and silted
109.0179	78	40x40x4	Oak	Very fragile and silted
109.0179	78	140x40x4	Not taken	Very fragile and silted
109.0179	78	90x40x4	Not taken	Very fragile and silted
109.0179	78	140x40x4	Oak	Very fragile and silted
109.0179	78	60x50x4	Not taken	Very fragile and silted

Appendix VII

AB1703 Wylfa Newydd Early Clearance Works

Hotspot 7-9 Radiocarbon Dating Results

BetaCal 3.21

Calibration of Radiocarbon Age to Calendar Years

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

(Variables: d13C = -27.3 o/oo)

Laboratory number **Beta-554167**

Conventional radiocarbon age **3600 ± 30 BP**

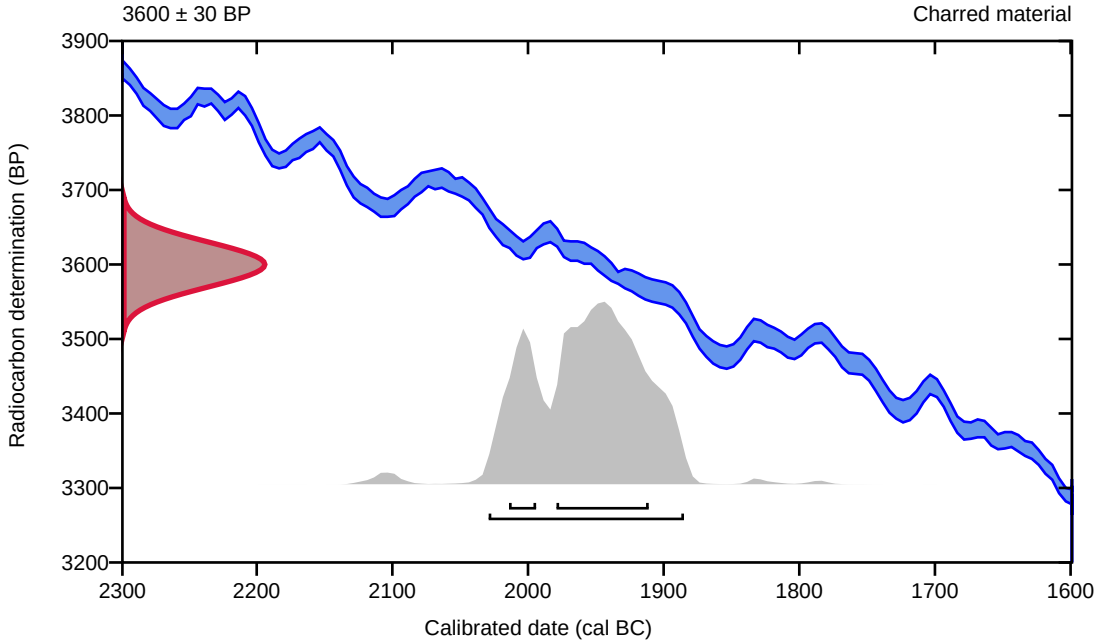
95.4% probability

(95.4%) 2031 - 1887 cal BC (3980 - 3836 cal BP)

68.2% probability

(54.3%) 1981 - 1913 cal BC (3930 - 3862 cal BP)
(13.9%) 2016 - 1996 cal BC (3965 - 3945 cal BP)

HS7/9_(109.0044)_< 15 >



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).

Beta Analytic Radiocarbon Dating Laboratory

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BetaCal 3.21

Calibration of Radiocarbon Age to Calendar Years

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

(Variables: d13C = -27.5 o/oo)

Laboratory number **Beta-554168**

Conventional radiocarbon age **2880 ± 30 BP**

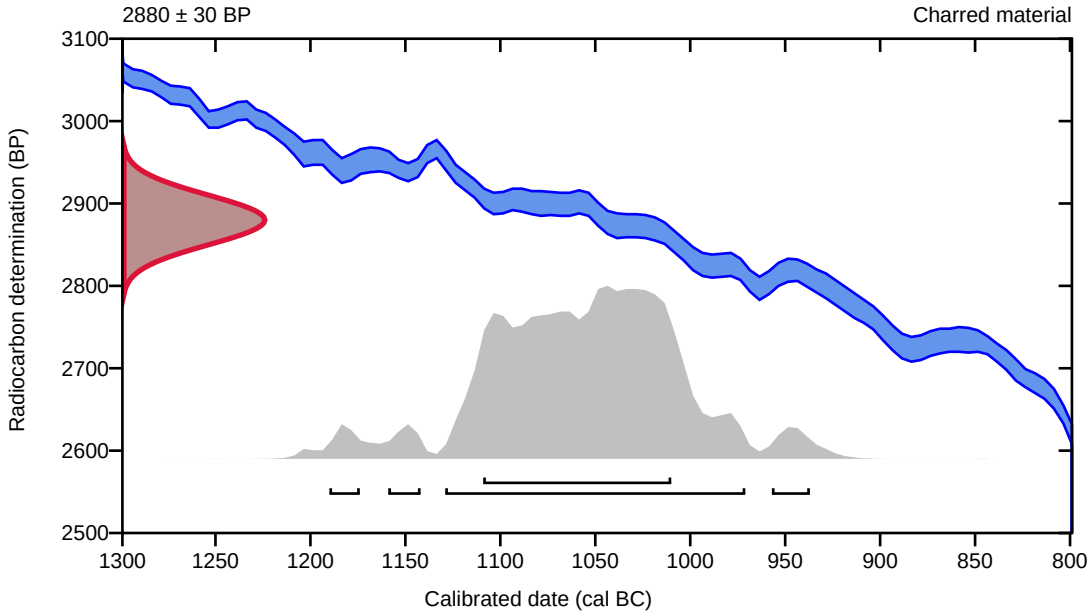
95.4% probability

(88.7%)	1131 - 973 cal BC	(3080 - 2922 cal BP)
(2.5%)	959 - 939 cal BC	(2908 - 2888 cal BP)
(2.2%)	1161 - 1144 cal BC	(3110 - 3093 cal BP)
(2%)	1192 - 1176 cal BC	(3141 - 3125 cal BP)

68.2% probability

(68.2%)	1111 - 1012 cal BC	(3060 - 2961 cal BP)

HS7/9_(109.0169)_< 68 >



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 = -26.0 o/oo)

Laboratory number **Beta-554169**

Conventional radiocarbon age **2930 ± 30 BP**

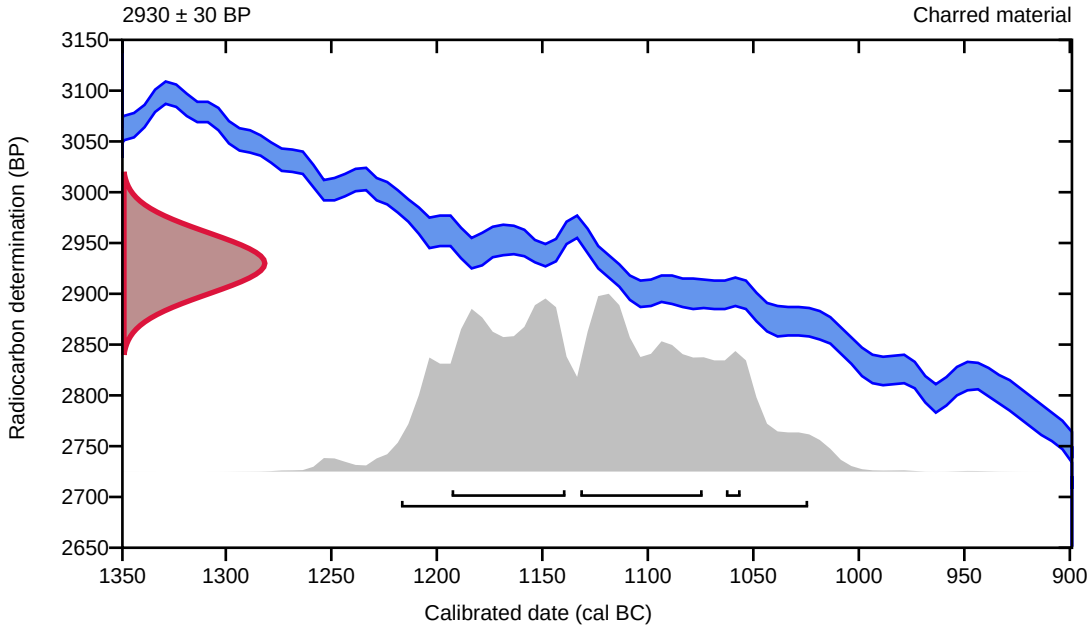
95.4% probability

(95.4%)	1219 - 1026 cal BC	(3168 - 2975 cal BP)

68.2% probability

(33.4%)	1195 - 1141 cal BC	(3144 - 3090 cal BP)
(31.4%)	1134 - 1076 cal BC	(3083 - 3025 cal BP)
(3.4%)	1065 - 1058 cal BC	(3014 - 3007 cal BP)

HS7/9_(109.0170)_< 71 >



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 = -21.8 o/oo)

Laboratory number **Beta-554170**

Conventional radiocarbon age **2020 ± 30 BP**

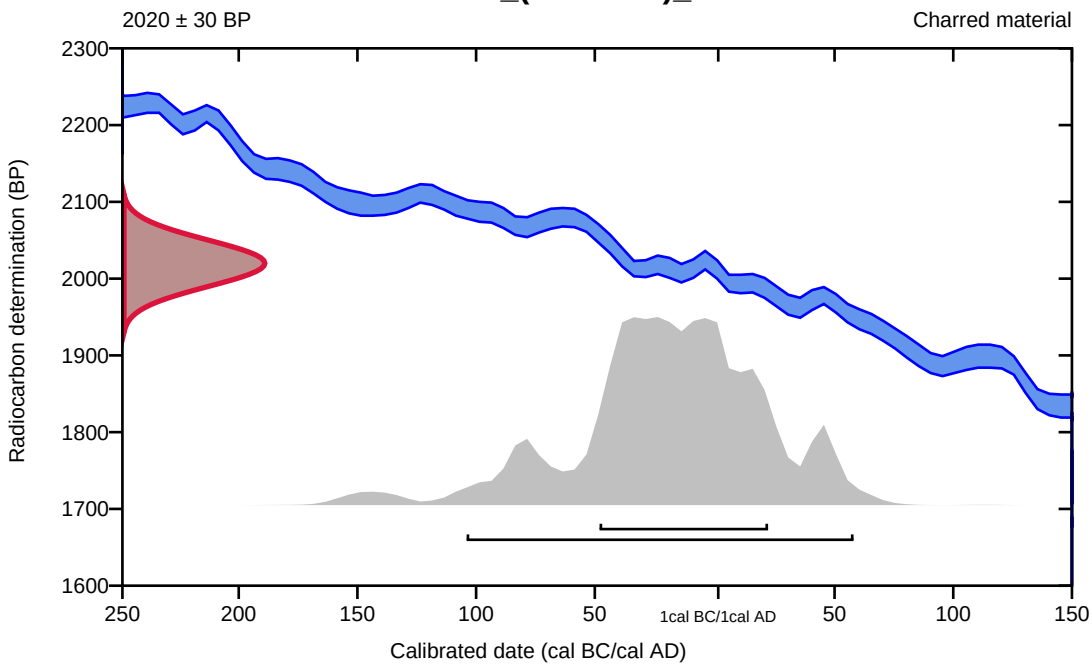
95.4% probability

(95.4%) 106 cal BC - 58 cal AD (2055 - 1892 cal BP)

68.2% probability

(68.2%) 50 cal BC - 22 cal AD (1999 - 1928 cal BP)

HS7/9_(109.0222)_< 87 >



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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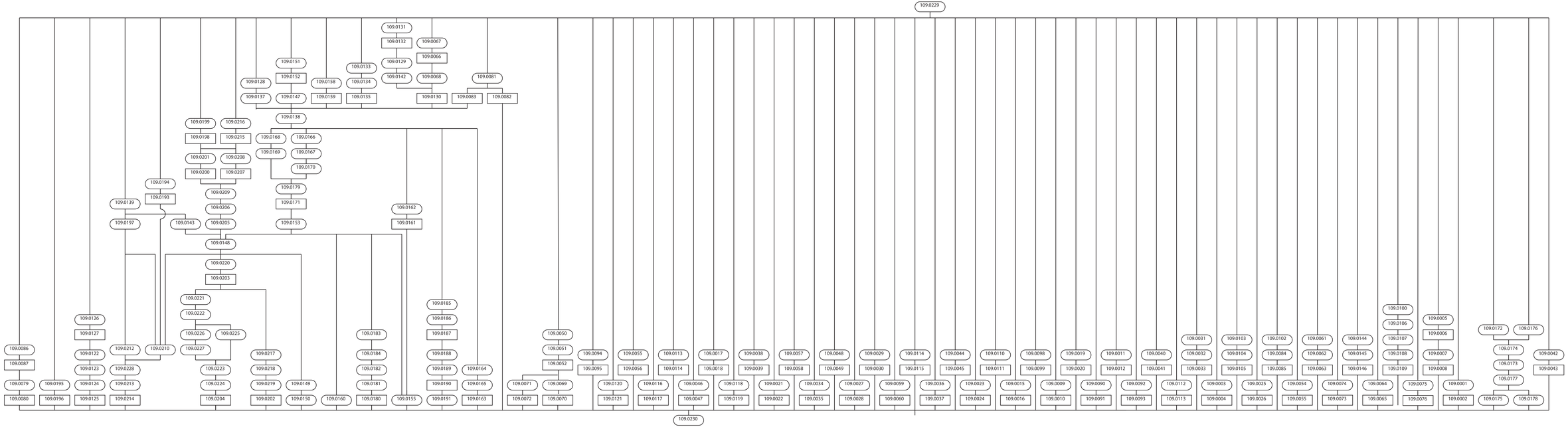
Appendix VIII

AB1703 Wylfa Newydd Early Clearance Works

Hotspot 7-9 Harris Matrix

Appendix VIII. AB1703 Hotspot 7-9 Matrix



Appendix IX

AB1703 Wylfa Newydd Early Clearance Works

Post Excavation Assessment 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

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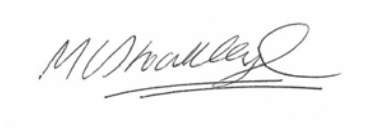

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WYLFA NEWYDD POST EXCAVATION ASSESSMENT METHODOLOGY

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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