HORIZON NUCLEAR POWER

WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project

Archaeology Site Summary Reports and Plans

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1-1 Area 7 Summary Report

Archaeoleg Brython Archaeology

Site Summary Report
Area 7
Document Number

WYN-BRY-CON-REP-00002 v1.2

Archaeoleg Brython Archaeology

Site Summary Report
Area 7;

Wylfa archaeological works on behalf of Horizon Nuclear Power

Prepared for Horizon Nuclear Power

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Summary

Archaeoleg Brython Archaeology CYF. have completed the excavation of a probable Iron Age semi-enclosed hilltop settlement and a probable Early Medieval cemetery at Wylfa, Anglesey (NGR SH34719289) in advance of an application to construct the proposed Wylfa Newydd nuclear power station. The excavation area measured 6799m^2. All works were undertaken in accordance with the Written Scheme of Investigation and monitored by Gwynedd Archaeological Planning Service.

The earliest activity at the site is likely to be represented by two pits, both of which had fills rich in charcoal. A fragment of Neolithic polished stone axe was recovered from the fill of one of the pits, suggesting that they date to this period.

A ditch associated with the later Prehistoric settlement was identified in the geophysical survey of the area and confirmed through evaluation trenching. The lack of artefacts and type of features identified during the excavation suggests that the ditch and associated internal features, which included a truncated roundhouse and probable post-built granary, may date to the Iron Age Period.

Upon stripping the original excavation area a long cist cemetery was identified and as a result the excavation area was extended to define its limits. Investigation of the cemetery identified four funerary enclosures, similar to other Early Medieval examples from Gwynedd and Anglesey, which appear to have become a focus for further burials. A total of 51 graves were excavated, of which the majority were likely to have been for children and neonates. No human remains were recovered due to the acidic nature of the soil. The cemetery is a locally and regionally significant example and has the potential to shed new light on burial practices during the Early Medieval period.

Based upon the results of the excavation, it is recommended the archaeological potential of the assemblage and archive produced from the excavation of Area 7 be further analysed and the results be disseminated in the form of an assessment report in line with the Written Scheme of Investigation.

The earliest activity at the site was represented by two pits containing charcoal, within one a Neolithic polished stone axe was found.

1 Introduction

Archaeoleg Brython Archaeology CYF. (ABA) have been commissioned by Horizon Nuclear Power Ltd. (HNP) to undertake a phased programme of excavation in advance of the submission of a Development Consent Order application (PINS Ref EN 010007) for the construction of the proposed Wylfa Newydd Power Station. The purpose of this document is to inform Horizon's DCO application, and to summarise the results of the excavation in advance of the production of an assessment report.

This report provides a summary of the results of archaeological excavations undertaken during 2017 and 2018 and represents the first phase of the post excavation analysis phase of archaeological investigations at the Wylfa Newydd site. Following the production of a Written Scheme of Investigation (WSI) (Horizon, 2016), 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 scope of the works was agreed and monitored whilst in progress by Gwynedd Archaeological Planning Service (GAPS), cultural heritage advisors to the Local Authority. Wardell Armstrong LLP. (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.

2 Background

The Area 7 excavation was located in a field which was designated 'A3' during the archaeological trial trench evaluation works (Wessex Archaeology, 2016a,b,c). The initial excavation area was c. 5,000m^2 in size, centred on NGR SH34719289 at a height of approximately 35m AOD. The excavation area was located c. 920m to the west of the centre of Tregele, 780m to the south of the existing Wylfa power station and 550m to the south of the coastline (*See Figure 1*).

Prior to the excavation of the Area 7 it had been subject to an archaeological Desk Based Assessment (Cooke et al, 2012), magnetometer geophysical survey (Hopewell, 2011a,b, 2012 & WYAS, 2015) and a thorough programme of evaluation trenching (Wessex Archaeology, 2016a,b). The geophysical survey identified a possible field system and associated partial ring ditch which (partially) enclosed a number of sub circular anomalies.

The site was stripped by Wessex Archaeology during September 2017 and the western and northern parts of the site were excavated and backfilled. Due to the discovery of cist graves the area was extended to the south and east. Following the extension it was decided not to excavate during the winter months and the site was protected with geotextile. ABA excavated the remaining archaeology at the site during August and September 2018.

The British Geological Survey's Geology of Britain viewer states the superficial deposits in the area consist of Till, Devensian – Diamicton. These are sedimentary deposits which formed between 116 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, 2018).

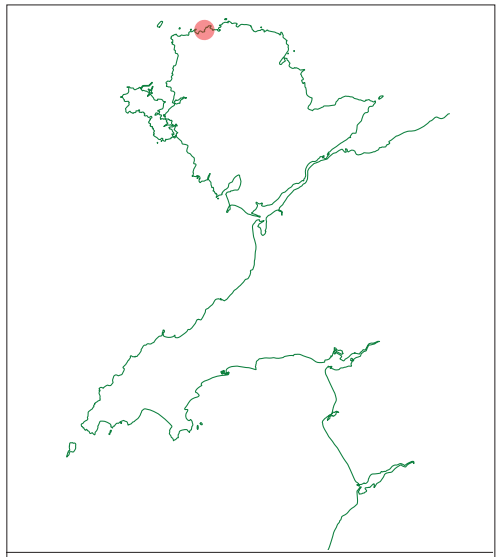


Figure 1
Location Plan, Area 7.

Key

Excavation Area

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Drawn By:	IGP
Date:	19/10/18
Location:	SH34719289
Project:	AB1703 Area 7

Archaeoleg Brython Archaeology

3 Aims and Objectives

3.1 Site Specific Aims and Objectives

The WSI (Horizon, 2016) stated that the specific aims of the excavation and subsequent post-excavation programme were to;

1. To establish the true nature and function of the various archaeological remains present, specifically to identify the presence of any agricultural, domestic, industrial or ritual activity and the character of such.

2. To establish the condition, age and stratigraphic sequence, of any archaeological / historical remain identified.

3. Gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills.

4. To understand how the remains seen within the investigation area relate to other known features across the landscape (chronologically, stratigraphically as well as spatially), with particular reference to the prehistoric activity in the fields to the south and west.

3.2 Research Objectives

The relevant archaeological research framework documents identified in the WSI (Horizon, 2016) were;

- *Review of the Research Framework for the Archaeology of Wales: North West Wales – Neolithic and Early Bronze Age (Steve Burrow, 2010).*
- *Review of the Research Framework for the Archaeology of Wales: North West Wales – Later Bronze Age and Iron Age (Fiona Gale, 2010).*
- *A Research Framework for the Archaeology of Wales – Romano British (AD 43-AD 410) (Davies, 2011).*
- *A Research Framework for the Archaeology of Wales: North West Wales - Early Medieval c. AD 400-1070 (Nancy Edwards, Tudur Davies and Kate A. Hemer, 2016).*
- *A Research Framework for the Archaeology of Wales: North West Wales – Medieval c.AD 1100 – 1539 (David Longley, 2010).*

Within the WSI (Horizon, 2016), the following research objectives were identified from the relevant archaeological research framework documents outlined above;

1. Confirmation of the date, nature, character and extent of potential prehistoric sites in an order that can be placed into the wider context of Anglesey during this period. There is particular emphasis on obtaining accurate C14 dates in order that the chronology of sites and ceramic sequences can ascertained.

2. There is an emphasis on understanding the wider settings of prehistoric sites – with specific reference to 'Understanding how sites work in the landscape, permanent/seasonal use and

understanding the social role of hillforts' (Gale, 2010). It is possible that the remains within the proposed investigation area form part of the wider setting of the prehistoric remains seen in the adjacent field to the west (K1 and K4).

3. To undertake detailed analysis of prehistoric artefacts and their contexts in order to understand the chronological and typographic development, and use, of the artefacts.

4. Placing the setting of the information gained from the 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 bogs.

6. Identifying and understanding early field systems, their development and degree of continuity.

7. Further understanding and identification of pasture land in locations other than upland locations – specifically such locations as coastal wetlands, elevated wetlands and moors.

8. Gaining insights into social organisation and settlement hierarchies.

A probable Early Medieval cemetery was identified during the excavation of the site. As such the following research objectives were also identified as being relevant in the WSI (Horizon, 2016);

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

2. To undertake detailed analysis of (early) medieval artefacts and their contexts in order to understand the chronological and typographic development, and use, of the artefacts.

3. The analysis of human remains for information on date, origins, demography, health, nutrition and transfer of pathogens

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

5. Gaining of insights into the chronology and process of Christian conversion, the evolution and changing functions of religious sites and the broader impact of these on the landscape and (early) medieval society in Wales.

6. Identifying, in so far as is possible, the settlement and ecclesiastical sites associated with cemetery sites in order to understand the interrelationships between settlement sites, parish catchment areas and cemetery catchment areas.

7. Identifying, so far as is possible, the status of the individuals placed within the cemetery and understanding how this relates to the status of the settlement from which they came.

8. 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.

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

10. Establishing the extent of continuity or discontinuity between the late Roman and Early Medieval periods via analysis of environmental evidence (RO8), the agricultural economy (RO8), artefacts recovered (RO2) and changes in settlement patterns (RO6), trade (RO9) and burial / funeral practices (RO5).

11. Understanding how the transition between the Late Roman and Early Medieval period on Anglesey (RO10) compares with the same period elsewhere in Wales and Britain.

12. Understanding what, if any, impact Irish and Scandinavian populations had on (early) medieval Wales (artefacts, agricultural economy, funerary practices etc).

4 Methodology

4.1 Surveying and Setting Out

The excavation area was set out by the Balfour Beatty Jones Brothers Joint Venture (JBBBJV). The excavation area and all archaeological features were subsequently surveyed by Wessex Archaeology using GPS and TST, and ABA using a Leica Viva GPS system. All surveys were tied in to the Ordnance Survey National Grid.

During the excavations undertaken by ABA, a 10m grid, also tied in to the Ordnance Survey National Grid, was set out and marked with grid pegs on the site to aid recording.

4.2 Mechanical Excavation

All mechanical excavation of the site, with the exception of a small extension, was undertaken by Wessex Archaeology.

Topsoil and other overburden was removed using a tracked 360 degree excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under comprehensive archaeological direction.

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 both with a metal detector and visually. Any artefacts of potential archaeological interest identified as a result of this work were recovered and their locations accurately recorded in line with the WSI (Horizon, 2016).

4.3 Hand Excavation

Immediately after the removal of deposits overlying the archaeological horizon the area was manually cleaned, all features investigated and recorded. A pre-excavation plan of all visible features was 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 taking these signals into account.

All excavations and records were undertaken in accordance with best practice as set out in Standards and Guidance for Archaeological Excavation (CIFA, 2014a).

With the possibility of human remains being present the excavations were undertaken in accordance with the best practice guidelines set out in Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England, English Heritage, 2005.

4.3.1 Funerary Remains

All funerary type archaeological remains identified were excavated in accordance with the following strategy:

- 100% of all graves and cists were excavated.
- Prior to excavation detailed photography, including photogrammetry was undertaken and a pre-excavation plan of all such features produced, at a scale of 1:20. These show the details of any burial cuts and any visible artefacts such as the capping / visible side stones of cists and human skeletal remains. The pre-excavation plan of the burial features will be recorded in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.
- All of the capping stones of all cists were carefully removed, weighed and retained on site, 10% of the total number of cist stones were retained for further specialist analysis off-site.
- Hand excavation was undertaken in order to reveal any possible in situ human skeletal remains.
- All grave fill was retained as bulk sample material.
- During the removal of burial fill, material from what would have been the head, torso and lower legs/feet were taken as separate samples, and recorded as such, in order that the location of macroscopic and microscopic artefacts and remains could be broadly identified.
- A smaller sample of up to 10litres was collected from the lower abdominal/pelvic area for the potential recovery of intestinal parasites.
- Detailed photographs, photogrammetry, plans and sections (at a maximum scale of 1:20) of the emptied cists were undertaken. Illustrating, in particular, the arrangement and detail of the remaining lining slabs of the cist.
- Hand drawn sections of the cuts of graves, at a maximum scale of 1:20, were produced along with a detailed photographic record of the appearance of the features once excavated.
- All lining (side and where present base) stone slabs of the cists, were removed, weighed and retained on site, approximately 10% of the stones were retained for further specialist analysis off-site.
- A plan of the excavated burial features was recorded in 3D by GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.
- The location of all hand drawn sections and plans was recorded in 3D by GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.3.2 Non-Funerary Remains

All non-funerary type archaeological remains identified were excavated in accordance with the following strategy which was outlined in the WSI (Horizon, 2016):

- 100% of all positive features likely to obscure earlier archaeological features;
- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships;

- discrete negative features (more than 1m 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%;
- in addition to the above, all intersections between features and all terminals of linear features; and
- other features: 25%, unless otherwise agreed with the Consultant.
- The location of all small finds, with the exception of those discovered within discrete features, were recorded in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.4 Recording

All excavated contexts were fully recorded in line with the standards set out in the WSI (Horizon, 2016), described in sections 4.3.1 and 4.3.2, using appropriate ABA pro-forma recording sheets.

- All photogrammetry and drawing control points were located in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.
- 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.

4.5 Palaeoenvironmental Sampling

Environmental sampling was undertaken in accordance with the WSI (Horizon, 2016) and Environmental Archaeology; A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage 2011).

100% of all grave fills was collected as bulk soil samples. The fill of all graves was collected from four specific areas (head, torso, feet and a smaller sample from the pelvic area), each given a separate sample number to aid identification.

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, in accordance with requirements.

4.6 Archiving

The creation, compilation, transfer and deposition of the archaeological archive follows in line with the regulations of the Chartered Institute for Archaeologists Standards and Guidance (CIfA, 2014b).

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.

All finds will be stored in accordance with CIfA's Standard and Guidance (CIfA, 2014c). It is recommended that all artefacts are deposited at Oriel Ynys Môn, Llangefni.

Digital copies of the report will be submitted to Horizon who will then distributed to stakeholders. Printed versions will only be produced if specifically requested.

ABA will hold a digital version of the archive indefinitely.

5 Archaeological Results

Site name: Wylfa Newydd

Site code: AB1703 Area 7

HER Event Code: 45396 *PRN:76053*

NGR: SH34719289

Excavated by: Archaeoleg Brython Archaeology CYF.

Site type: Iron Age semi-enclosed settlement, Early Medieval cemetery

Topsoil average depth: 0.15m

Subsoil average depth: 0.15m

5.1 Historic Map Evidence and Documentary Data

Historic mapping and documentary sources consulted did not provide any evidence of the features identified at the site (Cooke et al, 2012).

5.2 Geophysical Survey Results

Geophysical surveys were carried out during the assessment of the site (WYAS, 2015; Hopewell 2011a & b; Hopewell 2012). The surveys did not demonstrate the presence of significant archaeological remains within the excavation area and suggested the presence of 'background' agricultural type remains such as field boundaries, ditches, and field drainage.

5.3 Evaluation Results

See figure 2

Wessex Archaeology undertook a programme of evaluation trenching within field A3 in 2015-2016. A total of 46 trenches were opened in this field with 21 of those containing recorded archaeology, (Wessex Archaeology, 2016a,b,c). Twelve trenches contained undated ditches, and one trench contained an undated pit (Wessex Archaeology, 2016a).

Evidence of Prehistoric activity was identified in four trenches, 85, 671, 672, 691 (Figure 2), and comprised a 1m wide ring ditch and a pair of pits. A flint flake was recovered from the ditch and environmental samples recovered from the ditch were notable for containing grains and chaff associated with food production. As a result of the evaluation results, Area 7 was positioned to ensure potential features associated with archaeological remains identified during the evaluation were excavated and recorded, mitigating the impact of the proposed development upon the archaeological remains.

5.4 Excavation Results

See Figure 2

5.4.1 Neolithic

Evidence for Neolithic activity was recovered from the fill of two pits which contained charcoal and burnt stones. Pit [07.0559], to the north east of one of the Funerary Enclosure 2, contained a burnt saddle quern (SF 07.0013) placed at the base with a large unworked fragment of burnt millstone-grit placed on top. The fill of pit [07.0559] also contained numerous large burnt stones, charcoal, two pieces of possible Graig Lwyd stone from Penmaenmawr (SF 07.0014 and 07.0015) and a polished axe (SF 07.0012).

Pit [07.0533] to the south of pit [07.0559] and east of Funerary Enclosure 2 appeared to be contemporary with evidence of in situ burning and was filled with large burnt stones, charcoal and a polished stone (SF 07.0010). A further potential Neolithic pit [07.0515] was identified to the north east of pit [07.0515]within its fill (07.0478) small recut [07.0477] contained evidence of in situ burning within its fill (07.0509)

5.4.2 Iron Age

Probable Iron Age activity was concentrated in the northern part of the excavation area and consisted of a probable roundhouse associated with a partial enclosure ditch, small ditches and gullies and a group of pits and postholes.

The ditch was observed to be located on a northwest to southeast orientation extending from the western limit of activity and curved southward, measuring 1.5m wide and a total length of 52 metres. It had a consistent 'v' shaped profile and its fills comprised of naturally laid sediments. This ditch likely represented the northern extent of associated activity but there was no evidence to suggest that the ditch had ever fully enclosed a defined area.

The remains of a sub-circular gully [07.0238], which had a projected diameter of 12m, and associated postholes [07.0153], [07.0302], [07.0319] and [07.0315] were excavated within the potential enclosure. This group of features is likely to represent the truncated remains of a late prehistoric roundhouse.

A group of pits and postholes to the southeast of the roundhouse drip gully may have represented the remains of a granary building and associated rubbish pits. The postholes were arranged to form a rectangular structure approximately which would have measured approximately 5m x 4m, similar dimensions to other examples of granary structures such as those at Cefn Du, Gaerwen (Cuttler et al, 2012). The similar size of the postholes along with the similar composition of their fills suggested they were contemporary. The deliberate infilling of a number of the postholes with large cobble sized stones may infer activity postdating the structure. A whetstone (SF 07.0004) was found in posthole [07.0252], pit [07.0505] contained two near complete iron knives (SF 07.0016) and a worked stone core (SF 07.0018). The charcoal rich layer overlying the rubbish pit group (07.0463) contained some burnt clay (SF 07.0006 and SF 07.0008).

5.4.3 Early Medieval

The early medieval cemetery was not identified during the evaluation trenching undertaken prior to the start of the Area 7 excavation. The small size of the first cists identified, and the presence of the partial ring ditch to the north, initially suggested that they may be Bronze Age cremations rather than inhumations. Following the identification of four square funerary enclosures, which are relatively common features in early medieval cemeteries in Gwynedd and Anglesey, it became apparent that all funerary features in Area 7 were likely to date from the early medieval period.

Three complete early medieval square funerary enclosures were excavated in the southern part of the site, with a fourth observed to have been heavily truncated by later activity. These appeared to define the southern limit of the cemetery with only two graves (G07.008 and G07.045) located to the south of the enclosures. Funerary Enclosure 4, which was heavily truncated, was excavated to the west of Funerary Enclosures 1 to 3. The central burials of these enclosures were very similar in the form of the cut and the nature of the fills and all were orientated east to west. No human remains had survived within any of the graves, presumably due to the acidic nature of the soil.

Funerary Enclosure 1, in the southern central area of the site, was the largest of the three with a continuous ditch measuring c.1m wide and 0.5m deep enclosing an area measuring approximately 32m^2 (5.5m x 5.5m). There was no evidence of an entrance for the enclosure to access its central grave. The southern edge of the enclosure had been recently truncated by the installation of a haul road. Large slabs of schist were uncovered in the ditch, occurring more frequent and ordered in the southeast corner and less frequent and more disturbed to the north and west. It is possible that slabs from the disturbed areas may have been removed and reused to build the cists within the graves of the cemetery to the northwest. The possible laid schist slabs may have been contemporary with the burial and ditch but could equally represent later alteration to the monument, removing the physical barrier of the ditch but retaining the perception of definition between interior and exterior. Two small postholes in the enclosure's south-east corner, may represent the remains of an additional wooden fence or grave markers.

The cut [07.0537] of the central grave had a clay bedding layer into which stones were placed to line the grave, mostly on the north and south sides, some of the stones were completely covered by the clay. The stones at the edge of the cut did not form a cist and were likely to be packing stones placed around the body or coffin. Unlike the cist graves in the cemetery the fill of the grave consisted of a stiff yellow clay which was similar in composition to the natural glacial deposits. A dark silt deposit (07.0496) containing occasional schist pieces overlay the grave. This may have been the remains of an earth mound over the grave. A small, shallow pit/posthole [07.0639] of unknown function was cut into the dark deposit at the north western corner of the grave. To the north of the grave was a small curving gully [07.0461] which respects the cut of the grave and the silty deposit over it. This could either have been contemporary with the monument's construction or a later addition to enhance or define the enclosure.

Funerary Enclosure 2, south-east of the cemetery, was smaller than Funerary Enclosure 1 but had three internal burials. The south-east corner had been truncated by an evaluation trench with only a small amount of the enclosure ditch cut [07.0486] remaining. The ditch of the enclosure varied in depth between 0.26-0.42m and was up to 1.2m wide, it enclosed an area of approximately 29m^2 (5m x 5.8m). An entranceway was located on its eastern side and a single recut of the ditch was identified on the northern side of the enclosure. The recut suggests that the monument was maintained as an important feature in the landscape for a significant period of time. The fill at the termini of the ditch was very compact silt clay, this differed from the majority of fill of the ditch was a friable mix of clay, silt and large stones. These stones were irregular in shape and size, unlike the

slabs in Funerary Enclosure 1, suggesting that they may be due to gradual deposition rather than a deliberate act.

The central grave (G07.032) was large enough to accommodate an adult, two smaller graves likely for juveniles were located to the north and south. G07.032 was 2.10m long and was lined on the N and S sides by large irregular shaped schist stones, likely to represent packing rather than a constructed cist (similar to G07.053). It was filled with a stiff yellow clay (07.0492), similar in composition to the natural glacial deposits in the area. To the south, G07.031 was 1.20m long, had no evidence of a cist and was again filled with stiff yellow clay (07.0490). The fill was very compacted due to the haul road which overlay it, but it had not been disturbed. A large worked flint pebble (SF 07.0009) was found in the base of the grave near the head. G07.033, to the north, was 0.92m long and was partially lined with schist slaps on its northern and southern sides. Unlike the other two graves the fill appeared to be a silted deposit rather than an intentional backfill, suggesting it may have originally been a capped cist grave.

Funerary Enclosure 3 was the southernmost of the enclosures, it was also one of the smallest funerary enclosures. It had one large central grave, likely to have accommodated an adult, and a smaller grave to the north which is likely to have been for a juvenile. The enclosure ditch was up to 0.82m wide and was between 0.20m and 0.44m deep, enclosing an area of approximately 10.8m^2 (3.8m x 3m). The entranceway was located on the eastern side of the enclosure. The fill of the ditch contained occasional medium to large schist slabs and stones which had no discernible function or pattern. The central grave, G07.054 was 2.24m long and 0.53m deep. The grave did not have a cist but a coffin stain was present (07.0671), this was identified as a very distinct grey-purple stain in the clay at the base of the cut, similar to that observed in G07.009. The grave had been intentionally backfilled with a stiff yellow clay, very similar in composition to the surrounding natural deposits, which contained occasional fragments of schist. The smaller grave, G07.052, was 0.77m long and had 2 schist cist stones on the northern edge (07.0633) which were probably the remains of a cist. The fill of the grave had accumulated due to silting suggesting that capstones may have originally covered the grave.

Funerary Enclosure 4 was located to the west of Funerary Enclosure 1. The ditch of the enclosure had been heavily truncated to the east and west resulting in up to 0.15m depth remaining. The ditch enclosed a single central grave within an area of approximately 12m^2 (4m x 3m). Grave G07.009 was 2.02m long and 0.55m deep, it did not contain a cist but a well defined coffin stain (07.0285) was seen near the base. This staining was a purple grey clay similar to those identified in graves G07.054 and G07.009 but the sides were also visible due to backfill that had fallen between the 'coffin' and the sides of the cut. The grave had been backfilled with a stiff yellow clay, similar in composition to the surrounding natural deposits, evidence of a subsequent deposit of darker soil which may have been mounded over the grave was identified on its southern side.

Of the 44 graves excavated outside of the funerary enclosures, 42 were located to the north of the funerary enclosures and two were identified to the west of Funerary Enclosure 3. The two outliers, G07.008 and G07.045, were each covered with a single large schist slab as a capstone. The 44 graves are likely to have accommodated individuals of differing ages. Based on dimensions 10 are likely to have accommodated adults, 10 juveniles and 24 neonates. 13 were simple earth cut graves with no cist, 13 contained vertical side stones, 11 had capstones and vertical side stones, two had vertical side stones and stone lined bases, one had vertical side stones and two layers of capstones, one grave had a full cist comprising capstones, vertical side stones and stone lined base. The depths of the graves ranged from 0.07m to 0.40m and the lengths from 0.54m to 2.10m. Postholes were identified and associated with G07.007, which may suggest the presence of grave

markers. Grave G07.051 was the only double grave found in this excavation, measuring 2.26m long, 1.60m wide and 0.46m deep, its southern extent had been disturbed by an evaluation trench which probably resulted in the removal of some capstones. Four neonate sized graves appeared to be orientated towards the northeast corner of Funerary Enclosure 1, resulting in them diverging from the typical east-west alignment. This suggests that the monument was still of significance at the time of these burials.

Very few finds were recovered from the fills of the graves. The fill of grave G07.010 contained a piece of worked flint (SF 07.0005) by the foot area which is likely to be residual rather than an intentional deposit.

5.4.4 Features of Undetermined Date

To the west of Funerary Enclosure 3 were a series of intercutting pits, one group of four pits, the largest of which measured 3.20m long x 3.16m wide and 0.51m deep, and one of two pits the largest of which measured 1.50m long x 1.26m wide x 0.30m deep. The similarity of the fills in both clusters suggest that they are likely to be broadly contemporary.

A large ditch traversed the southern edge of the site along a north-west to south-east. This may have delineated the southern edge of the cemetery or as a drainage ditch. There was evidence of re-cutting at the western end suggesting it was in use over a substantial period. The upper fill contained lots of small to large stones implying backfilling at the end of use. Two pieces of worked chert were recovered from the ditch fill.

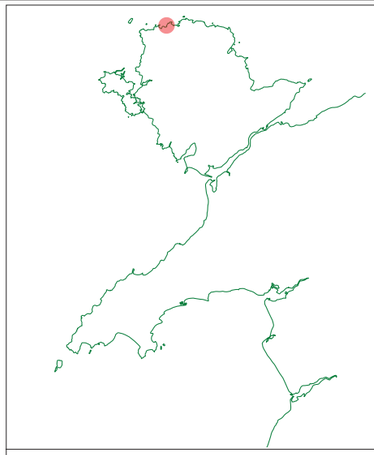


Figure 2
Site Plan, Area 7.

Neolithic Pits

Key

- Excavation Area
- Wessex Excavation
- Iron Age Activity
- Cemetery
- Funerary Enclosure 1
- Funerary Enclosure 2
- Funerary Enclosure 3
- Funerary Enclosure 4
- Evaluation Trenches

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Drawn By: IGP

Date: 19/10/18

Location: SH34719289

Project: AB1703 Area 7

Archaeoleg Brython Archaeology

Grid: 10m

6 Finds and Dating Evidence

A total of 0.95kg of bulk finds and 17kg of small finds were recovered during the course of the excavation of Area 7.

The most diagnostic artefact recovered was the fragment of Neolithic polished stone axe from a pit which was clearly not associated with the cemetery. Fragments of worked flint and chert which were found in features across the site are likely to be prehistoric in date but none are instantly diagnostic of any period. Chert and flint found within the graves are likely to be residual.

The character of the archaeology in the vicinity of the partial ring ditch and the lack of both Bronze Age and Roman pottery suggests that the features date to the Iron Age which is accepted to be aceramic in north-west Wales.

The style of the graves and funerary enclosures suggest an early medieval date but no artefacts which can be attributed to this period were identified during the excavation. Similar examples of funerary enclosures which have been dated to the early medieval period include Ysgol y Hendre, Caernarfon (Kenney & Parry, 2012) and Capel Eithin, Gaerwen (White & Smith, 1999).

Datable artefacts may have been retained within the bulk soil samples collected during excavation, necessitating a need to process these during the assessment stage. The samples are also likely to contain material suitable for radiocarbon dating which will be required to establish a robust site chronology.

No human remains were recovered during the excavation.

7 Palaeoenvironmental

A total of 360 environmental samples comprising 1134 10 litre buckets were collected from features at Area 7. Overall, the rate of recovery of datable artefacts during excavation is notably poor in north-west Wales. As such, far more importance is placed on the recovery of paleoenvironmental samples to provide data helping to establish a chronology and narrative to sites in this region.

With regards to the cemetery at Area 7, the graves were each split up into three sample locations, the head/shoulders, torso and legs/feet in order to aid the retention of small artefacts and skeletal remains and to more accurately determine their original location within the graves. A fourth smaller sample was collected from the sacrum/pelvic area to assess for the presence of intestinal parasites.

Processing of the grave fill samples from other cemeteries nearby suggests that there is little value in processing 100% of the fill, as such it was agreed with the curator that this would be reduced to 40litres per sample. Should the initial results from the Area 7 samples provide good environmental, skeletal or artefactual material, the remainder of the sample will be processed.

It is recommended that 5% of the parasite samples are initially tested during the assessment stage of the post-excavation process to check for the presence of parasite macrofossils. If parasites are present specialist advice would be sought to devise the subsequent processing and analysis programme.

No human remains or datable artefacts were recovered during the excavation of the cemetery at Area 7. As such, the dating of the cemetery will rely on the recovery of charred plant remains from the fill of graves and should be undertaken during the assessment stage of the post-excavation programme.

8 Quantification and Recommendations

8.1 Quantification of Excavation Data

Data Category	Number
Context	536
Small finds	18 (17307.3 / 17.3073kg)
Bulk finds	1 (957.5g / 0.9575kg)
Environmental samples	360 samples (11235 ltr / 1134 buckets)
Graves	51
Human remains (skeleton)	0
Capstones	54 (444.87kg)
Cist stones	209 (1,133.53kg)
Monochrome film	0
Digital photographs	717
Rectified photographs / Photogrammetry	12,827
GPS surveyed digital pre-excavation plans	1
GPS surveyed digital excavation plans	6
TST surveyed digital excavation plans	X
Hand drawn plans	177
Hand drawn sections	257

8.2 Recommendation for Further Work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	Contexts, plans and sections Photogrammetry Small finds Environmental samples C^{14} Dating Lithics Human Remains (in unlikely event that any are recovered from environmental samples)
Publication of key data categories	✓
Deposit archive	✓

9 Discussion

The excavation at Area 7 has revealed a site which is rich in archaeological potential and should be assessed to properly understand the archaeological features identified during investigation. As such, it is recommended that the samples and artefacts from the probable Neolithic pits should be processed, analysed and dated. Petrological analysis of the stone axe and possible Graig Lwyd flakes will provide a provenance for the raw material and place the features within a wider prehistoric landscape.

The probable Iron Age settlement identified in Area 7 is fairly typical of small defended hilltop settlements which become common during the later Bronze Age and Iron Age (Lynch et al, 2000), the lack of ceramics is also typical of Iron Age sites in north-west Wales (Kenney, 2008). The enclosure ditch which bounds the settlement to the north only partially encloses the features comprising the remains of the settlement.

The function of the ditch is therefore questionable and only likely answered by the assessment of material recovered from deposits associated with the later prehistoric settlement activity. This assessment will establish a firm site chronology allowing Area 7 to be included and considered as part of the wider archaeological landscape of Wylfa.

The early medieval cemetery is a significant discovery due to its character, and while it is unfortunate that human remains were not recovered during the excavation, the cemetery still has the potential to increase knowledge of burial practices in north-west Wales during this period. It is recommended that a maximum of 40 litres of any sampled deposit associated with the graves is processed to gauge the potential palaeoenvironmental data from the graves and funerary enclosures. Should any human remains be recovered then 100% of the samples should be processed. In the absence of human remains the chronological development of the cemetery and its relationship to others in the area should be the main avenue of research. It appears that the funerary enclosures were the focus of the cemetery, around which further inhumations were interred. It is notable that the majority of the unenclosed graves appear to be those which may have contained the remains of neonates. Further study of the cemetery may reveal information on infant burial practices during the early medieval period in north-west Wales.

Further to the recommendations above, samples from the large undated pit clusters to the west of Funerary Enclosure 3 and southern ditch which may bound the southern edge of the cemetery should be processed to help determine function and date and thereby achieve a firm understanding of their relationship to other features.

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Appendix I

Archaeoleg Brython Archaeology

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Brett Connolly

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Pedro da Silva

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

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1-2 Area 7 photos

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Appendix II

Archaeoleg Brython Archaeology

Area 7

Plates and Photogrammetry

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Plate 1: Small grave with side stones. View from the south east. 1x0.5m scale. *2*

Plate 2: Large stone lined grave. View from the south east. 1x1m scale. *2*

Plate 3: West facing section of ditch [07.0398]. 1x1m scale. *3*

Plate 4: East facing section through stone filled pit [07.0559]. 1x1m scale. *3*

Plate 6: Post excavation of cemetery showing funerary enclosures. General shot. View from the east. *4*

Plate 7: Post excavation of Funerary Enclosure 1. General shot. View from the north west. *4*

Plate 8: Post excavation of Funerary Enclosure 1. View from the north east. 2x2m scale. *5*

Photogrammetry (not georeferenced)



Plate 1: Small grave with side stones. View from the south east. 1x0.5m scale.



Plate 2: Large stone lined grave. View from the south east. 1x1m scale.



Plate 3: West facing section of ditch [07.0398]. 1x1m scale.



Plate 4: East facing section through stone filled pit [07.0559]. 1x1m scale.



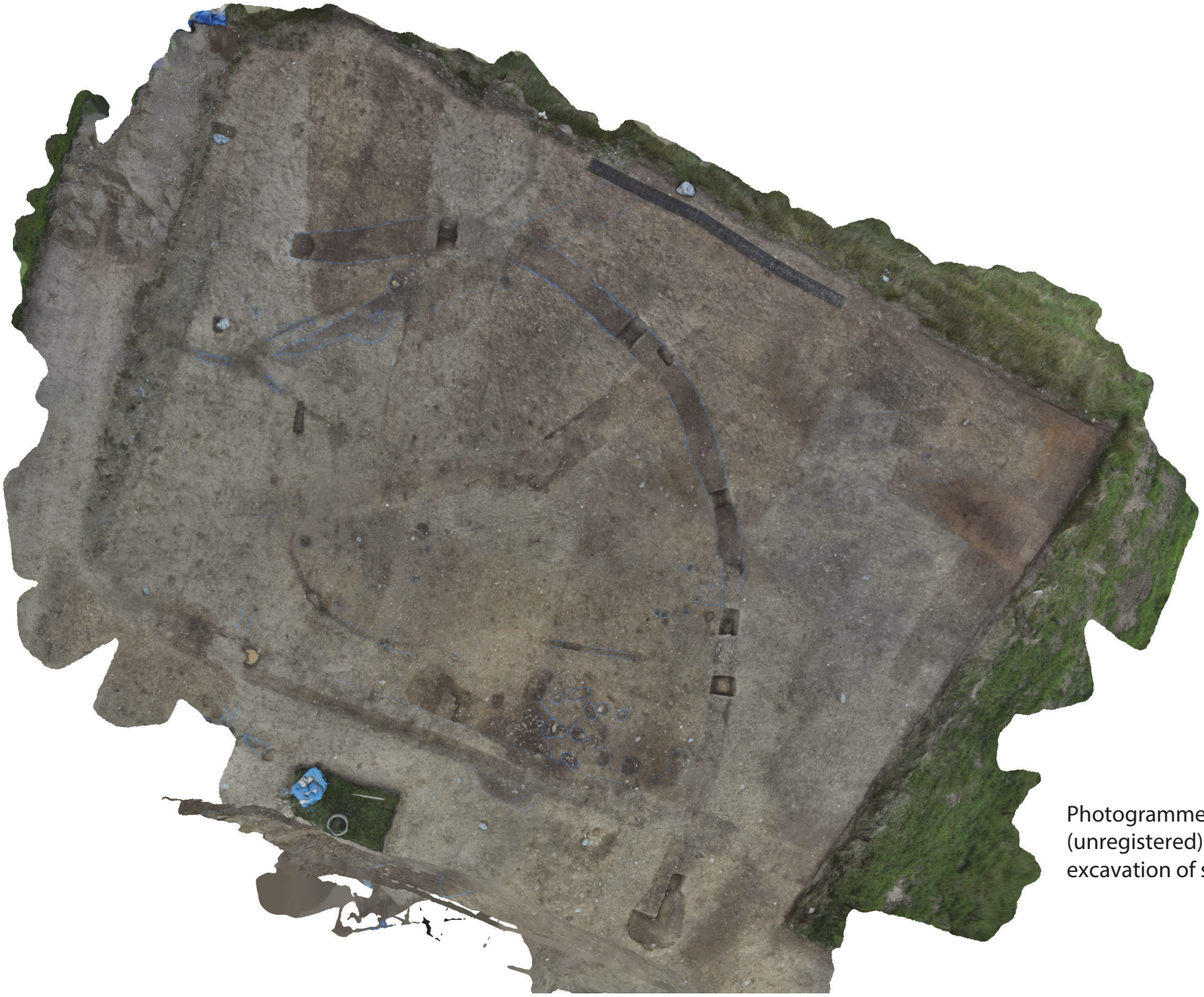
Plate 4: Post excavation of cemetery showing funerary enclosures. General shot. View from the east.



Plate 5: Post excavation of Funerary Enclosure 1. General shot. View from the north west.



Plate 6: Post excavation of Funerary Enclosure 1. View from the north east. 2x2m scale.



Photogrammetry (unregistered) of Area 7 mid excavation of settlement area.

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1-3 Area 8 Summary Report

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Archaeoleg Brython Archaeology

Site Summary Report
Area 8
Document Number:
WYN-BRY-CON-REP-00013 v1.2

Archaeoleg Brython Archaeology

Site Summary Report
Area 8

Wylfa archaeological works on behalf of Horizon Nuclear Power

Prepared for Horizon Nuclear Power

Text by Laura Wilson Parry, Cindy Nelson-Viljoen and Iwan G. Parry

Illustrations by Laura Wilson Parry

January 2019

WYN-BRY-CON-REP-00013 v1.2

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Appendix I: Archaeoleg Brython Archaeology Team AB1703

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Summary

Archaeoleg Brython Archaeology CYF. have completed the excavation of late Prehistoric and probable post-medieval features at Area 8, Wylfa, Anglesey (centred on NGR SH35189282) in advance of an application to construct the proposed Wylfa Newydd nuclear power station. The excavation area measured 8,817m^2 . All works were undertaken in accordance with the Written Scheme of Investigation and monitored by Gwynedd Archaeological Planning Service.

During a phase of archaeological evaluation trenching undertaken in 2015 a suspected burnt mound and clawdd boundary was identified. Area 8 was located to address the archaeological potential of these remains and was excavated in October 2018. The excavation revealed a burnt mound with two associated troughs, a cluster of six stakeholes, two parallel ditches, and a modern field drain. Recovered artefacts comprised of a stone loom weight recovered from the fill of one of the troughs.

Due to the lack of dateable artefacts and type of features identified during excavation, the environmental samples require processing to help determine function and date to gain a better understanding of their relationship with other features.

Based upon the results of the excavation, it is recommended the archaeological potential of the assemblage and archive produced from the excavation of Area 8 be further analysed and the results be disseminated in the form of an assessment report in line with the Written Scheme of Investigation.

1 Introduction

Archaeoleg Brython Archaeology CYF. (ABA) have been commissioned by Horizon Nuclear Power Ltd. (HNP) to undertake a phased programme of excavation in advance of the submission of a Development Consent Order (DCO) application (PINS Ref EN 010007) for the construction of the proposed Wylfa Newydd Power Station. The purpose of this document is to inform Horizon's DCO application, and to summarise the results of the excavation in advance of the production of an assessment report.

This report provides a summary of the results of archaeological excavations undertaken during 2018 and represents the first phase of the post excavation analysis phase of archaeological investigations at the Wylfa Newydd site. Following the production of a Written Scheme of Investigation (WSI) (Horizon, 2015), 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 scope of the works was agreed and monitored whilst in progress by Gwynedd Archaeological Planning Service (GAPS), cultural heritage advisors to the Local Authority. Wardell Armstrong LLP. (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.

2 Background

The Area 8 excavation was located in a field which was designated 'A9' during the archaeological trial trench evaluation works (Wessex Archaeology, 2016a,b,c). The initial excavation area was 8,817m^2, centred on NGR SH35189282 at a height of approximately 27m AOD. The excavation area was located c. 450m to the north west of the centre of Tregele and c. 780 to the south of the existing Wylfa power station (*See Figure 1*).

Prior to the excavation of the Area 8 it had been subject to an archaeological Desk Based Assessment (Cooke et al, 2012), magnetometer geophysical survey (Hopewell, 2011a,b, 2012) and a thorough programme of evaluation trenching (Wessex Archaeology, 2016a,b). Area 8 was selected for excavation based on the results of the evaluation trenching as the remains of a burnt mound and clawdd was encountered during these investigations (Wessex Archaeology 2016a; 2016b).

The British Geological Survey's Geology of Britain viewer states the superficial deposits in the area consist of Till, Devensian – Diamicton. These are sedimentary deposits which formed between 116 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, 2018).

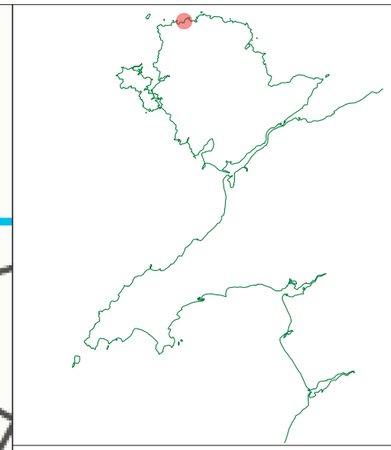


Figure 1
Location Plan, Area 8.

The Firs

Rhwng Dau Fynydd

W

Drain

Drain

0 100
metres

Key

Area 8

Area 8 Excavation

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Drawn By: LWP

Date: 31/01/19

Location: SH35189282

Project: AB1703 Area 8

Archaeoleg Brython Archaeology

3 Aims and Objectives

3.1 General Aims

The general aim of the investigation was to gather additional information of the extent, condition, depth, character, quality, stratigraphic sequence and date of the archaeological remains within the investigation area (Horizon, 2017b).

The results of the investigation will 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.

3.2 Specific Aims

The aims of the archaeological strip, map and sample identified in the WSI (Horizon, 2017a) were as follows:

1. To establish the true nature and function of the various archaeological remains present, specifically to identify the presence of any agricultural, domestic, industrial or ritual activity and the character of such.
2. To establish the condition, age and stratigraphic sequence, of any archaeological / historical remain identified.
3. To more definitively establish the date of the archaeological remains present – in particular the burnt mounds and features associated with them. This can be achieved via the recovery of datable artefacts or material (such as pottery, bone and charcoal) which can be dated either typographically and / or are suitable to be subjected to scientific dating techniques. This should include Bayesian Analysis of the data recovered from scientific dating of the samples as well as pair series correlation. This latter is best applied to multiple samples recovered from the same context, and where that context can be identified as stratigraphically sound (i.e. unlikely to contain intrusive material) and short lived.
4. Gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills.
5. To identify and establish links with the wider archaeological / historical setting of the site - to understand how the remains relate to other local / regional archaeological sites. The evaluation results present the area as a 'discrete' unlinked location. This would, of course, not have been the case it would have existed along with other, contemporary, sites within the local region and likely have had social and economic links with them. The investigations should aim to identify and establish these links via the study of such things as stratigraphic sequencing, the study of spatial alignment and visual aspect, the dating and sequencing of suitable artefacts (such as pottery) and through the scientific dating of suitable material.

3.3 Research Objectives

The relevant archaeological research framework documents are (Horizon 2017a);

- Review of the Research Framework for the Archaeology of Wales: North West Wales – Neolithic and Early Bronze Age (Steve Burrow, 2010).
- Review of the Research Framework for the Archaeology of Wales: North West Wales – Later Bronze Age and Iron Age (Fiona Gale, 2010).
- A Research Framework for the Archaeology of Wales – Romano British (AD 43-AD 410) (Davies, 2011).
- A Research Framework for the Archaeology of Wales: North West Wales - Early Medieval *c.* AD 400-1070 (Nancy Edwards, Tudur Davies and Kate A. Hemer, 2016).

- A Research Framework for the Archaeology of Wales: North West Wales – Medieval *c.*AD 1100 – 1539 (David Longley, 2010).

From these documents the following, relevant, research objectives (RO) can be identified (Horizon, 2017a);

1. Confirmation of the date, nature, character and extent of potential prehistoric sites in an order that can be placed into the wider context of Anglesey during this period. There is particular emphasis on obtaining accurate C14 dates in order that the chronology of sites and ceramic sequences can be ascertained.
2. There is an emphasis on understanding the wider settings of prehistoric sites – with specific reference to '*Understanding how sites work in the landscape, permanent/seasonal use and understanding the social role of hillforts'* (Gale, 2010). It is possible that the remains within the proposed investigation area form part of the wider setting of the prehistoric remains seen to the south and east.
3. To undertake detailed analysis of prehistoric artefacts and their contexts in order to understand the chronological and typographic development, and use, of the artefacts.
4. Placing the setting of the information gained from the 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 bogs.
6. Identifying and understanding early field systems, their development and degree of continuity.
7. Further understanding and identification of pasture land in locations other than upland locations – specifically such locations as coastal wetlands, elevated wetlands and moors.
8. Develop our understanding of known, but poorly understood, monument types - such as burnt mounds, including such aspects as;
    a. Date;
    b. Length of 'use life' and re-use;
    c. Structure;
    d. Location (within the landscape);
    e. Association with other features and site types;
    f. Associated finds types and;
    g. Function.

4 Methodology

4.1 Surveying and Setting Out

The strip, map and sample area was surveyed and set out by the Main Contractor, Jones Brothers Balfour Beatty Joint Venture (JBBBJV). The excavation area and all archaeological features were subsequently surveyed using a Leica Viva GPS system. All surveys were tied in to the Ordnance Survey National Grid.

4.2 Mechanical Excavation

Topsoil and any other overburden was removed using a tracked 360 degree excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under direct archaeological supervision.

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 of the underlying archaeological features were revealed, or when the absence of any archaeological 'horizon' was adequately demonstrated.

After the completion of mechanical excavation, both the spoil heaps and the stripped surface were scanned both with a metal detector and visually. Any artefacts of potential archaeological interest identified because of this work were recovered and their locations accurately recorded.

4.3 Hand Excavation

Immediately after the removal of deposits overlying the archaeological horizon, the area was manually cleaned, and all features investigated and recorded as per standard ABA procedures.

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 taking these signals into account.

All excavations were undertaken in accordance with best practice as set out in Standards and Guidance for Archaeological Excavation (CIfA, 2014a).

All archaeological remains identified were excavated in accordance with the following strategy as set out in the WSI (Horizon, 2017a):

- 100% of all positive features likely to obscure earlier archaeological features;
- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships;
- discrete negative features (more than 1m 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%;
- in addition to the above, all intersections between features and all terminals of linear features; and

- other features: 25%, unless otherwise agreed with the Consultant.
- The location of all small finds, with the exception of those discovered within discrete features, were recorded in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.4 Recording

All excavated contexts were fully recorded in line with the standards set out in the WSI (Horizon, 2017a) and 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. Hand drawn plans and photogrammetry models made of excavated features, were tied in to the overall plan through the use of control points.

A full photographic record was maintained during the excavation 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.

4.5 Palaeoenvironmental Sampling Strategy

Environmental sampling was undertaken in accordance with the sampling policies outlined in the CIfA's Standard and Guidance (CIfA, 2014a) and Environmental Archaeology; A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage, 2011).

4.6 Archiving

The creation, compilation, transfer and deposition of the archaeological archive follows in line with the regulations of the Chartered Institute for Archaeologists Standards and Guidance (CIfA, 2014b).

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.

All finds will be stored in accordance with CIfA's Standard and Guidance (CIfA, 2014c). It is recommended that all artefacts are deposited at Oriel Ynys Môn, Llangefni.

Digital copies of the report will be submitted to Horizon who will then distributed to stakeholders. Printed versions will only be produced if specifically requested.

ABA will hold a digital version of the archive indefinitely.

5 Archaeological Results

Site name: Wylfa Newydd

Site code: AB1703Area8

HER Event Code: 45396 *PRN:76054*

NGR: SH35189282

Excavated by: Archaeoleg Brython Archaeology CYF.

Site type: Late Prehistoric and probable post Medieval

Topsoil average depth: 0.30m

Subsoil average depth: 0.15m

5.1 Historic Map Evidence and Documentary Data

Area 8, originally identified as Trench 214 during evaluation is situated in Field A9 in which a ditch (21405), assumed to be field boundary/drainage clawdd feature, was identified on historical maps and geophysical data (Wessex Archaeology 2016a).

The boundary matched field boundaries depicted on the first edition OS map of 1889 but was absent from the Llanfechell tithe map of 1842, and therefore dates to the mid/late 19th century. It measured 3.5m wide, and was likely associated with the continuation of this boundary also seen in trenches 211, 955, 212, 956, 213, 231, 214, 206, 205, 957, 958, 129, 988 (field A13) (Wessex Archaeology 2016a).

5.2 Geophysical Survey Results

Geophysical surveys were carried out during the assessment of the site (Hopewell, 2011a,b, 2012). The survey did note the presence of a clawdd boundary (21106) which followed a straight line in Field A9 and the geophysical survey indicated that it continued into Field A13. The combined excavation and geophysical evidence indicated that around 270 m of the clawdd survived (Wessex 2016a).

5.3 Evaluation Results

Wessex Archaeology undertook a programme of evaluation trenching within field A9 in 2015-2016. A total of 52 trenches were opened in this field with 23 of those containing recorded archaeology, (Wessex Archaeology, 2016a,b,c). 35 Trenches contained undated ditches, and four undated pits (Wessex Archaeology, 2016a).

A burnt mound (21404; Trench 214) measuring 5m by 1.8m and 0.2m deep was identified during evaluation and the deposit described as containing low proportions of charred plant remains, dominated by wood charcoal, and low densities of charred cereal grain and chaff, that included emmer/spelt wheat grains, indeterminate wheat grains, barley grains and glume wheat chaff (Wessex Archaeology 2016a).

Clawdd (21106) observed within trench 214 and all so recorded in Trenches 205-206, 211-214 and 955-958, was described as visible as both a negative and positive feature that had been substantially disturbed and truncated by later activity as the stone cladding was absent in most

trenches. Historical maps suggest a 19th century date but no datable artefacts were recovered (Wessex Archaeology, 2016a).

5.4 Excavation Results

See Figure 2

The topsoil and subsoil were stripped by Wessex Archaeology, excavation of Area 8 was carried out by Archaeoleg Brython Archaeology CYF. during October 2018. Twelve features in Area 8 were investigated, they consisted of a burnt mound, two associated troughs, two parallel ditches, six stakeholes and a modern field drain.

Deposit (08.0003), identified as burnt mound deposits (originally identified as burnt mound 21404 during evaluation), measured 13.0m in length, 7.10m wide and 0.21m in depth and consisted of loose dark black-brown sandy clay with frequent inclusions of heat affected stones, sandstone, schist and basalt. Heavy agricultural activity in the area resulted in substantial plough damage. No finds or identified within the burnt mount.

A trough [08.0019] associated with the burnt mound and was overlaid by it was situated to the north east of the burnt mound area. It was sub rectangular in shape with vertical sides and a flat base, it measured 2.18m in length, 1.72m wide and 0.90m deep and appeared to be lined with an orange clay. It was filled with material similar the that of the burnt mound (08.0018) which consisted of loose black clay sand with angular stone, some burnt, and charcoal inclusions. One small find, a large loom weight (SF001) made from schist/slate, was found within the centre of the trough in fill (08.0018).

Situated to the immediate east of trough [08.0019] were a group of 6 stakeholes. The stakeholes contained very similar fills of friable black silt clay with flecks of charcoal. They measured between 0.03m to 0.08m in diameter, and up to 0.09m in depth and all circular shape in plan, with vertical sides and concave base. The stakeholes may have formed a windbreak or light structure associated with trough [08.0019].

A heart shaped second trough [08.0021] measured 3.3m in length and 0.55m in depth and was located close to and to the south east of trough [08.0019]. It had steep sides towards the west, with gradually sloping sides towards the east. The trough contained five fills (08.0022), (08.0028), (08.0029), (08.0030), and (08.0031). The upper two fills (08.0031) and (08.0022) consisted of subsoil, and a charcoal filled loose dark reddish grey clay silt layer respectively. Fill (08.0028), situated below fill (08.0022) consisted of loose dark brown clay silt. The bottom two fills (08.0029) and (08.0030) both consisted of a firm grey clay lining with a clear interface within the cut [08.0021].

The double ditch field boundary, [08.0004] and [08.0006], ran parallel to each other and were orientated northwest to southeast. Both ditches were linear with moderately sloping, slightly concave sides and had an irregular base. The fills, (08.0005) and (08.0007), consisted of a light brown clayey silt. The ditches measured 1.0m to 0.85m wide and 0.25m in depth and continued beyond the limit of excavation to the northwest and southeast. Both diches contained modern backfill and debris including plastic and wood. These ditches were identified as a clawdd boundary (2116) during the evaluation phase and was seen on early OS maps. The clawdd is an earthen bank, often stone faced, with a bank of material which runs between two parallel ditches.

The linear modern field drain [08.0008], measuring 12m in length, 0.15 in breath and up to 0.15m in depth was oriented north west to south east and cuts through the burnt mounds north east side. It continued south east, beyond the limit of the excavation. The fill (08.0009) consist of modern backfill including gravel and plastic.



Grid - 5m

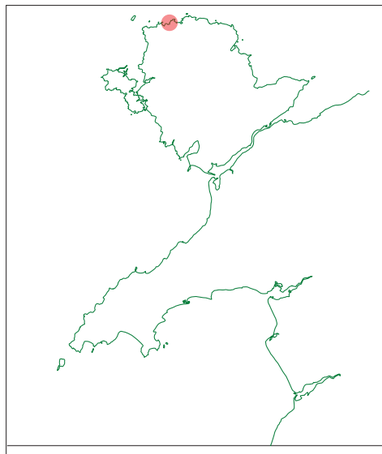


Figure 2
Site Plan, Area 8.

Key

Excavation Area

Parallel Ditches

Burnt mound Spread

Modern Field drain

© Archaeoleg Brython Archaeology CYF.

Drawn By: LWP

Date: 31/01/19

Location: SH35189282

Project: AB1703 Area 8

Archaeoleg Brython Archaeology

6 Finds and Dating Evidence

No bulk finds and one small find of 0.1038kg were recovered during the course of the excavation of Area 8.

The small find (SF001) consisted of a large loom weight made from schist/slate and found within the centre of trough [08.0019] in fill (08.0018). Though difficult to date it may suggest domestic activity in the vicinity.

No scientific dating has been undertaken and the lack of datable artefacts may indicate a necessity for radiocarbon dating to establish a robust chronology. Suitable material for radiocarbon dating is likely to be present in the bulk environmental samples, especially samples from the burnt mount (08.0003) and the dark brownish grey charcoal layer (08.0028), and this material needs to be recovered during the assessment stage of the post-excavation programme.

7 Palaeoenvironmental

A total of 5 bulk environmental samples comprising of 15 10 litre buckets were collected from archaeological deposits at Area 8 for processing using a flotation method in order to identify botanical and faunal remains.

Generally, the rate of recovery of datable artefacts during excavation is notably poor in the region of North West Wales. As such, more importance has been placed on the recovery of paleoenvironmental samples to provide data to help establish a chronology and narrative to sites in this region. Due to this, it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

8 Quantification and Recommendations

8.1 Quantification of Excavation Data

Data Category	**Number**
Context	37
Small finds	1 (103.8g / 0.1038kg)
Bulk finds	0
Environmental samples	5 (150 ltr / 15 buckets)
Monochrome film	0
Digital photographs	35
Rectified photographs / Photogrammetry	1012
GPS surveyed digital pre-excavation plans	1
GPS surveyed digital excavation plans	1
TST surveyed digital excavation plans	0
Hand drawn plans	1
Hand drawn sections	9

8.2 Recommendation for Further Work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	Contexts, plans and sections Small Finds Environmental samples Lithics/Worked stone C^{14} Dating
Publication of key data categories	✓
Deposit archive	✓

9 Discussion

Area 8 was targeted for excavation because of the potential for archaeology indicated by the results of evaluation trenching in 2015 which revealed a burnt mound and Clawdd. Based on the archaeological components of Field A9, in which Area 8 is situated, the area was generally described as Neolithic to Bronze age (Wessex Archaeology, 2016a).

Excavation of Area 8 revealed 12 features and including a burnt mound (08.0003), two troughs [08.0019] and [08.0021], six stakeholes ([08.0020], [08.0023], [08.0024], [08.0025], [08.0026], [08.0027]), two parallel ditches, and a modern field drain [08.0008].

A sub rectangular trough [08.0019] and a heart shaped trough [08.0021] were both lined with clay which effectively enabled the features to hold water. Heated stones would be placed into the trough to heat the water, the hot water may have been used for a variety of tasks including cooking, tanning, bathing or brewing. The 6 stakeholes situated in a cluster near the east side of trough [08.0019] suggest the presence of a light structure associated with the function of the burnt mound and trough.

Only one artefact was recovered, a loom weight (SF001), within trough [08.0019] which was difficult to spot date as the fill was accumulative rather than purposefully backfilled, however it does suggest domestic activities nearby. The stone loom weight (SF001) should be assessed by a specialist and possibly petrological analysis, which would be beneficial in determining the origin of the raw material which would help with understanding the site. Determining the chronology and date of Area 8 was difficult from the excavated finds and features, although burnt mounds within the area are generally associated with the Bronze Age, there were very few small finds, an none to accurately spot date.

Post-excavation analysis should include analysis of the bulk environmental samples through floatation, that could produce material suitable for scientific dating. An analysis of the flots would further identify and quantify charred plant remains and/or microfauna that could aid in identifying environmental and agricultural history of the site and the function of the burnt mound.

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Appendix I

Archaeoleg Brython Archaeology

Team AB1703

Archaeoleg Brython Archaeology Team AB1703

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Lucia Fernandez Rabanal

Sean Finlay-Scott

James Fish

Amy Gamman

Catherine Godsiffe

Sergio Gomez-Carrion

Paul Hickman

Karen Hole

Vickki Hudson

Rocio Jimenez Diaz

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William Jones

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Clair Richardson

Louis Roper

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Karolina Saxerbo Sjoberg

Victoria Scott

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1-4 Area 8 photos

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Appendix II

Archaeoleg Brython Archaeology

Area 8

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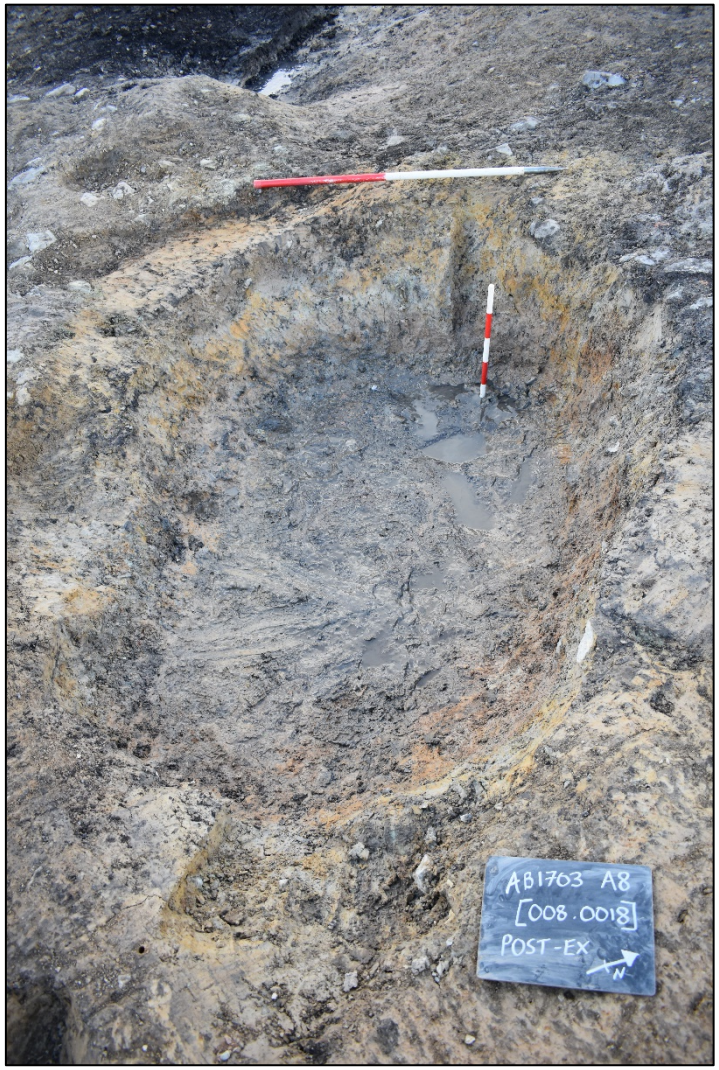


Plate 1: Post excavation of trough [008.0019]. View from the south east. 1x1m and 1x0.5m scales.

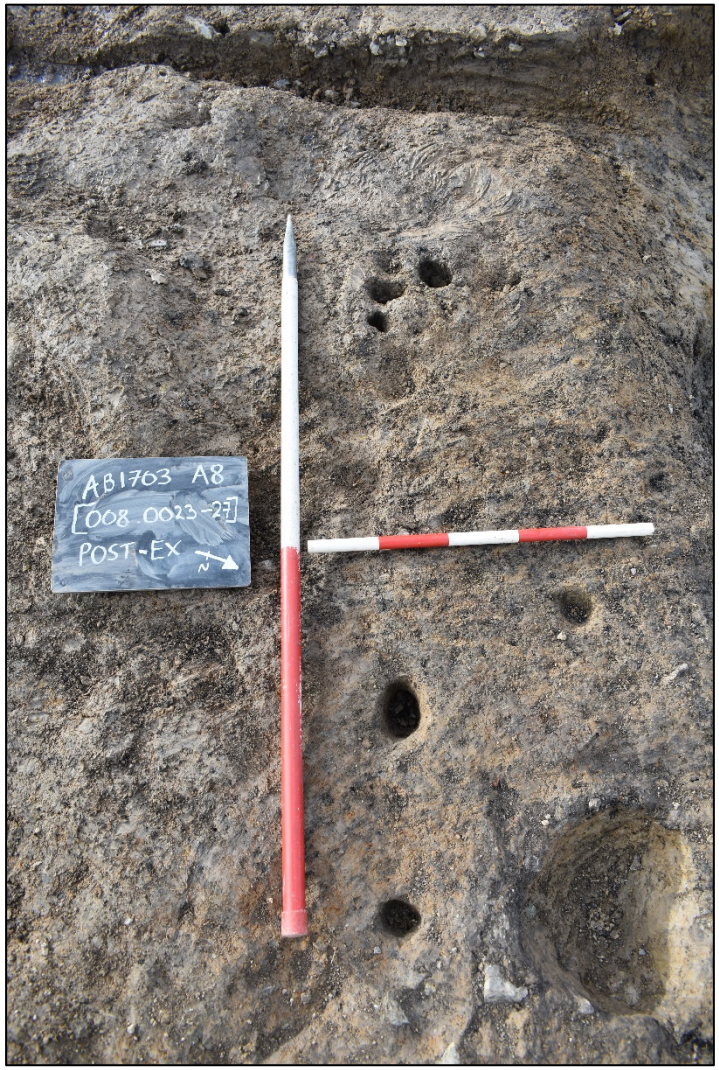


Plate 2: Cluster of stakeholes to the west of trough [008.0019]. View from the north east. 1x1m and 1x0.5m scales.

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Appendix 1-5 Wylfa Head Summary Report

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Archaeoleg Brython Archaeology

Site Summary Report
Wylfa Head

Document Number: WYN-BRY-CON-REP-00001

v1.2

Archaeoleg Brython Archaeology

Site Summary Report
Wylfa Head;

Wylfa archaeological works on behalf of Horizon Nuclear Power

Prepared for Horizon Nuclear Power

Text by Vickki Hudson, Catherine Godsiffe, Cindy Nelson-Viljoen, Iwan G. Parry and Laura Wilson Parry

Illustrations by Iwan G. Parry

October 2018

WYN-BRY-CON-REP-00001
v1.2

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Appendix I: Archaeoleg Brython Archaeology Team AB1703

Appendix II: Plates and Photogrammetry

Summary

Archaeoleg Brython Archaeology CYF. have completed the excavation of a large Early Medieval cemetery and enclosed Romano-British settlement at Wylfa Head, Anglesey (NGR SH35769384) in advance of an application to construct the proposed Wylfa Newydd nuclear power station. The excavation area measured 5525m^2. All works were undertaken in accordance with the Written Scheme of Investigation (WSI) and monitored by Gwynedd Archaeological Planning Service.

During a phase of evaluation trenching in 2016 an Early Medieval cemetery was identified at Wylfa Head. The Wylfa Head excavation area was located to address the archaeological potential of these remains and excavated in 2017-18. During the excavation of the cemetery, a Romano-British settlement was identified. As a result, the excavation area was extended to adequately assess the identified features.

The earliest activity at the site is likely to be represented by a flint scatter dating to the Mesolithic period, and a Neolithic pit at the southern edge of the site which contained three stone axes and a cache of small polishing stones.

The Romano-British settlement appeared to have evolved through a series of phases, possibly starting as an open settlement during the Iron Age and becoming enclosed by substantial wall during the Romano-British period. As well as domestic, industrial activity was identified in the form of furnaces, suggesting that metalworking was undertaken at the site.

The cemetery comprised 314 graves, most of which were stone lined and capped long-cist types, a dense concentration of graves in a prominent position on the site appears to have been the focus of funerary activity.

Based upon the results of the excavation, it is recommended the archaeological potential of the assemblage and archive produced from the excavation of Wylfa Head be further analysed and the results be disseminated in the form of an assessment report in line with the Written Scheme of Investigation.

1 Introduction

Archaeoleg Brython Archaeology CYF. (ABA) have been commissioned by Horizon Nuclear Power Ltd. (HNP) to undertake a phased programme of excavation in advance of the submission of a Development Consent Order application (PINS reference number EN010007) for the proposed construction of a nuclear power station at Wylfa Newydd. The purpose of this document is to provide supporting evidence for Horizons DCO application, and to summarise the results of the excavation in advance of the production of an assessment report.

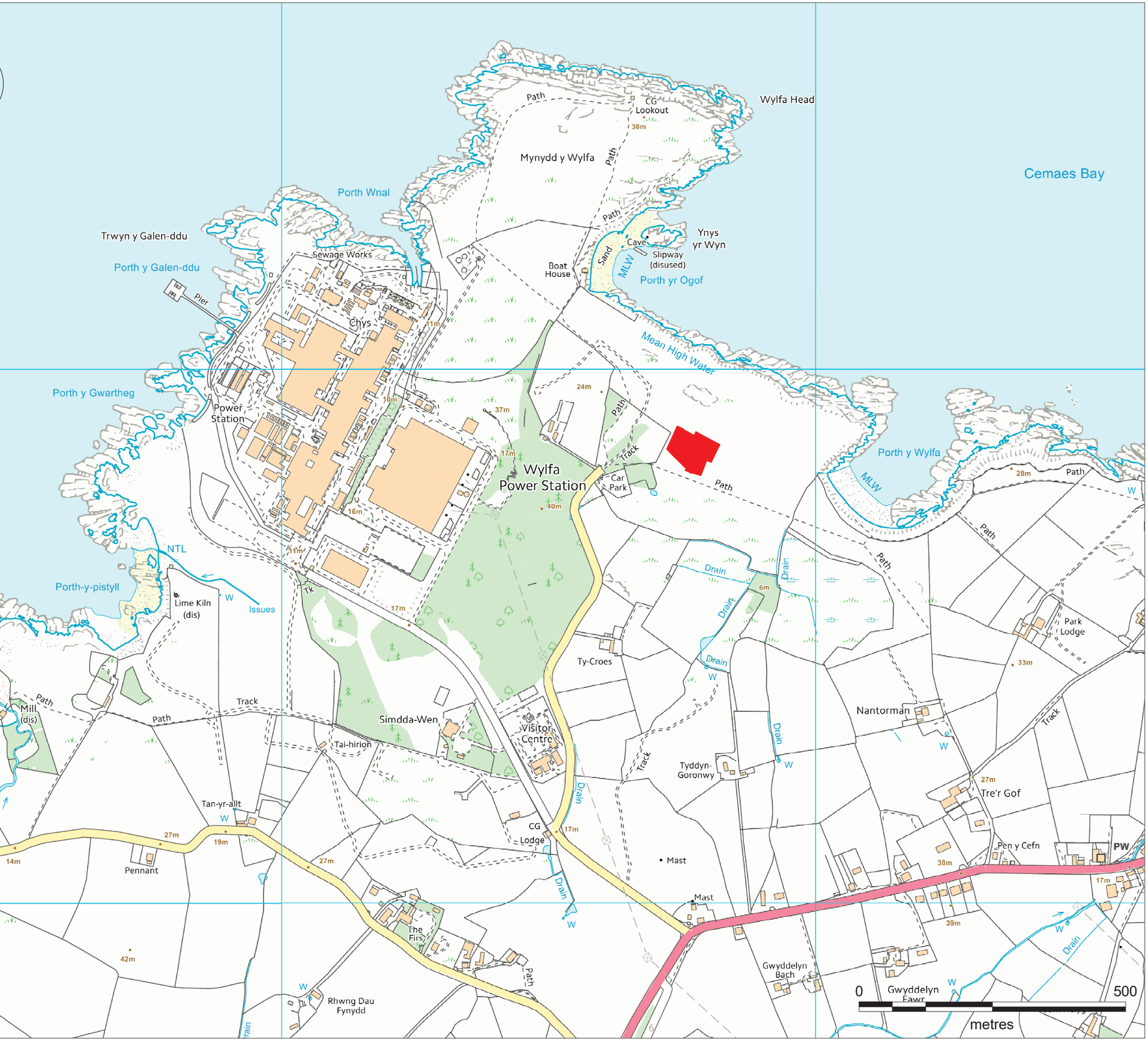
This report provides a summary of the results of archaeological excavations undertaken during 2017 and 2018 and represents the first phase of post excavation analysis regarding the archaeological investigation at the Wylfa Newydd site. Following the production of a Written Scheme of Investigation (WSI) (Horizon, 2017), 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 scope of the works was agreed and monitored whilst in progress by Gwynedd Archaeological Planning Service (GAPS), cultural heritage advisors to the Local Authority. Wardell Armstrong Ltd. (WA) have been employed by HNP as cultural heritage consultants for the project and within this capacity have provided guidance and advice during the works.

2 Background

The Wylfa Head site was located in a field which was designated 'L1' during the archaeological trail trench evaluation works (Headland Archaeology, 2017). The initial excavation area was c. 4585m^2 in size, and centred on NGR SH35769384 at a height of approximately 9m above sea level. The excavation area generally consisted of a hill, the crest of which was on the western edge, sloping to the north, south and east to a small, flat plateau (*See Figure 1*).

Prior to the excavation of Wylfa Head 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 (Headland Archaeology, 2017). Wylfa Head was selected for excavation based on the results of the evaluation trenching during which Early Medieval cist graves and Romano British pits were identified.

Superficial deposits in the area consist of Till, Devensian – Diamicton. These are sedimentary deposits which formed between 116 and 11.8 thousand years ago during the Quaternary period, indicating a landscape dominated by Ice Age conditions. The underlying bedrock geology consist of schist of the Gwna Group. This is a metamorphic bedrock which formed approximately 508 to 635 million years ago during the Cambrian and Ediacaran periods. These were originally sedimentary rocks formed in deep seas by chaotic deposition from underwater gravity slide, later altered by low-grade metamorphism (BGS, 2018).



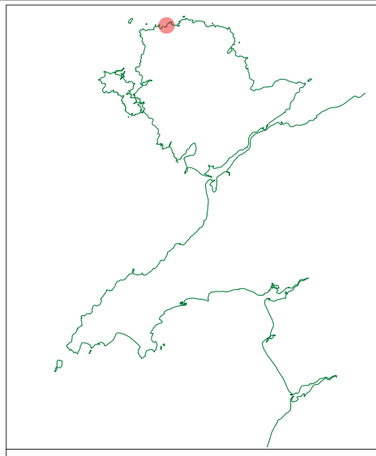


Figure 1
Location plan of Wylfa Head Excavation Area.

Key

Excavation Area

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Drawn By:	IGP
Date:	18/10/18
Location:	SH35769384
Project:	AB1703 Wylfa Head

Archaeoleg Brython Archaeology

3 Aims and Objectives

3.1 Site Specific Aims and Objectives

The WSI (Horizon, 2016) stated that the specific aims of the excavation and subsequent post-excavation programme were to;

1. Establish the true nature of funerary practices within the cemetery. Open graves and cist burials were identified during the trial trench evaluation, but it is unclear if these represent the whole picture, for example is there any evidence for the use of coffins? Were cremated remains placed at the site also? Is there any evidence for grave goods being placed with the deceased? Etc.

2. Establish the date of the use life of the cemetery via the recovery of datable artefacts or material (such as bone and charcoal) which is suitable to be subjected to scientific dating techniques. This should include Bayesian Analysis of the data recovered from scientific dating of the samples as well as pair series correlation. This latter is best applied to multiple samples recovered from the same context, and where that context can be identified as stratigraphically sound (i.e. unlikely to contain intrusive material) and short lived.

3. Establish the stratigraphic sequence of the burials within the cemetery area, and of those remains around / associated with the cemetery, to allow contemporary relationships with the wider site to be established.

4. Gain information of the demographic make-up of the cemetery (age, gender etc) so far as is possible give that the highly acidic soils found on Anglesey mean that the preservation of bone is generally poor.

5. Gain information on such things as disease and diet via recovery and examination of HSR (study of the bone pathology) and the recovery of material that may represent the gut content of the buried individuals (via targeted bulk sampling of the grave fill material).

6. Determine the spatial lay out of the burials, and in particular if there are any distinct nodes of clustering to the burials, which may be indicative of separate distinct / intense periods of use or kinship.

7. Determine the presence, nature, character and date of any features associated with the burials, but which are not themselves burials – including (but not limited to) structural remains (such as post holes) and boundary features (such as ditches). Also to determine the spatial and stratigraphic relationships of these features between themselves and the burials.

8. Gain information on the past environment of the cemetery site via the recovery, and study, of micro and macro fossils from the burial fills.

9. Determine what, if any, link existed between the cemetery site and other known archaeological sites in the region, with particular emphasis on those other archaeological sites identified in fields L1/F1/L20 by the trial trench evaluation.

3.2 Research Objectives

The relevant archaeological research framework documents identified in the WSI (Horizon, 2016) were;

- *A Research Framework for the Archaeology of Wales: North West Wales - Early Medieval c. AD 400-1070 (Nancy Edwards, Tudur Davies and Kate A. Hemer, 2016).*

- *A Research Framework for the Archaeology of Wales: North West Wales – Medieval c.AD 1100 – 1539 (David Longley, 2010).*

Within the WSI (Horizon, 2016), the following research objectives were identified from the relevant archaeological research framework documents outlined above;*;*

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

2. To undertake detailed analysis of (early) medieval artefacts and their contexts in order to understand the chronological and typographic development, and use, of the artefacts.

3. The analysis of human remains for information on date, origins, demography, health, nutrition and transfer of pathogens

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

5. Gaining of insights into the chronology and process of Christian conversion, the evolution and changing functions of religious sites and the broader impact of these on the landscape and (early) medieval society in Wales.

6. Identifying, in so far as is possible, the settlement and ecclesiastical sites associated with cemetery sites in order to understand the interrelationships between settlement sites, parish catchment areas and cemetery catchment areas.

7. Identifying, so far as is possible, the status of the individuals placed within the cemetery and understanding how this relates to the status of the settlement from which they came.

8. 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.

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

10. Establishing the extent of continuity or discontinuity between the late Roman and Early Medieval periods via analysis of environmental evidence (RO8), the agricultural economy (RO8), artefacts recovered (RO2) and changes in settlement patterns (RO6), trade (RO9) and burial / funeral practices (RO5).

11. Understanding how the transition between the Late Roman and Early Medieval period on Anglesey (RO10) compares with the same period elsewhere in Wales and Britain.

12. Understanding what, if any, impact Irish and Scandinavian populations had on (early) medieval Wales (artefacts, agricultural economy, funerary practices etc).

As the excavations revealed archaeology from the Mesolithic, Neolithic, Romano-British, and possibly Iron Age periods the following archaeological research questions identified in the WSI for Strip, Map and Sample areas (Horizon, 2017) but are also relevant to the excavation area.

Prehistoric

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

- *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.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?*

Romano British

- *Q14: How did the culture on the island change, and in what ways, between the Roman and early medieval periods*
- *Q15: What types of Roman Sites are present with the Wylfa Newydd Development Area and how do they relate to their surrounding landscape both in terms of location and utilisation of the landscape*

4 Methodology

4.1 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 in to the Ordnance Survey National Grid.

During the excavation a 10m grid, also tied in to the Ordnance Survey National Grid, was set out and marked with grid pegs on the site.

4.2 Mechanical Excavation

Topsoil and other overburden was removed using a tracked 360 degree excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under direct archaeological supervision.

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 of the underlying archaeological features were revealed, 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 both with a metal detector and visually. Any artefacts of potential archaeological interest identified as a result of this work were recovered and their locations accurately recorded in line with the WSI (Horizon, 2017).

4.3 Hand Excavation

Immediately after the removal of deposits overlying the archaeological horizon, the area was manually cleaned, all features investigated and recorded. As pre-excavation plan of all visible features was 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 be collected. All hand-cleaned surfaces, features and archaeological layers were scanned for metal object signals using a metal detector, excavation priorities were assessed taking these signals into account.

All excavations were undertaken in accordance with best practice as set out in Standards and Guidance for Archaeological Excavation (CIFA, 2014a).

With the possibility of human remains being present the excavations were undertaken in accordance with the best practice guidelines set out in Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England, English Heritage, 2005.

4.3.1 Funerary Remains

All funerary type archaeological remains identified were excavated in accordance with the following strategy:

- 100% of all graves and cists were excavated.

- Prior to excavation detailed photography, including photogrammetry was undertaken and a pre-excavation plan of all such features produced, at a scale of 1:20. These show the details of any burial cuts and any visible artefacts such as the capping / visible side stones of cists and Human Skeletal Remains (HSR). The pre-excavation plan of the burial features will be recorded in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

- All of the capping stones of all cists were carefully removed, weighed and retained on site, 10% of the total number of cist stones were retained for further specialist analysis off-site.

- Hand excavation was undertaken in order to reveal any in situ HSR.

- All grave fill was retained as bulk sample material.

- All in situ HSR were subject to detailed photography and georeferenced photogrammetry, 3D located using a GPS system tied into the OS NGR system and accurate to +/- 5mm, prior to removal.

- Once recorded all HSR were carefully removed and retained.

- Remaining burial fill was then be excavated. All excavated material was retained as bulk sample material.

- During the removal of burial fill, material from what would have been the head and gut areas of the burial were taken as separate samples, and recorded as such, in order that they can be separated out from the general baulk samples during the post excavation analysis phase of works.

- Detailed post excavation photographs, photogrammetry, plans and sections (at a maximum scale of 1:20) of the emptied cists were undertaken. Illustrating, in particular, the arrangement and detail of the remaining lining slabs of the cist.

- Post excavation sections of the cuts of graves, at a maximum scale of 1:20, were produced - along with a detailed photographic record of the post excavation appearance of the features.

- All lining (side and where present base) stone slabs of the cists, were removed, weighed and retained on site, approximately 10% of the stones were retained for further specialist analysis off-site.

- During the works care was taken to establish stratigraphic relationships with any other intercutting features.

- The post-excavation plan of the burial features was recorded in 3D by GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

- The location of all section and plan drawings was recorded in 3D by GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.3.2 Non-Funerary Remains

All non-funerary type archaeological remains identified were excavated in accordance with the following strategy which was outlined in the WSI (Horizon, 2016):

- 100% of all positive features likely to obscure earlier archaeological features;

- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships;

- discrete negative features (more than 1m 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%;
- in addition to the above, all intersections between features and all terminals of linear features; and
- other features: 25%, unless otherwise agreed with the Consultant.
- The location of all small finds, with the exception of those discovered within discrete features, were recorded in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.4 Recording

All excavated contexts were fully recorded in line with the standards set out in the WSI (Horizon, 2016), described in sections 4.3.1 and 4.3.2, using appropriate ABA pro-forma recording sheets.

- All photogrammetry and drawing control points were located in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.
- 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.

4.5 Palaeoenvironmental Sampling

General environmental sampling was undertaken in accordance with the WSI (Horizon, 2016) and Environmental Archaeology; A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage, 2011).

100% of all grave fills was collected as bulk soil samples. The fill of all graves was collected from four specific areas (head, torso, feet and a smaller sample from the pelvic area), each given a separate sample number to aid identification.

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, in accordance with requirements.

4.6 Archiving

The creation, compilation, transfer and deposition of the archaeological archive follows in line with the regulations of the Chartered Institute for Archaeologists Standards and Guidance (CIfA, 2014b).

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.

All finds will be stored in accordance with CIfA's Standard and Guidance (CIfA, 2014c). It is recommended that all artefacts are deposited at Oriel Ynys Môn, Llangefni.

Digital copies of the report will be submitted to Horizon who will then distributed to stakeholders. Printed versions will only be produced if specifically requested.

ABA will hold a digital version of the archive indefinitely.

5 Archaeological Results

Site name: Wylfa Newydd

Site code: AB1703

HER Event Code: 45396 *PRN: 76052*

NGR: SH35769384

Excavated by: Archaeoleg Brython Archaeology CYF.

Site type: Romano British Settlement, Early Medieval Cemetery

Topsoil average depth: 0.2m

Subsoil average depth: 0.3m

5.1 Historic Map Evidence and Documentary Data

Historic mapping and documentary sources consulted did not provide any evidence of the Prehistoric, Romano British and Early Medieval features identified at the site (Cooke et al., 2012).

Historic Ordnance Survey Mapping does show buildings associated with Wylfa House at the western edge of the excavation area during the mid-20th century, it is also known that the kitchen garden of the house was located in the vicinity of the excavation area.

5.2 Geophysical Survey Results

Geophysical surveys were carried out during the assessment of the site (Hopewell 2011a,b, Hopewell 2012). These pieces of work did not demonstrate the presence of significant archaeological remains within the excavation area. Both suggested the presence of 'background' agricultural type remains such as field boundaries and drainage ditches.

5.3 Evaluation Results

The evaluation trenching, undertaken in September 2016 within field L1 revealed the remains of what appeared to be a substantial human cemetery with approximately 49 burials identified across 5 trenches (Headland Archaeology, 2017).

- Trench 2155 contained what appeared to be 5 cist burials - small burial 'chambers' lined and capped with thin slabs of locally derived stone;
- Trench 2156 contained a further 5 burials – a mix of grave and cists. Parts of a human humerus and femur were recovered from one grave (2156-004) in this trench;
- Trench 2157 contained four burials, again a mix of graves and cists;
- Trench 2164 contained around 20 burials, approximately 3 of these were graves, with the remainder being cists. The majority of these burials were only identified in section (the graves not, initially, being recognised during mechanical excavation);
- Trench 2165 contained around 15 burials (two graves, the rest cists). One of these (2165-005) contained part of a human femur). Again, the majority of these burials were only identified in section.

The evaluation also identified a series of Romano-British pits and post-holes in Trench 2154 (Headland Archaeology, 2017).

5.4 Excavation Results

As well as the targeted Early Medieval cemetery a number of prehistoric features and a significant Romano British enclosed settlement were identified within the excavation area.

5.4.1 Mesolithic & Neolithic

See Figure 2

The earliest evidence of activity at the site was in the form of flint scatters and a few discrete pits which showed evidence of burning. These were found below a deposit of colluvium on the northern edge of the site which had initially been misinterpreted as natural glacial subsoil, this was below the level reached by the evaluation trenches.

One of the first features excavated at the site was a large pit [10.0008] identified at the southern limit of the site. Upon excavation this was found to contain three Neolithic axes and a cache of small polishing stones.

Two of the axes are believed to be made of Graig Lwyd stone from Penmaenmawr although they appear to be have been partially discoloured by heating. One of the axes is a fine roughout (SF 1210), shaped and ready to polish but showing no evidence that polishing had been started. The second has been partially polished (SF 1211). The similarities in the size, shape and working of these two axes makes it very likely that they were crafted by the same hand.

The third axe (SF 1212) is made of a blue-green stone which may have originated in the Lake District. Unlike the two other axes it has been made by pecking the rock rather than by knapping or flaking. The style of the axe may suggest that it could have had a function between that of an axe and a hammer and bears some similarities to the axe-hammers which are common during the Early Bronze Age.

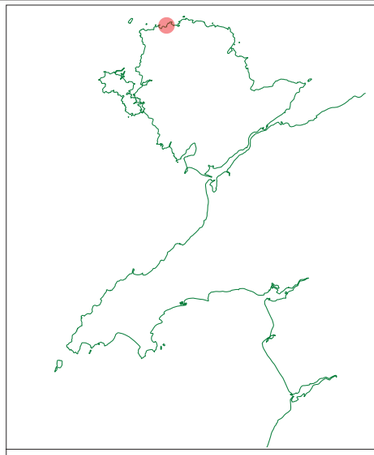


Figure 2
Wylfa Head Excavation Area:
Mesolithic and Neolithic activity.

Key

Excavation Area

Areas of Mesolithic and Neolithic ativity

Evaluation Trenches

Grid: 10m

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Drawn By: IGP

Date: 18/10/18

Location: SH35769384

Project: AB1703 Wylfa Head

Archaeoleg Brython Archaeology

5.4.2 Iron Age & Romano British

See Figure 3

Domestic and industrial activity was mostly concentrated at the northern half of the excavation area, although a number of associated features were identified on the southern slope of the hill.

The earliest structure within the main settlement area was an Iron Age/Romano-British roundhouse, located to the south of a later enclosure wall, which had been cut slightly into the bedrock on the south western side. Many of the features within this structure contained small finds usually associated with industrial activity and metal working, though without datable artefacts it wasn't possible to say for certain which of these features were contemporary with the structure. A large horizontal stone to the South formed a threshold (10.2066) into the structure, and a gully ran in an arc around the south western edge. There was a centrally located stone built feature, within cut [10.2812], of uncertain function and a red and orange baked clay square base may have been the remains of an oven or small kiln. A curving shallow gully [10.1912] to the west of this structure also contained evidence of industrial activity in the form of slag and two iron blades. This appeared to have been cut by the gully for the roundhouse but accurate dating would be required to confidently confirm chronology. It is also possible that the timber post structure, presumed to be another roundhouse, located on the top of the plateau occupied by the later cemetery could date from this early settlement period but without accurate dating evidence this cannot be confirmed.

Another possible timber structure predating later stone buildings was suggested by an oval pit [10.2875] which showed multiple phases of reuse, with the latest phase being a stone lined pit with a clay lining which would have made it watertight. Each of the earlier uses of the pit involved clay linings which had been baked hard, re-cut and then re-lined. A trio of post holes, located on the inside of the threshold of a later stone building, were also attributed to this earlier structure as they would have blocked the entrance had they still been in use during the later phase.

Further features which appear to pre-date the enclosure wall of the settlement were identified in the north-west of the excavation area. No evidence of the enclosure wall were identified in this area, therefore it is possible that the features are contemporary with the enclosed phase of the settlement. Features in this area included a six-post structure, stone lined drains, post-holes and gullies.

The most intense domestic and industrial activity within the area appears to be associated with the enclosed phase of the settlement. The enclosure walls were substantial structures, over 1m wide, consisting of an inner and outer 'skin', what was believed to be the exterior being lined with substantial stone orthostats, with a rubble core. Although no walls could be confirmed to fully enclose the eastern and western sides of the settlement, it is likely that the revetment at the south of the site represented the southern boundary.

An area of industrial activity on the interior edge of the southern revetment is likely to have been a building, or possibly covered working area. The remains of a small wall [10.1997] defined the northern extent of this activity with its collapse and associated rubble to the south. Hearth [10.2295] had a possible flue associated with it but the relationship was truncated by a later grave. A furnace [10.2431] was excavated just to the east of this with slag remaining in situ (SF 1433) and 2 hearths/areas of burning were found to the east of this ([10.2443], (10.2362)). A layer of industrial waste (10.2343), measuring 10.8m x 3m, covered the surrounding area with finds of slag (SF 1336, 1376, 1398, 1404-1409), furnace lining (SF1399-1402) and possible glass slag (SF1410). Unfortunately, much of the evidence for the structure had been removed by the early medieval cemetery. As there are no direct relationships between this area and the structures to the north, other than stating that it relates to the enclosed phase of the settlement, it cannot be firmly associated with any of the domestic structures.

Hints of a rectangular structure were identified to the west of the later domestic building, represented by a shallow foundation cut filled with loose stones, cut through by later curving wall (10.2072) and (10.2759).

The final occupied structure prior to abandonment was a small Romano-British domestic building with dry stone walls surviving up to four courses in height with a threshold of vertical stones (10.2742) on its northern side. Part of the structure may have re-used an earlier roundhouse wall to the south (10.2072) and (10.2759). These walls overlaid the earlier post-built structure associated with the clay lined pit which may have had an industrial function. The northern walls of these later structures were difficult to identify due to much of the stone having been robbed. The floor surface inside was formed of compacted yellow sandy silt, similar to the glacial deposits in the area, and was overlain by thin charcoal rich occupation deposits in patches. The majority of finds from this structure were Romano-British in date and of a domestic nature, including Samian ware, mortarium fragments, a roman coin (SF 1540) and a stone gaming counter (SF 1541).

Immediately east of the domestic structure was another building delineated by very large orthostats of grey schist (10.2782), forming a square room with rounded corners which had a corridor (10.2781), leading to the north. Robber trenches indicate that the corridor was originally longer but that many of the stones had been removed. Within this structure, at its southern end, was a very large oval pit [10.2775] which contained a rectangular lining of schist orthostats (10.2774), with the western edge left open for access via a stepped slope. Very few finds were recovered from within this structure to denote use or date, though the samples collected should provide suitable material for radiocarbon dating as they contained large amounts of charcoal and were well sealed.

On the exterior of the enclosure wall a number of features which are likely to be contemporary with the settlement were identified. These included pits containing contemporary pottery and drainage gullies. At the north-western corner of the excavation area a fairly shallow stone lined pit was identified, the function of the pit cannot be confidently suggested but given its low-lying position at a wet part of the site it is likely that it would have held water.

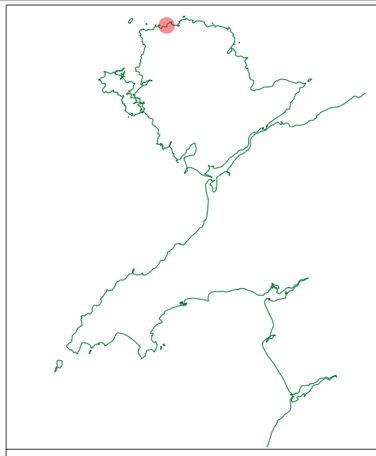


Figure 3
Wylfa Head Excavation Area: Iron Age and Romano-British activity.

Key

- Excavation Area
- General IA/RB Activity
- Roundhouse Phase 1 Prob. IA
- Roundhouse Phase 2 RB
- Structures Phase 3 Prob. RB
- Industrial Activity/Structure RB
- Enclosure RB
- Roundhouses/Structures Phasing Uncertain
- Evaluation Trenches

Grid: 10m

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Drawn By: IGP

Date: 18/10/18

Location: SH35769384

Project: AB1703 Wylfa Head

Archaeoleg Brython Archaeology

5.4.3 Early Medieval

See Figure 4

An early medieval cist cemetery was excavated, mostly concentrated on the plateau and its southern slope, to the east of the highest part of the site. A total of 314 graves were identified, most of which were cut into the natural bedrock. Based on dimensions 28 were of a size which would have accommodated neonates/infants, 37 juveniles, 216 adults, 31 were unknown due to truncation, two were double graves. Of these, 48 were earth cut, six had capstones only, 72 had side stones, 175 had cap and side stones, nine had side, cap and base stones, two had base stones only, one had base and side stones and one had capstones and two layers of side stones. Human remains, in varying degrees of preservation, were recovered from 110 individuals. As has been noted in other cemeteries of this period there appears to have been an initial focal point which must have held some significance. At the Wylfa Head cemetery this was identified as a dense concentration of graves which seemed to have some structural elements, this area was denoted as F296.

Area F296 was located at the highest point on the plateau, it measured 7.5m by 7.0m and contained a total of 36 graves, 25 adult sized graves, one juvenile, nine neonatal/infant, and four which could not be determined due to the degree of truncation. A series of poorly constructed low walls were built directly on top of the capstones of some graves, forming two rounded square spaces. The Northern most of these spaces (10.0377) was particularly ephemeral with much of the stone being disturbed or removed prior to excavation. The southernmost structure (10.0373) was better preserved, with the wall being complete bar an opening to the south which may have acted as an entrance way. The interior of this space was deliberately backfilled with rubble (10.0371) which consisted of small angular stones.

Surrounding F296 was a rough ring of 12 post holes, clearly seen on post-excavation plans, which appeared to be consistent with the presence of a timber roundhouse. Some of the post holes were cut by graves, suggesting the earlier structure had been used as a boundary for this portion of the cemetery. At certain points graves had been angled to fit within this earlier structure which suggests that being within this area was more important than the orientation of the grave. It is possible that the ruins of the roundhouse may have formed a circular mound which could have been mistaken for a Bronze Age barrow, which may explain why this part of the cemetery was seen as having significance.

A few graves (G112, G159 and G160) in close proximity to F296, had evidence of reuse with schist slabs placed vertically across the grave towards the foot/head end. This may have been done to create an 'annex' to contain the remains of the original individual and re-use the original grave for a later internment. Evidence of this practice was identified at another early medieval cemetery at Llangefni, Anglesey which had better bone preservation (Brython Archaeology, forthcoming) . The density of graves in this area may suggest an alternative to constructing new cists or be a practice of re-using family graves. Some of the graves within F296 contained later post holes placed in gaps within capstones which may have held grave markers for locating or identification purposes.

Based on physical relationships there were four identifiable phases of burials within area F296, evidenced by G246 which cut G245, which in turn cut G259 which cut G238. A number of graves showed no physical relationships with any others therefore it was not possible to associate these with a phase of activity. Five graves were soil cut with no evidence of remains, G170, G324, G325, G351 and G355. Two of the graves contained the degraded remains of wooden linings, G216 and G238, both graves were also lined with stone cists though only G238 had capstones. Only five of the graves contained any human remains, G228, G230, G233, G236 and G243, all recovered from graves which had side stones, four of the graves also had capstones, G228, G230, G233 and G236. All the remains were in very poor condition. Twelve of the graves had small finds which included

slag, lead fragments and flint associated with their fills, but none of these finds appeared to be in their original context and were likely to be associated with earlier activity at the site.

Two of the graves had been deliberately backfilled with a red and orange clay material which contained large fragments of charcoal and some burnt bone fragments prior to being covered with capstones, G233 and G232. G232 had been cut by the later G250, which was a smaller juvenile grave which had been backfilled in a similar way before capping and had reused the cist originally constructed for G232, leaving only the very east end of the original grave undisturbed. The orange clay material in G233 was associated with the head and torso of the body, with a stain which indicated a supine burial. The only area within F296 that did not contain any densely packed and intercutting graves was a square of undisturbed natural to the north which was very conspicuous once all the graves had been excavated.

Beyond F296 the cemetery was generally well organised with distinct groups and rows which probably formed organically based on the visibility of existing graves. The majority of the cemetery extended downhill to the east and south from F296 with a few exceptions lying to the west.

At its southern limit the cemetery truncated an area of probable Romano-British industrial activity, likely to be associated with the settlement to the north. The southern limit of the cemetery was denoted by the earlier revetment wall associated with the earlier enclosed settlement, suggesting that it was still visible while the cemetery was in use. The majority of the graves were within this boundary, with only a handful of exceptions having been cut through the rubble.

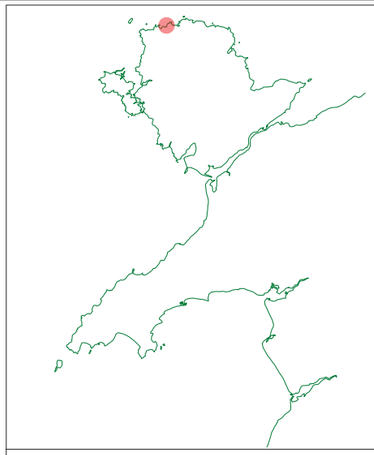


Figure 4
Wylfa Head Excavation Area: Early Medieval Cemetery.

Key

- Excavation Area
- Early Medieval Cemetery
- F296
- Evaluation Trenches

Grid: 10m

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Drawn By:	IGP
Date:	18/10/18
Location:	SH35769384
Project:	AB1703 Wylfa Head

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5.4.4 Post-Medieval and Modern

See Figure 5

A post-medieval ditch which truncated a number of graves was the main feature of this period which interacted with the earlier archaeology. The ditch led from a square, rock-cut shaft which was located on the crest of the highest part of the site. No dating evidence was recovered from the shaft itself but its character and nearby rock cut features from which post-medieval artefacts were recovered suggest that it is likely to be of a similar date. Subsequent map regression has also shown that buildings associated with Wylfa House once stood immediately west of the shaft.

5.4.5 Features of Undetermined Date

See Figure 5

A number of features were identified on the top of the hill at the western edge of the excavation area from which no material dating evidence was produced. These are likely to be associated with Iron Age and Romano-British activity at the site but could also date to the Early Medieval period. The majority of the features consisted of small pits and post-holes which appear to form structures, windbreaks or fences, and laid rough stone surfaces.

On the northern side of the hill rock-cut platforms which appear to have been industrial working areas were also identified. These could equally be associated with the Iron Age and Romano-British activity or could date from the Early Medieval period.

It is likely that only option to firmly date these features will be through the recovery of charred plant remains for radiocarbon dating from the bulk soil samples collected.

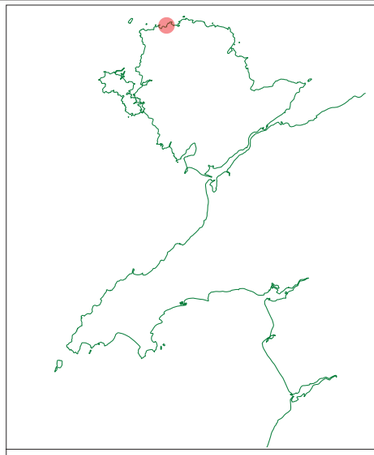


Figure 5
Wylfa Head Excavation Area: Undated, Post Medieval and Modern Activity.

Key

- Excavation Area
- Undated Acrivity Prob. IA/EM
- Industrial Activity Prob. IA/EM
- Post Med/Moden
- Shaft Prob. Post Med/Modern
- Evaluation Trenches

Grid: 10m

© Archaeoleg Brython Archaeology CYF.

Drawn By: IGP

Date: 18/10/18

Location: SH35769384

Project: AB1703 Wylfa Head

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6 Finds and Dating Evidence

A total of 139.5kg of small finds were recovered during the course of the excavation of Wylfa Head. Datable artefacts may have been retained within the bulk soil samples collected during excavation, necessitating a need to process these during the assessment stage. The samples are also likely to contain material suitable for radiocarbon dating which will be required to establish a robust site chronology.

6.1 Mesolithic, Neolithic & Early Bronze Age

The lithics recovered from the flint scatter at the northern edge of the site are typical of Mesolithic activity, some are classic microlith forms, others are bladelets from which microliths can be produced. Bulk soil samples were collected from the same deposits as lithics were recovered, these should provide charred plant remains for accurate dating.

The Neolithic axes and polishing stones are an important group of high quality artefacts. Bulk soil samples collected from the feature should provide accurate dating of the assemblage.

Lithics and possible fragments of pottery discovered during manual cleaning of the site provide evidence of further activity within the area during this period but are likely to have moved over time. They are unlikely to hold great value in the accurate dating of activity at the site.

6.2 Later Bronze Age, Iron Age & Romano British

The Iron Age in the North Wales is predominately aceramic (Lynch, 2000), as such features of this period are notoriously difficult to identify through artefacts alone. The possible Iron Age date of structures identified during the excavation is suggested based on stratigraphic relationships to later deposits of Romano-British date and the lack of ceramics within associated features. The projected size of the possible timber roundhouses are also similar to local examples such as those discovered at Parc Bryn Cegin, Llandegai, Gwynedd (Kenney, 2008). Metal finds from these deposits should be prioritised for conservation and x-raying.

A relative wealth of Romano-British ceramics, metalwork and coins were discovered within the areas of domestic and industrial activity. These include sherds of Samian, Mortaria, Black Burnished Ware and Amphora. A number of copper alloy beads, brooches, bracelets and unidentifiable fragments were recovered, it is also recommended that these are prioritised for conservation and possible identification by means of x-ray. Two coins, one of which appears to be 4th century in date were also recovered during the excavation, possibly suggesting that the settlement was active for several centuries. Numerous lead fragments recovered may hint at some of the industrial processes undertaken at the site.

A number of quern fragments, both saddle and rotary, were discovered across the site.

A number of stone spindle whorls, some decorated, were recovered from domestic deposits.

Some glass beads, both complete and fragmentary, were recovered from the site, occasional shards of glass were also discovered in association with domestic features.

Numerous fragments of daub, furnace lining and possible Ceramic Building Material (CBM) were recovered from across the site. These are unlikely to provide accurate dating but may aid interpretation of structures and could identify industrial processes employed at the site.

Some faunal remains were also identified in the domestic deposits. Due to the acidic soil conditions which are typical for the area, the majority of these are generally fragmentary teeth.

6.3 Early Medieval

Human remains recovered from the graves are of varying states of preservation. Some of the remains discovered in cists which had not filled with silt were better preserved that those which had been buried. Skulls which were relatively complete but in a fragile state have not been cleaned. From experience of working with poorly preserved remains it is preferable for the Osteoloigist undertaking analysis of the remains to undertake cleaning due to the risk of collapse, resulting in the opportunity for required measurements to be lost. It is likely that some of the remains will provide sufficient samples for radiocarbon dating. Teeth have survived relatively well in some graves where no other remains survive providing an opportunity to undertake stable isotope analysis.

All cist stones were assessed for markings on site, they were also weighed to quantify the amount of raw material quarried over the lifetime of the cemetery. Approximately 10% of the cist stones were retained for specialist analysis.

No artefacts which could be firmly attributed to the Early Medieval were discovered during the excavation.

6.4 Post-Medieval and Modern

Some post-medieval ceramics, largely consisting of Buckley pottery and clay tobacco pipe fragments, and metalwork, mostly agricultural in origin, were retained for reference. None are expected to be retained following initial assessment.

7 Palaeoenvironmental

A total of 1765 environmental samples comprising 6218 10 litre buckets were collected from features at Wylfa Head. Overall, the rate of recovery of datable artefacts during excavation is notably poor in north-west Wales. As such, far more importance is placed on the recovery of paleoenvironmental samples to provide data to establish a chronology and narrative to sites in this region.

With regards to the cemetery at Wylfa Head, the graves were each split up into three sample locations; the head/shoulders, torso and legs/feet in order to aid the retention of small artefacts and skeletal remains and to more accurately determine their original location within the graves. A fourth smaller sample was collected from the sacrum/pelvic area to assess for the presence of intestinal parasites.

Processing of the grave fill samples whilst excavations were ongoing suggest that there is little value in processing 100% of the fill, as such it was agreed with the curator that this would be reduced to 40litres per sample. Should the initial results from the Wylfa Head samples provide good environmental, skeletal or artefactual material, the remainder of the sample will be processed.

It is recommended that 5% of the parasite samples are initially tested during the assessment stage of the post-excavation process to check for the presence of parasite macrofossils. If parasites are present specialist advice would be sought to devise the subsequent processing and analysis programme.

It is likely that the samples from the domestic and industrial areas of the site would provide a significant amount of datable charred plant remains, industrial residues and macroscopic artefacts. Processing and assessment of the palaeoenvironmental samples will be critical in interpreting the site and establishing a firm chronology.

8 Quantification and Recommendations

8.1 Quantification of Excavation Data

Data Category	**Number**
Context	2777
Small finds	2044 (139524.25g / 139.52425kg)
Bulk finds	0
Environmental samples	1765 samples (62175 ltr / 6218 buckets)
Graves	314
Human remains (skeleton)	110 (22979.3g /22.9793kg)
Capstones	1356 (9,523.44kg)
Cist stones	1736 (12681.42kg)
Base stones	40 (54.58kg)
Monochrome film	X
Digital photographs	4,861
Rectified photographs / Photogrammetry	63,948
GPS surveyed digital pre-excavation plans	120
GPS surveyed digital excavation plans	8
TST surveyed digital excavation plans	X
Hand drawn plans	619
Hand drawn sections	878

8.2 Recommendation for Further Work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	Context, plans and sections Photogrammetry Small finds Environmental samples C^{14} Dating Human Remains
Publication of key data categories	✓
Deposit archive	✓

9 Discussion

Evidence of prehistoric activity at the site was limited. Brief analysis of the lithics should be undertaken as Mesolithic assemblages from datable contexts are not common in the area. The Neolithic axe group is undoubtedly a significant discovery, specialist input will be sought to determine potential avenues of research, currently this is not expected to extend beyond radiocarbon dating to determine the date of deposition and petrological analysis to determine the source of the raw material.

The Romano-British enclosed settlement with possible origins in the Iron Age was not expected to be present but is no less important. The full extent of the settlement has not been excavated as there will be no impact from the current development beyond the limits of the excavated area. Settlement patterns, interaction between newcomers and indigenes and technology are all research areas identified in The Framework for the Archaeology of Wales (Davies & Evans, 2017) which could be contributed to by the post-excavation programme. Thorough dating and analysis of the recovered artefacts and material from the bulk soil samples would provide valuable information on the development of the settlement, its economy and relationship to other sites in the area. It is recommended that the samples collected during the excavation are processed and assessed to identify material suitable for radiocarbon dating which will provide a firm chronology for the site. Assessment of the artefacts will aid understanding of the local population during the Romano British period and potentially their wider interactions.

The Wylfa Head cemetery is one of the largest early medieval cemeteries to be fully excavated in Wales and as such provides a rare opportunity to learn about its occupants, their origins, burial practices, economy, and relationship to the modern community. Although the state of preservation was not the best in comparison to other cemeteries of the period, the number of graves and the fact that approximately a third contained human remains makes the assemblage a valuable resource. This is amplified given that they were discovered in an area where human remains rarely survive and provides an opportunity where modern scientific techniques can be employed. An osteological assessment should be undertaken for all human remains recovered from the site, initially this will involve Measuring, Ageing, Sexing, and a basic assessment of pathology. It is recommended that a maximum of 40 litres of any sampled deposit associated with the graves is processed to gauge the potential palaeoenvironmental data, should any human remains be recovered then 100% of the samples should be processed. It is recommended that 5% of the parasite samples are processed initially and assessed, if results are good consideration should be given to processing a greater percentage of the remaining samples. Radiocarbon dating of human remains should be undertaken to provide a chronology for the development of the cemetery. Stable isotope analysis is recommended 25% of the suitable material.

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Appendix I

Archaeoleg Brython Archaeology

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1-6 Wylfa Head photos

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Appendix II

Archaeoleg Brython Archaeology

Wylfa Head

Plates and Photogrammetry (not georeferenced)

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Plate 2: Grave with well-preserved human remains. View from the east. 1x1m scale. *2*

Plate 3: Intercutting graves. View from the east. 1x0.5m scale. *3*

Plate 4: Typical level of preservation of human remains within the cemetery. View from the south east. 1x1m scale. *3*

Plate 5: Typical level of preservation of human remains within the cemetery. View from the south east. 1x2m scale. *4*

Plate 6: Good level of preservation within the cemetery. View from the north east. 1x1m and 1.05m scales. *4*

Plate 7: Focal area F.296 of the cemetery, showing stone capped cist graves. View from the north west. 2x2m scales. *5*



Plate 1: Showing the eastern enclosure wall [10.1985] of the settlement. View from the south east. 1x2m scale.



Plate 2: Grave with well-preserved human remains. View from the east. 1x1m scale.



Plate 3: Intercutting graves. View from the east. 1x0.5m scale.



Plate 4: Typical level of preservation of human remains within the cemetery. View from the south east. 1x1m scale.



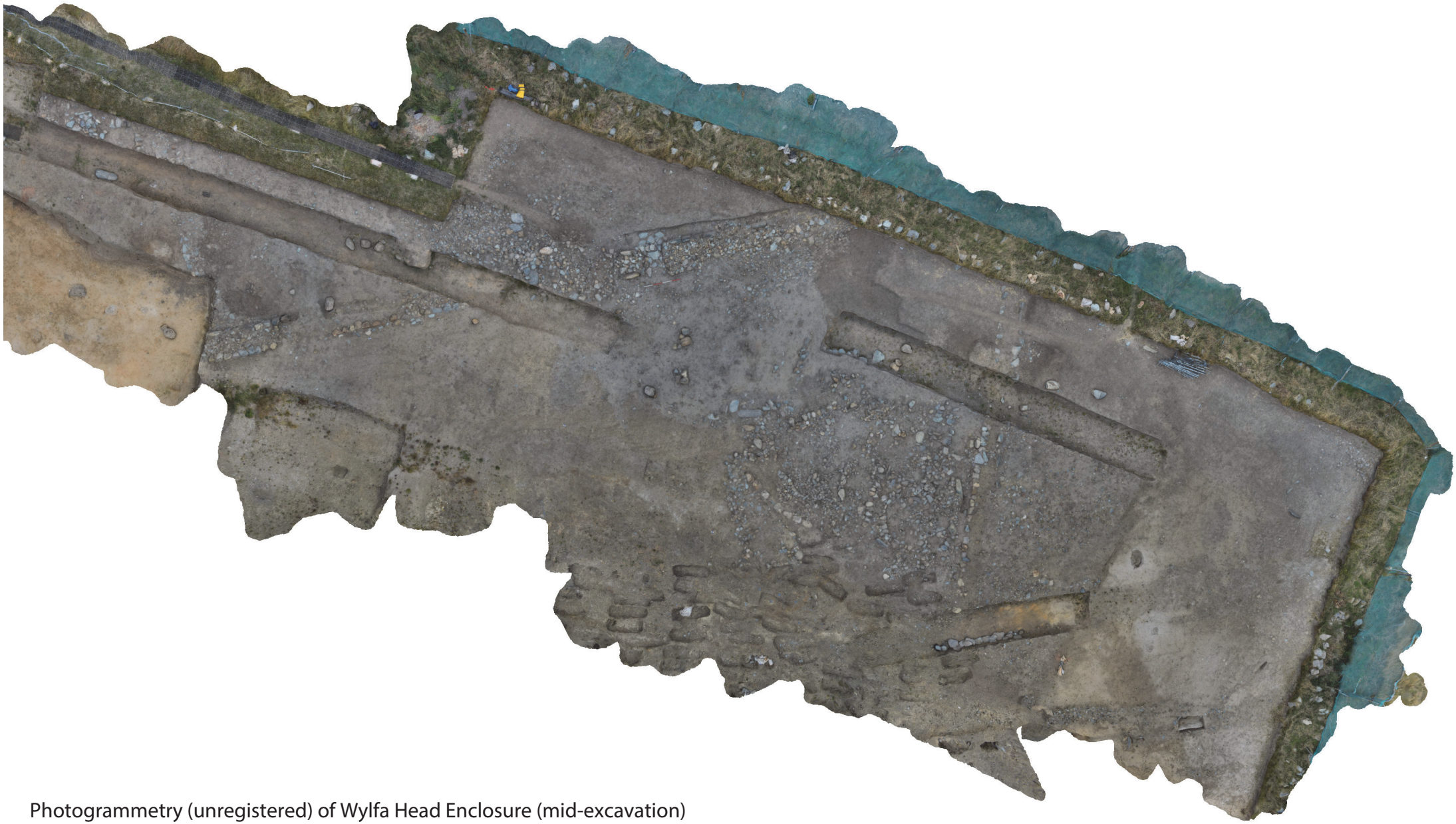
Plate 5: Typical level of preservation of human remains within the cemetery. View from the south east. 1x2m scale.



Plate 6: Good level of preservation within the cemetery. View from the north east. 1x1m and 1.05m scales.



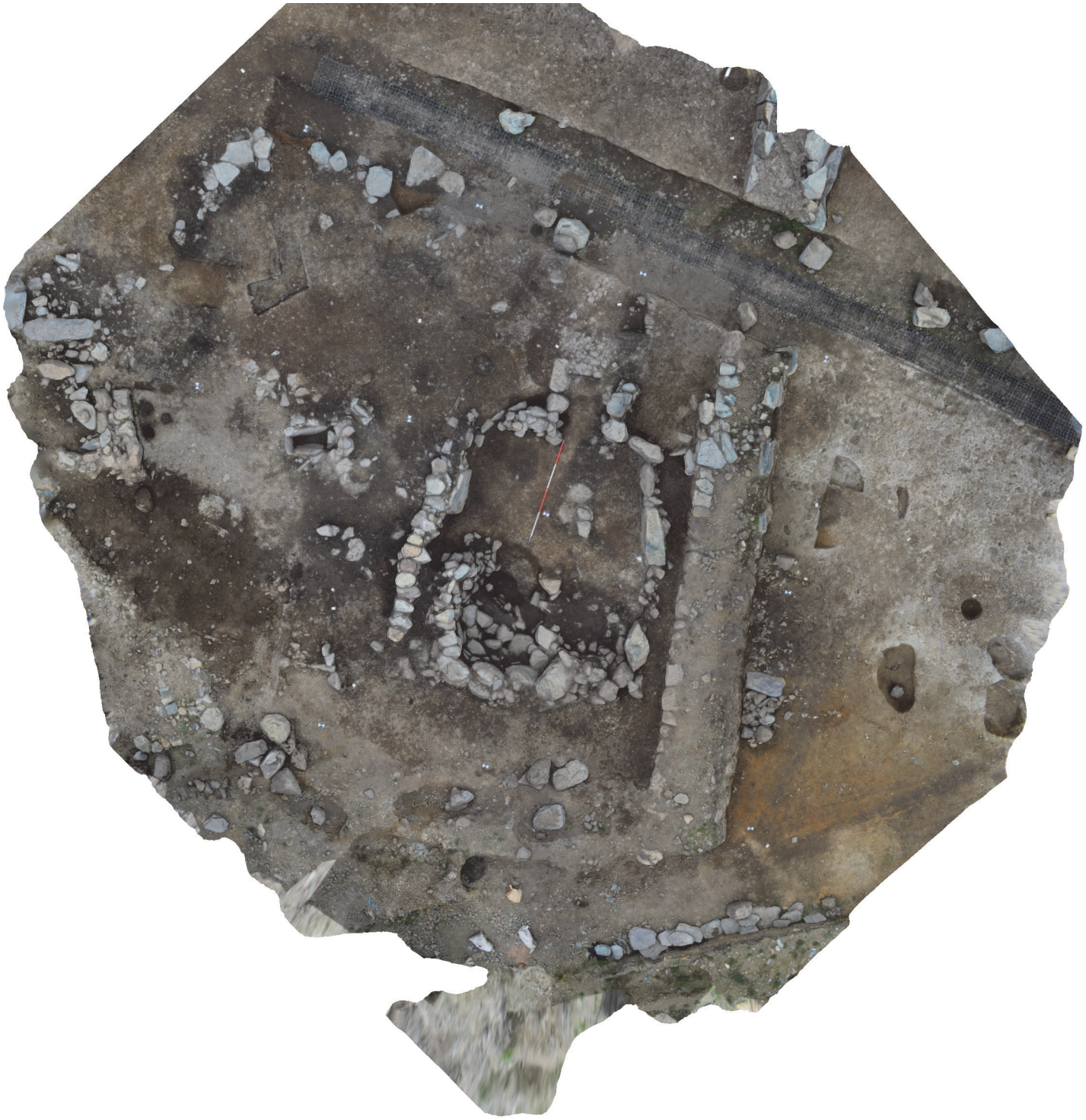
Plate 7: Focal area F.296 of the cemetery, showing stone capped cist graves. View from the north west. 2x2m scales.



Photogrammetry (unregistered) of Wylfa Head Enclosure (mid-excavation)



Photogrammetry (unregistered) of Wylfa Head stone-built structures (mid-excavation)



Photogrammetry (unregistered) of Wylfa Head stone-built structures (mid-excavation)

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1-7 Wylfa Summary Report Hotspot 5

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Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 5
Document Number:
WYN-BRY-CON-REP-00010 v1.2

Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 5

Wylfa archaeological works on behalf of Horizon Nuclear Power

Prepared for Horizon Nuclear Power

Text by Brenton Culshaw, Cindy Nelson-Viljoen,
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Illustrations by Declan New and Laura Wilson Parry

January 2019

WYN-BRY-CON-REP-00010 v1.2

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Appendix I: Archaeoleg Brython Archaeology Team AB1703

Appendix II: Plates

Summary

Archaeoleg Brython Archaeology CYF. have completed the excavation of potential Prehistoric features at Hotspot 5, Wylfa, Anglesey (NGR SH34909278) in advance of an application to construct a nuclear power station at Wylfa Newydd nuclear power station. The excavation area measured 728m^2 and the archaeological remains identified within the area consisted of a series of undated pits, ditches, troughs and a burnt mound. All work was undertaken in accordance with the Written Scheme of Investigation and monitored by Gwynedd Archaeological Planning Services.

During a phase of archaeological evaluation trenching undertaken in 2016, a suspected burnt mound was identified. Hotspot 5 was located to address the archaeological potential of the remains and was excavated during October to November 2018. The excavation revealed a burnt mound with four major deposit phases, associated troughs and pits, overlain with a colluvial deposit, and an undated drainage ditch.

Recovered artefacts comprised of a flint core recovered from an unstratified context; two polished/worked stones recovered from a trough to the north of the burnt mound; worked schist and chert fragments from a pit and a worked stone fragment from a deposit associated with the burnt mound. As such a Later Prehistoric date is tentatively ascribed. Due to the lack of dateable artefacts and type of features identified during excavation, the environmental samples require processing to help determine function and date to gain a better understanding of their relationship with other features.

Based upon the results of the excavation, it is recommended the archaeological potential of the assemblage and archive produced from the excavation of Hotspot 5 be further analysed and the results be disseminated in the form of an assessment report in line with the Written Scheme of Investigation.

1 Introduction

Archaeoleg Brython Archaeology CYF. (ABA) have been commissioned by Horizon Nuclear Power Ltd. (HNP) to undertake a phased programme of strip, map and sample excavation in advance of the submission of a Development Consent Order application (Pins reference number EN010007) for the proposed construction of the proposed Wylfa Newydd Nuclear Power Station. The purpose of this document is to provide supporting evidence for Horizons DCO application, and to summarise the results of the excavation in advance of the production of an assessment report.

This report provides a summary of the results of archaeological excavation of Strip, Map and Sample (SMS), of Hotspot 5 undertaken during 2018 and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site. Following the production of a Written Scheme of Investigation (WSI) (Horizon, 2017), 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 scope of the works was agreed. Archaeological works were monitored whilst in progress by Gwynedd Archaeological Planning Service (GAPS), cultural heritage advisors to the Local Authority. Wardell Armstrong LLP. (WA) have been employed by HNP as cultural heritage consultants for the project and within this capacity have provided guidance and advice during the works.

2 Background

Hotspot 5 was located approximately 1km west of Tregele and 1km southwest of the existing Wylfa power station on a southerly sloping field on the edge of marsh land in a pastural field previously labelled "A7" during the archaeological trial trench evaluation. The investigation area was at a height of approximately 17m AOD.

Prior to the excavation of the Hotspot 5 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 (Wessex Archaeology, 2016a, b & c). Hotspot 5 was selected for excavation based on the results of the evaluation trenching as the remains of a possible burnt mound deposits was encountered during these investigations. A number of Strip, Map and Sample areas described as "Hotspots" were identified as a result of the evaluation trenching. These were organised into four zones referred to as 1a, 1b, 2 and 3 within the WSI (Horizon, 2017). Hotspot 5 was located in Hotspot Zone 1a.

Geological superficial deposits in the area consist of Till, Devensian – Diamicton. These are sedimentary deposits which formed between 116 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, 2018).

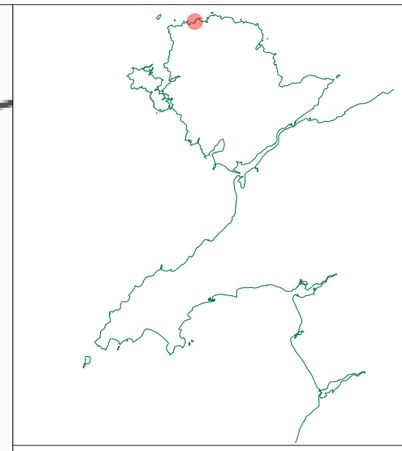


Figure 1
Location Plan, Hotspot 5.

Key

Hotspot 5

19m

Drain

W

Path

Caerdegog Isaf

0 100
metres

5

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Ordnance Survey Licence Number 100048957

Drawn By: LWP

Date: 31/01/19

Location: SH34629265

Project: AB1703 Hotspot 5

Archaeoleg Brython Archaeology

3 Aims and Objectives

3.1 Archaeological Strip, Map and Sample Aims

The aims of the archaeological strip, map and sample identified in the WSI (Horizon, 2017) were as follows:

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 (so 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;*
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; and*
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.*

3.2 Archaeological Strip, Map and Sample Objectives

The relevant archaeological framework documents identified in the WSI (Horizon 2017) were;

- Review of the Research Framework for the Archaeology of Wales: North West Wales – Neolithic and Early Bronze Age (Steve Burrow, 2010).
- Review of the Research Framework for the Archaeology of Wales: North West Wales – Later Bronze Age and Iron Age (Fiona Gale, 2010).
- A Research Framework for the Archaeology of Wales – Romano British (AD 43-AD 410) (Davies, 2011).
- A Research Framework for the Archaeology of Wales: North West Wales - Early Medieval c. AD 400-1070 (Nancy Edwards, Tudur Davies and Kate A. Hemer, 2016).
- A Research Framework for the Archaeology of Wales: North West Wales – Medieval c.AD 1100 – 1539 (David Longley, 2010).

These documents identify research objectives, and the WSI presented research questions derived from the objectives of the research frameworks outlined above. As a burnt mound was identified during the evaluation, the questions relevant to Hotspot 6 were;

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.

The results of the excavation revealed an undated drainage ditch. Following the results of the excavation, the following questions should be also addressed:

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?

Prehistoric artefacts were discovered, during excavation, and consisted of worked lithic artefacts, associated debitage . As such, questions addressing the research objectives in documents outlined above were identified within the WSI (Horizon, 2017) *were identified. These questions were;*

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?

4 Methodology

4.1 Surveying and Setting Out

The strip, map and sample area was surveyed and set out by the Main Contractor, Jones Brothers Balfour Beatty Joint Venture (JBBBJV). The excavation area and all archaeological features were subsequently surveyed using a Leica Viva GPS system. All surveys were tied in to the Ordnance Survey National Grid.

4.2 Mechanical Excavation

Topsoil and any other overburden was removed using a tracked 360 degree excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under direct archaeological supervision.

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 of the underlying archaeological features were revealed, or when the absence of any archaeological 'horizon' was adequately demonstrated.

After the completion of mechanical excavation, both the spoil heaps and the stripped surface were scanned both with a metal detector and visually. Any artefacts of potential archaeological interest identified because of this work were recovered and their locations accurately recorded.

4.3 Hand Excavation

Immediately after the removal of deposits overlying the archaeological horizon, the area was manually cleaned, and all features investigated and recorded as per standard ABA procedures.

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 taking these signals into account.

All excavations were undertaken in accordance with best practice as set out in Standards and Guidance for Archaeological Excavation (CIfA, 2014a).

All archaeological remains identified were excavated in accordance with the following strategy as set out in the WSI (Horizon, 2017):

- 100% of all positive features likely to obscure earlier archaeological features;
- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships;
- discrete negative features (more than 1m 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%;
- in addition to the above, all intersections between features and all terminals of linear features; and

- other features: 25%, unless otherwise agreed with the Consultant.
- The location of all small finds, with the exception of those discovered within discrete features, were recorded in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.4 Recording

All excavated contexts were fully recorded in line with the standards set out in the WSI (Horizon, 2017) and 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. Hand drawn plans and photogrammetry models made of excavated features, were tied in to the overall plan through the use of control points.

A full photographic record was maintained during the excavation 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.

4.5 Palaeoenvironmental Sampling Strategy

Environmental sampling was undertaken in accordance with the sampling policies outlined in the CIfA's Standard and Guidance (CIfA, 2014a) and Environmental Archaeology; A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage, 2011).

4.6 Archiving

The creation, compilation, transfer and deposition of the archaeological archive follows in line with the regulations of the Chartered Institute for Archaeologists Standards and Guidance (CIfA, 2014b).

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.

All finds will be stored in accordance with CIfA's Standard and Guidance (CIfA, 2014c). It is recommended that all artefacts are deposited at Oriel Ynys Môn, Llangefni.

Digital copies of the report will be submitted to Horizon who will then distributed to stakeholders. Printed versions will only be produced if specifically requested.

ABA will hold a digital version of the archive indefinitely.

5 Archaeological Results

Site name: Wylfa Hotspot 5

Site code: AB1703HS5

HER Event Code: 45396 *PRN: 76055*

NGR: SH34829270

Excavated by: Archaeoleg Brython Archaeology CYF.

Site type: Strip, map and sample

Topsoil average depth: 0.20m

Subsoil average depth: 0.20m

5.1 Historic Map Evidence and Documentary Data

No evidence of field boundaries, ditches or any other archaeological features was found on historical maps (Wessex Archaeology, 2016a).

5.2 Geophysical Survey Results

Geophysical surveys were carried out during the assessment of the site (Hopewell 2011a & b, Hopewell 2012). Anomalies were detected and interpreted as a probable burnt mound feature (Wessex 2016a).

5.3 Evaluation Results

In 2016 Wessex Archaeology undertook a programme of evaluation trenching within field A7. A total of 54 trenches were opened in this field with 26 of these containing recorded archaeological features (Wessex Archaeology, 2016a,b,c). Of these trenches, 14 contained undated ditches, and two contained undated pits (Wessex Archaeology, 2016a).

Evidence of Prehistoric activity was identified in Trench 315 (Wessex Archaeology, 2016a) and comprised a potential Prehistoric burnt mound deposit and associated pit features. The burnt mound material measured approximately 15m x 1.8m (Wessex Archaeology, 2016a, p. 15, 59). The environmental samples produced sporadic fragments of charred hazel shell (Wessex Archaeology, 2016).

5.4 Excavation Results

See Figure 2

The excavation of Hotspot 5 was carried out by Archaeoleg Brython Archaeology CYF. during October and November 2018. Hotspot 5 consisted of a series of pits, some intercutting, an undated ditch, a burnt mound and associated troughs. A number of modern mechanically cut field drains, running north to south and north-east to south-west truncated a high proportion of the investigated area.

The burnt mound (105.0022) indicated four major deposit phases that were excavated in two 1.5m wide slots running north to south and east to west across the mound. The earliest phase was excavated in the western section of (105.0022) and consisted of a mid-brown grey clay silt fill (105.0048), with inclusions of angular to sub-angular burnt limestone chunks (c. 0.06-0.11m in size) and flecks of charcoal. The deposit extended c. 5.36m in breadth and was 0.34m thick. Deposit (105.0048) may be stratigraphically below or contemporary with an associated deposit (105.0049) consisting of firm dark mid-grey silt clay. Small find (SF006), a piece of worked stone, was recovered from this deposit. Two potential troughs [105.0042] and [105.0055] and a small pit [105.0091] was excavated toward the western extent within the earliest phase.

Trough [105.0042] was sub-circular in plan with moderately steep convex sides and a flat base measuring 2.75m in length, 2.08m in width and 0.77m deep. The feature contained six deposits, two of which were noteworthy; (105.0052) and (105.0043). Fill (105.0052) was early in the sequence and consisted of a loose mid grey sand silt with inclusions of wood, charcoal flecks and angular lumps of limestone and schist slabs ranging in size from 0.05m to 0.46m. This was considered a deliberate backfill and some of the larger schist slabs may indicate that trough [105.0042] was stone lined. Fill (105.0043) was the latest deposit within trough [105.0042] and extended beyond the feature edges as a layer by c. 2m to the north. It consisted of angular unburnt limestone chunks (c. 0.05-0.16m in size), within a mid-orange brown silt. Fill (105.0043) was a deliberate dump of unfired material and probably represented an unused stockpile of stones for burnt mound industrial processes. Small find (SF003), a polished stone or potential quern stone was recovered from this fill. This deposit was truncated by a single cut feature [105.0012], a possible trough adjacent to the burnt mound.

Trough [105.0012] contained three fills (105.0013); (105.0027); (105.0032) of which (105.0013) is the primary fill consisting of a compact mid-grey black silty sand with frequent inclusions of medium to large angular stones and find (SF002), a possible grind stone.

Trough [105.0055] was sub-circular in plan with near vertical straight sides and a flat base measuring 1.43m in length, 1.13m in width and 0.40m in depth. There was no indication that this trough was stone lined but it did appear to have been sealed with orange clay. The deposits consist of the accumulation of burnt mound material which was overlain by dumped burnt mound material (105.0050). Pit [105.0091] was sub-circular in plan with shallow concave sides and concave base measuring 0.93m in diameter and 0.06m deep. This was sealed by a discreet deposit of burnt mound material. The function of this pit is unknown.

A second cluster of features was excavated towards the north-east extent of burnt mound [105.0022] and consisted of trough [105.0077], a burnt spread [105.0095], a discreet pit [105.0064] and a trough [105.0098]. The rectangular trough [105.0077] consisted of straight, vertical sides and a concave base, and measured 1.53m in length, 0.50m in breadth and 0.32m in depth. The sides and base were lined with irregular slabs of schist forming a rough box. This contained an accumulation of burnt mound material (105.0059); (105.0076); (105.0078); (105.0084); (105.0085); (105.0086); (105.0087), consisting of dark grey black to brown clay silt and layers of flat schist stones. The function of this feature was likely to hold water and was likely contemporary with the burnt mound process.

The sub-circular pit [105.0064] consisted of near vertical sides and flat base measuring 0.98m in diameter and 0.15m deep. The fill (105.0069) consisted of loose black-brown silty clay with regular inclusions of large burnt stone.

Burnt spread (105.0095) was an irregular shape in plan which sat in a hollow with a slightly undulating profile extending 2.9m in length, 1.9m in width, and is 0.1m thick. Deposit (105.0096) overlaid it consisted of a dark grey sand silt with inclusions of charcoal and angular burnt limestone fragments, 0.02-0.05m in size with evidence of in situ burning. Another trough [105.0098] was rectangular shape in plan with near vertical straight sides and a flat base measuring

1.85m in length, 1.19m in width and 0.48m in depth. There is some indication that the feature may have been clay lined (105.0099) and was filled with burnt mound material (105.0058) and truncated by trough [105.0077], indicating re-visitation and reuse of the burnt mound

The early-middle phase of the burnt mound was located in the centre of the excavated area and measured c. 6.56m in breadth and 0.53m in depth. The fill (105.0047) consisted almost entirely of burnt limestone chunks (c. 0.05-0.10m in size), thinly coated in light brown grey silt.
A later phase of activity was defined by three fills (105.0039); (105.0045); (105.0050) located in the east of the burnt mound. The fills measured c. 7.8m, 7.21m and 2.04m in breadth, and 0.6m, 0.3m and 0.17m thick respectively. All three fills consisted of a dark grey clay silt with inclusions of charcoal flecks and angular burnt limestone chunks raining in size from 0.04-0.09m.
The final phase of activity was located in the north-east of the burnt mound, consisted of a mid-brown clay silt (105.0035) with inclusions of angular burnt limestone chunks measuring 0.04-0.15m in size. The deposit measured c. 2.8m in breadth and 0.39m thick.

A diffuse deposit (105.0040) existed in discreet patches across the southern limit of Hotspot 5. It had a maximum breadth of 2.35m and depth of 0.14m, and consisted of dark brown grey silt with few inclusions of small rounded gravel. The deposit seems to derive from processes likened with standing water and bioturbation likely signifying a rise in the water table during use of the burnt mound. Also spread in patches across the burnt mound was a deposit (105.0041), that was truncated and overlain by almost all the features and deposits associated with the burnt mound. Deposit (105.0041) was irregular in plan with an undulating profile extending c. 25m in length, 14m wide and 0.18m deep. The deposit consists of a dark to mid grey silt clay with inclusions of flecks of charcoal and angular to sub-angular burnt and unburnt limestone chunks measuring 0.04-0.42m in size. Overlain by (105.0041) was a flood/ponding alluvial deposit (105.0100) located across the south and centre of Hotspot 5 measuring c. 20m in length and 0.18m deep. It consisted of a mid-grey sand clay and appears to have been formed by a combination of colluviation and alluvial processes. Directly overlain by (105.0100) was a geological deposit of pale-yellow brown silt (105.0003), which took on a greenish hue in permanently water-logged areas.

A large tree throw [105.0004], excavated to the north of the burnt mound, was sub-circular shape in plan with moderate concave sides and an irregular base. The fill (105.0024) consisted of a mid-brown grey silt clay with inclusions of sub-angular limestone chunks c. 0.02-0.05m in size. A singular sub-circular pit [105.0071] of unknown date was situated close to the water table, with a diameter of 1.23m and depth of 0.60m. There may be some indication of stepping along the eastern edge. The fill (105.0070) consisted of a dark brown humic peat with notable inclusions of wood and hazel nut shells. Two small finds (SF004), a worked blue schist stone fragment, and (SF005) a worked chert stone flake was recovered from this fill. This pit was likely associated with the burnt mound, although there was no direct relationship its position makes it very likely that it was situated to collect water from the wetlands

Three features that had no physical relationship with the burnt mound were investigated and consisted of the terminus [105.0007] and two profile slots [105.0011]; [105.0020] of a ditch feature running north west to south east. The ditch measured 6.43m in length, 0.79m wide and 0.18m deep and contained a single deposit (105.019) of dark brown silt clay with a high organic component. Below the subsoil the colluvium deposit (105.0038) consisting of mid-brown grey clay silt with inclusions of small rounded stones was excavated and measured 0.3m in thickness. Potentially contemporary with (105.0038) are two discreet deposits (105.0036) and (105.0037) consisting of a firm mid-grey brown clay silt with moderate inclusions of angular limestone chunks (c. 0.03-0.10m in size), and likely derived from the underlying burnt mound deposits of (105.0036) and (105.0037). The discreet deposits measured between 1.16-0.15m in thickness.

The colluvial deposit (105.0038) overlay the burnt mound and associated features. Its uniform nature suggests that it was not disturbed in relationship with the burnt mound and indicates the burnt mounds final abandonment. This was overlaid by an early modern ploughsoil (105.0034) of grey brown sand silt.

6 Finds and Dating Evidence

During the course of the excavation of Strip, Map and Sample at Hotspot 5 no bulk finds and 3.8481kg of small finds were recovered.

The small finds comprised of a flint node or possible core (SF001) recovered from unstratified context; two polished/worked stones (SF002) and (SF003) recovered from trough [105.0012] and trough [105.0042] respectively; a piece of worked schist (SF004) and chert flake (SF005) recovered from pit [105.0071]; and a worked stone fragment (SF006) from deposit (105.0049). As such a Later Prehistoric date is tentatively ascribed.

No scientific dating has been undertaken. Suitable material for radiocarbon dating is likely to be present in the bulk environmental samples, and this material needs to be recovered during the assessment stage of the post-excavation programme.



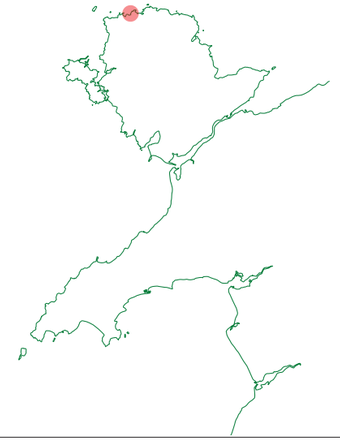


Figure 2
Site Plan, Hotspot 5.

Key

- Excavation Area
- Burnt mound spread
- Field drains

© Archaeoleg Brython Archaeology CYF.

Drawn By: DPN/LWP

Date: 31/01/19

Location: SH34629265

Project: AB1703 Hotspot 5

Archaeoleg Brython Archaeology

7 Palaeoenvironmental

A total of 49 bulk environmental samples were collected from archaeological deposits at Hotspot 5 comprising of 196 10 litre buckets for processing using a flotation method in order to identify botanical and faunal remains.

Generally, the rate of recovery of datable artefacts during excavation is notably poor in the region of North West Wales. As such, more importance has been placed on the recovery of paleoenvironmental samples to provide data to help establish a chronology and narrative to sites in this region. Due to this, it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

8 Quantification and Recommendations

8.1 Quantification of Excavation Data

Data Category	**Number**
Context	100
Small finds	6 (3848.1g / 3.8481kg)
Bulk finds	-
Environmental samples	40
Monochrome film	X
Digital photographs	164
Rectified photographs / Photogrammetry	1139
GPS surveyed digital pre-excavation plans	1
GPS surveyed digital excavation plans	1
TST surveyed digital excavation plans	X
Hand drawn plans	18
Hand drawn sections	19

8.2 Recommendation for Further Work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	Contexts, plans and sections Small Finds Environmental samples Lithics/Worked stone C^{14} Dating
Publication of key data categories	✓
Deposit archive	✓

9 Discussion

The evaluation identified a Later Prehistoric burnt mound in Trench 315 which was the area targeted by Hotspot 5. Upon excavation a large burnt mound was uncovered along with five associated troughs, pits and deposits. A colluvial layer overlay the burnt mound, sealing it.

The evaluation identified a Later Prehistoric burnt mound material in Trench 315 which became Hotspot 5 (Wessex Archaeology, 2016). Upon excavation a large burnt mound was uncovered along with 5 associated troughs, pits and deposits, these were sealed by a colluvial layer with a later drainage ditch cut into it.

The burnt mound was excavated in two slots ruing north to south and east to west and indicated four main phases of deposition. All of the deposit and features associated with the burnt mound, i.e. 5 potential troughs [105.0012], [105.0042]; [105.0055], [105.0077] and [105.0098] two pits [105.0091]; [105.0064], a burnt spread (105.0095) likely represents an accumulation of waste burnt mound material from industrial activity. The shape and undulating nature of pit [105.0004] indicated that it was a tree throw and not archaeological.

The small finds from Hotspot 5 comprised of lithics and worked stone, and all apart from one lithic (SF001) was discovered in secure contexts. The worked stone (SF002-SF006) found in troughs and a pit should undergo petrological analysis, which would be beneficial in determining the origin of the raw material.

Determining the absolute chronology for archaeological remains recorded at Hotspot 5 from the feature typology and the dearth of finds was difficult. Because of this, the data from the environmental samples is critical in helping to establish the date and function of these features. In particular, should ecofacts during the environmental processing be of a sufficient nature, the radiocarbon dating of the deposits of the burnt mound and fills of the pits and troughs will be critical.

The processing of the bulk environmental soil samples, through floatation, and analysis of the flots would identify and quantify charred plant remains, if any are present, and the residues from the environmental processing should also be checked for industrial material which could help determine if, and what, industrial processes were occurring nearby.
It is recommended that post-excavation analysis should include analysis of bulk environmental samples and a lithic report.

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Appendix I

Archaeoleg Brython Archaeology

Team AB1703

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Thomas Eley

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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

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Timothy Lewis

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Craig Parkinson

Gethyn Phillips

Jeannette Plummer Sires

Stephen Porter

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1-8 Hotspot 5 photos

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Appendix II

Archaeoleg Brython Archaeology

Hotspot 5

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Plate 3: Post excavation of stone lined trough [105.0012]. View from the south west. 1x1m and 1x2m scales. 3



Plate 1: Slot 2 through burnt mound (105.0022) and trough [105.0042]. View from the north west. 2x1m scales.



Plate 2: West facing section of baulk, Slot 1, showing burnt mound material. View from the west. 1x2m scale.



Plate 3: Post excavation of stone lined trough [105.0012]. View from the south west. 1x1m and 1x2m scales.

1-9 Wylfa Summary Report Hotspot 6

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Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 6

Document Number WYN-BRY-CON-REP-00008 v1.2

Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 6

Wylfa archaeological works on behalf of Horizon Nuclear Power

Prepared for Horizon Nuclear Power

Text by Vickki Hudson, Declan New, Cindy Nelson-Viljoen and Iwan G. Parry

Illustrations by Declan New and Laura W. Parry

January 2019

WYN-BRY-CON-REP-00008 v1.2

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Appendix I: Archaeoleg Brython Archaeology Team AB1703
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Summary

Archaeoleg Brython Archaeology CYF. have completed the excavation of potential Prehistoric features at Hotspot 6, Wylfa, Anglesey (NGR SH34829270) in advance of an application to construct a nuclear power station at Wylfa Newydd nuclear power station. The excavation area measured 225m^2 and the archaeological remains identified within the area consisted of a series of undated intercutting ditches and gullies. All work was undertaken in accordance with the Written Scheme of Investigation and monitored by Gwynedd Archaeological Planning Services.

During a phase of archaeological evaluation trenching undertaken in 2016, a suspected burnt mound and ring gully were identified. Hotspot 6 was located to address the archaeological potential of these remains and was excavated in September 2018. The excavation revealed an alluvial layer containing stones and charcoal that was originally recorded as a bunt mound, and two square enclosures.

Recovered artefacts comprised of lithics recovered from the terminus of a ditch and a pit located within an enclosure. The earliest activity identified was a piece of deliberately struck flint recovered from the fill of a ditch terminus and spot dated as later Prehistoric. Due to the lack of dateable artefacts and type of features identified during excavation, the environmental samples require processing to help determine function and date to gain a better understanding of their relationship with other features.

Based upon the results of the excavation, it is recommended the archaeological potential of the assemblage and archive produced from the excavation of Hotspot 6 be further analysed and the results be disseminated in the form of an assessment report in line with the Written Scheme of Investigation

1 Introduction

Archaeoleg Brython Archaeology CYF. (ABA) have been commissioned by Horizon Nuclear Power Ltd. (HNP) to undertake a phased programme of strip, map and sample excavation in advance of the submission of a Development Consent Order application (Pins reference number EN010007) for the proposed construction of the proposed Wylfa Newydd Nuclear Power Station. The purpose of this document is to provide supporting evidence for Horizons DCO application, and to summarise the results of the excavation in advance of the production of an assessment report.

This report provides a summary of the results of archaeological excavation of Strip, Map and Sample (SMS), of Hotspot 6 undertaken during 2018 and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site. Following the production of a Written Scheme of Investigation (WSI) (Horizon, 2017), 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 scope of the works was agreed. Archaeological works were monitored whilst in progress by Gwynedd Archaeological Planning Service (GAPS), cultural heritage advisors to the Local Authority. Wardell Armstrong LLP. (WA) have been employed by HNP as cultural heritage consultants for the project and within this capacity have provided guidance and advice during the works.

2 Background

Hotspot 6 was located approximately 750m west of Tregele and 1km south of the existing Wylfa power station on a southerly sloping field on the edge of marsh land in a pastural field previously labelled "A7" during the archaeological trial trench evaluation. The investigation area was at a height of approximately 19.25m AOD.

Prior to the excavation of the Hotspot 6 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 (Wessex Archaeology, 2016a, b & c). Hotspot 6 was selected for excavation based on the results of the evaluation trenching as the remains of a possible burnt mound sealed by alluvial deposits was encountered during these investigations. A number of Strip, Map and Sample areas described as "Hotspots" were identified as a result of the evaluation trenching. These were organised into four zones referred to as 1a, 1b, 2 and 3 within the WSI (Horizon, 2017). Hotspot 6 is located in Hotspot Zone 1a.

Geological superficial deposits in the area consist of Till, Devensian – Diamicton. These are sedimentary deposits which formed between 116 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, 2018).

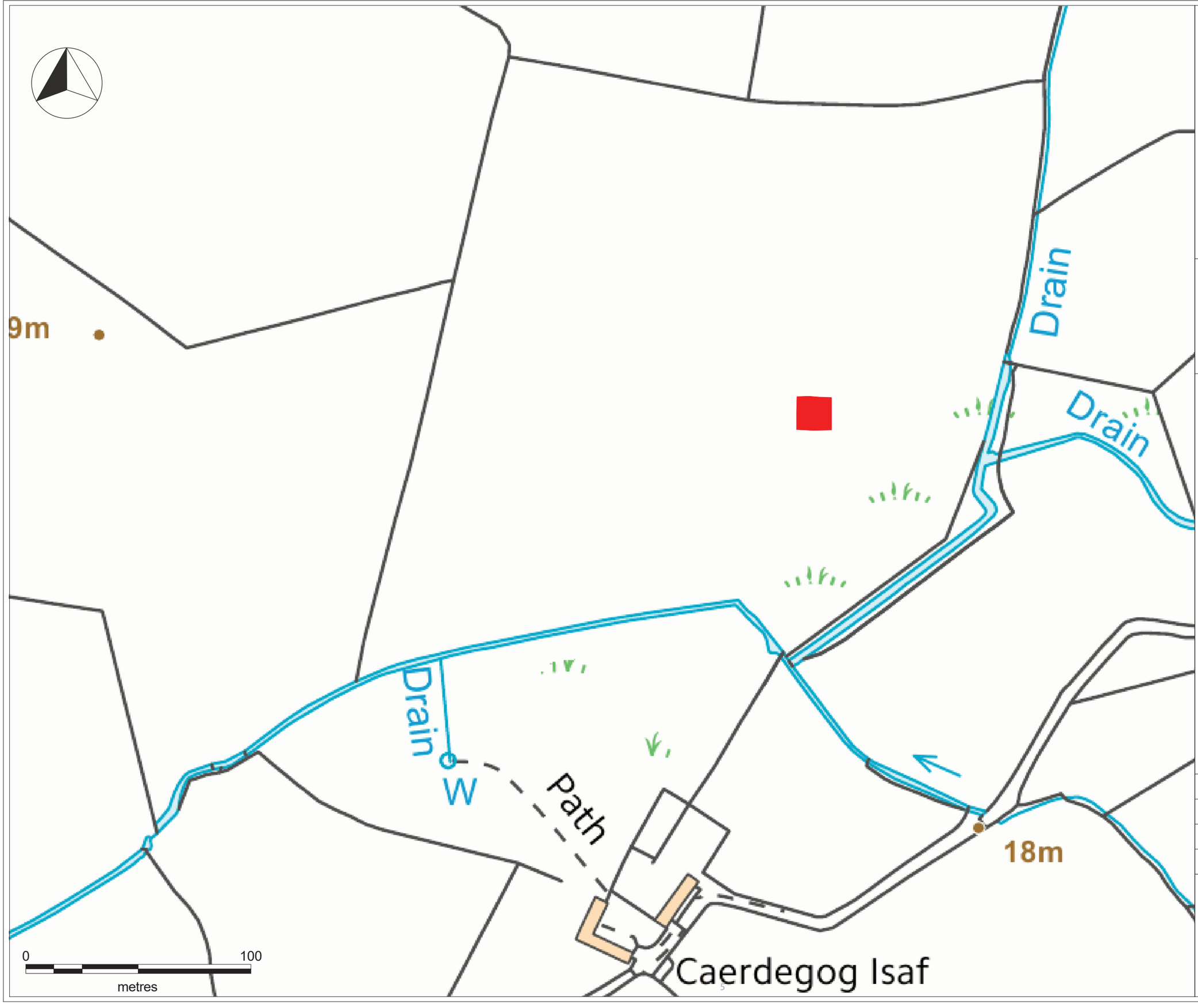




Figure 1
Location Plan, Hotspot 6.

Key

Hotspot 6

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Ordnance Survey Licence Number 100048957

Drawn By: LWP

Date: 22/10/18

Location: SH34829270

Project: AB1703 Hotspot 6

Archaeoleg Brython Archaeology

3 Aims and Objectives

3.1 Archaeological Strip, Map and Sample Aims

The aims of the archaeological strip, map and sample identified in the WSI (Horizon, 2017) were as follows:

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 (so 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;*
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; and*
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.*

3.2 Archaeological Strip, Map and Sample Objectives

The relevant archaeological framework documents identified in the WSI (Horizon 2017) were;

- Review of the Research Framework for the Archaeology of Wales: North West Wales – Neolithic and Early Bronze Age (Steve Burrow, 2010).
- Review of the Research Framework for the Archaeology of Wales: North West Wales – Later Bronze Age and Iron Age (Fiona Gale, 2010).
- A Research Framework for the Archaeology of Wales – Romano British (AD 43-AD 410) (Davies, 2011).
- A Research Framework for the Archaeology of Wales: North West Wales - Early Medieval c. AD 400-1070 (Nancy Edwards, Tudur Davies and Kate A. Hemer, 2016).
- A Research Framework for the Archaeology of Wales: North West Wales – Medieval c.AD 1100 – 1539 (David Longley, 2010).

These documents identify research objectives, and the WSI presented research questions derived from the objectives of the research frameworks outlined above. As a burnt mound was identified during the evaluation, the questions relevant to Hotspot 6 were;

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.

The results of the excavation however revealed archaeological remains differing from those observed within the evaluation trenches. Following the results of the excavation, the following questions should be addressed:

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?

Prehistoric artefacts were discovered, during trial trenching, and consisted of worked lithic artefacts, associated debitage and pottery. As such, questions addressing the research objectives in documents outlined above were identified within the WSI (Horizon, 2017) *were identified. These questions were;*

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?

4 Methodology

4.1 Surveying and Setting Out

The strip, map and sample area was surveyed and set out by the Main Contractor, Balfour Beatty Jones Brothers Joint Venture (JBBBJV). The excavation area and all archaeological features were subsequently surveyed using a Leica Viva GPS system. All surveys were tied in to the Ordnance Survey National Grid.

4.2 Mechanical Excavation

Topsoil and any other overburden was removed using a tracked 360 degree excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under direct archaeological supervision.

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 of the underlying archaeological features were revealed, or when the absence of any archaeological 'horizon' was adequately demonstrated.

After the completion of mechanical excavation, both the spoil heaps and the stripped surface were scanned both with a metal detector and visually. Any artefacts of potential archaeological interest identified because of this work were recovered and their locations accurately recorded.

4.3 Hand Excavation

Immediately after the removal of deposits overlying the archaeological horizon, the area was manually cleaned, and all features investigated and recorded as per standard ABA procedures.

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 taking these signals into account.

All excavations were undertaken in accordance with best practice as set out in Standards and Guidance for Archaeological Excavation (CIfA, 2014a).

All archaeological remains identified were excavated in accordance with the following strategy as set out in the WSI (Horizon, 2017):

- 100% of all positive features likely to obscure earlier archaeological features;
- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships;
- discrete negative features (more than 1m 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%;

- in addition to the above, all intersections between features and all terminals of linear features; and
- other features: 25%, unless otherwise agreed with the Consultant.
- The location of all small finds, with the exception of those discovered within discrete features, were recorded in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.4 Recording

All excavated contexts were fully recorded in line with the standards set out in the WSI (Horizon, 2017) and 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. Hand drawn plans and photogrammetry models made of excavated features, were tied in to the overall plan through the use of control points.

A full photographic record was maintained during the excavation 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.

4.5 Palaeoenvironmental Sampling Strategy

Environmental sampling was undertaken in accordance with the sampling policies outlined in the CIfA's Standard and Guidance (CIfA, 2014a) and Environmental Archaeology; A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage, 2011).

4.6 Archiving

The creation, compilation, transfer and deposition of the archaeological archive follows in line with the regulations of the Chartered Institute for Archaeologists Standards and Guidance (CIfA, 2014b).

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.

All finds will be stored in accordance with CIfA's Standard and Guidance (CIfA, 2014c). It is recommended that all artefacts are deposited at Oriel Ynys Môn, Llangefni.

Digital copies of the report will be submitted to Horizon who will then distributed to stakeholders. Printed versions will only be produced if specifically requested.

ABA will hold a digital version of the archive indefinitely.

5 Archaeological Results

Site name: Wylfa Hotspot 6

Site code: AB1703HS6

HER Event Code: 45396 *PRN: 76056*

NGR: SH34829270

Excavated by: Archaeoleg Brython Archaeology CYF.

Site type: Strip, map and sample

Topsoil average depth: 0.20m

Subsoil average depth: 0.30m

5.1 Historic Map Evidence and Documentary Data

No historical map evidence indicating the presence of field boundary ditches (Wessex Archaeology, 2016a).

5.2 Geophysical Survey Results

Geophysical surveys were carried out during the assessment of the site (Hopewell 2011a & b, Hopewell 2012). These pieces of work did not demonstrate the presence of significant archaeological remains within the excavation area.

5.3 Evaluation Results

In 2016 Wessex Archaeology undertook a programme of evaluation trenching within field A7. A total of 54 trenches were opened in this field with 26 of these containing recorded archaeological features (Wessex Archaeology, 2016a,b,c). Of these trenches, 14 contained undated ditches, and two contained undated pits (Wessex Archaeology, 2016a).

Evidence of Prehistoric activity was identified in Trench 254 (Wessex Archaeology, 2016a) and comprised a potential Prehistoric burnt mound deposit overlain by an alluvial deposit. The environmental samples produced sporadic fragments of charred hazel shell (Wessex Archaeology, 2016).

5.4 Excavation Results

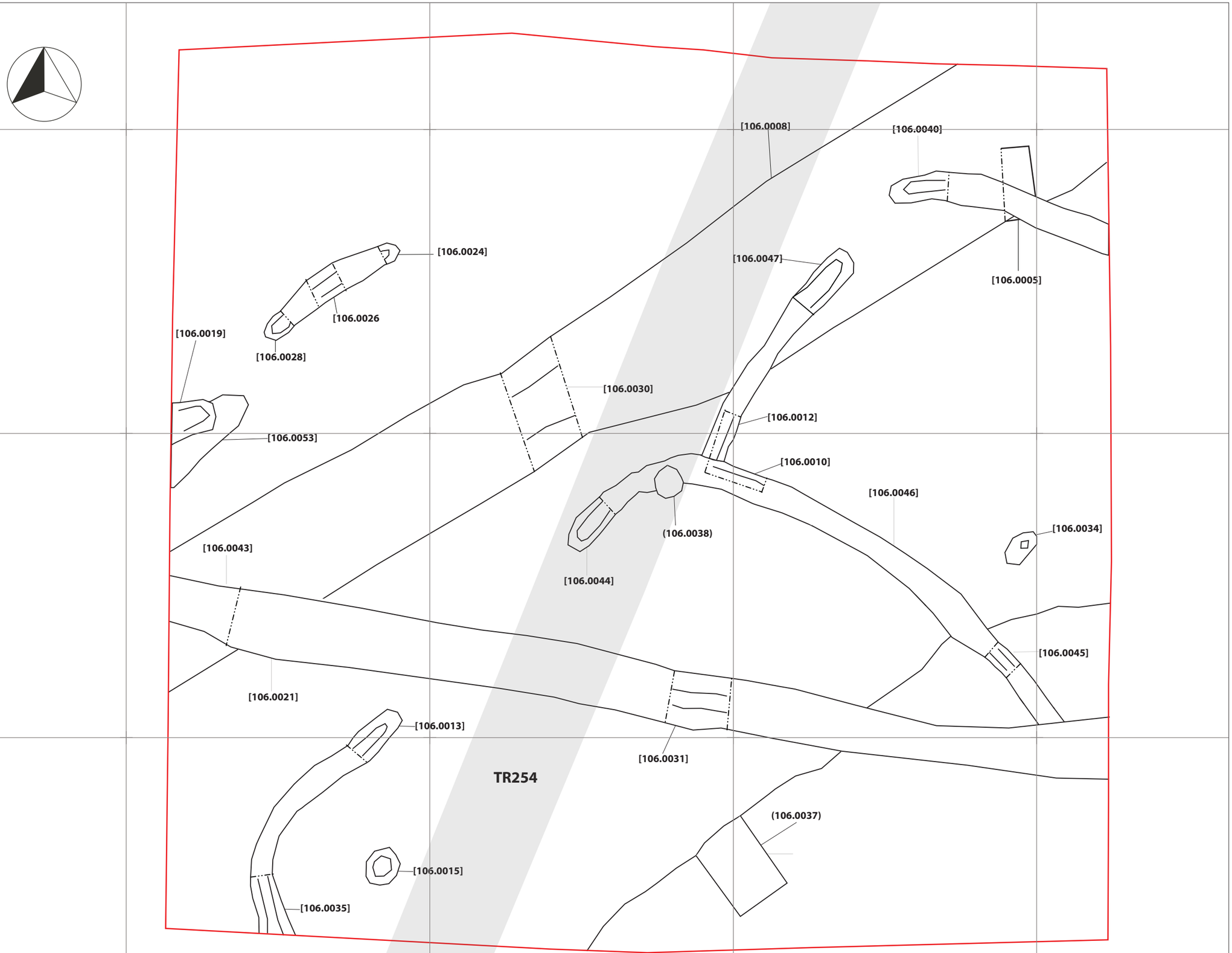
See Figure 2

The excavation of Hotspot 6 by Strip, Map and Sample was carried out by Archaeoleg Brython Archaeology CYF. during September 2018.

The earliest feature at Hotspot 6 was pit [106.0034], the fill of which contained worked chert and flint which was spot dated as later Prehistoric. A colluvial layer to the south east corner of the site (106.0037) contained regular amounts of mixed stones with frequent charcoal and was likely the material recorded as a burnt mound encountered and recorded in the evaluation Trench 254.

A linear trackway oriented south west to north east [106.0008] traversed the full width of the trench, towards Strip, Map and Sample Hotspot 7/9 and likely formed the same trackway observed in this location. No datable artefacts were recovered from the trackway, although bulk samples were recovered from the silted material overlying the trackway surface.

A series of intercutting ditches were recorded across Hotspot 6. These ditches may represent two roughly square enclosures with possible entrances located to their north west sides, with the enclosure to the south-west being the latest. The ditches forming the two enclosures were observed to be stratigraphically later than the trackway and the colluvium, with the ditch of the earlier enclosure to the located to the north west cutting silted deposits overlying the trackway surface, and the eastern ditch forming part of the later south western enclosure cutting the colluvial material. Apart from a possible struck flint (S.F. 002) recovered from the fill of ditch cut [106.0010], no further finds were recovered from the enclosure ditch fills, although environmental samples were recovered from each.



Grid - 5m

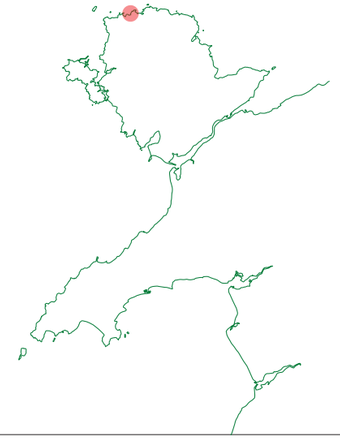


Figure 2
Site Plan, Hotspot 6.

Key

Excavation Area

Evaluation Trenches

Extent Of Excavation

© Archaeoleg Brython Archaeology CYF.

Drawn By:	DPN
Date:	22/10/18
Location:	SH34829270
Project:	AB1703 Hotspot 6

Archaeoleg Brython Archaeology

6 Finds and Dating Evidence

During the course of the excavation of Strip, Map and Sample at Hotspot 6 no bulk finds and 0.66kg of small finds were recovered.

The small finds comprised of; one piece of struck flint (S.F.002) recovered from the fill (106.0009) of ditch terminus [106.0010], though the flint was noted as not securely within in the context; two lithics; one worked chert (S.F.003) and flint flake (S.F. 004) were found within the fill of pit [106.0034]. The two lithics from the pit were the only artefacts discovered in secure contexts.

No scientific dating has been undertaken. Suitable material for radiocarbon dating is likely to be present in the bulk environmental samples, and this material needs to be recovered during the assessment stage of the post-excavation programme.

7 Palaeoenvironmental

A total of 12 bulk environmental samples were collected from archaeological deposits at Hotspot 6 comprising of 33 10 litre buckets for processing using a flotation method in order to identify botanical and faunal remains.

Generally, the rate of recovery of datable artefacts during excavation is notably poor in the region of North West Wales. As such, more importance has been placed on the recovery of paleoenvironmental samples to provide data to help establish a chronology and narrative to sites in this region. Due to this, it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

8 Quantification and Recommendations

8.1 Quantification of Excavation Data

Data Category	**Number**
Context	56
Small finds	4 (65.6g)
Bulk finds	-
Environmental samples	12
Monochrome film	X
Digital photographs	61
Rectified photographs / Photogrammetry	424
GPS surveyed digital pre-excavation plans	3
GPS surveyed digital excavation plans	1
TST surveyed digital excavation plans	X
Hand drawn plans	2
Hand drawn sections	19

8.2 Recommendation for Further Work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	Contexts, plans and sections Small Finds Environmental samples Lithics C^{14} Dating
Publication of key data categories	✓
Deposit archive	✓

9 Discussion

Hotspot 6 was believed to contain a burnt mound during evaluation, but upon excavation this proved to be a series of colluvial deposits which contained stone and charcoal. The presence of charred Hazelnut shells in these deposits and a spot dated Prehistoric pit nearby suggest the potential for early activity in the area which is a priority in the identified research framework objectives outlined in documents discussed in section 3.2 of this document.

Of particular note, the strip, map and sample at Hotspot 6 highlighted the presence of a trackway, and similar to the colluvial deposits identified in the south eastern corner of the trench, was observed to be chronologically earlier than the squared enclosure. This trackway traversed the site parallel to an area of what is currently low-lying wetland to the south, and the utilisation of this trackway is a key consideration when Hotspot 6 is placed within a wider archaeological landscape. The lithics recovered from features within Hotspot 6 may correspond with this earlier activity and should be considered when assessed in a further phase of post-excavation analysis.

Determining the chronology for archaeological remains recorded at Hotspot 6 from the feature typology was problematic, especially considering the lack of finds. Due to this, the data from the environmental samples is critical in helping to establish the date and function of these features. In particular, should ecofacts recovered during the environmental processing be of a sufficient nature, the radiocarbon dating of the fills of the squared enclosure ditches and deposit overlying the trackway will be critical. With the present data recovered from excavation of Hotspot 6, the remains of the squared enclosure may relate to the later Prehistoric period but could equally be of a later date.

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Appendix I

Archaeoleg Brython Archaeology

Team AB1703

Archaeoleg Brython Archaeology Team AB1703

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Stephen Porter

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Gary Reid

Clair Richardson

Louis Roper

Kurt Russell

Karolina Saxerbo Sjoberg

Victoria Scott

James Sinclair

Robert Slabonski

Elena Stefani

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1-10 Hotspot 6 photos

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Appendix II

Archaeoleg Brython Archaeology

Hotspot 6

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Plate 2: Post excavation shot of Hotspot 6 excavation area. View from the west. 2x1m scales..... 2



Plate 1: Pre excavation shot of Hotspot 6 excavation area. View from the west. 2x2m scales.



Plate 2: Post excavation shot of Hotspot 6 excavation area. View from the west. 2x1m scales.

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1-11 Wylfa Summary Report Hotspot 7-9

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Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 7/9
Document Number:
WYN-BRY-CON-REP-00012 v1.2

Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 7/9

Wylfa archaeological works on behalf of Horizon Nuclear Power

Prepared for Horizon Nuclear Power

Text by Iwan G. Parry, Edmund Palka, Laura Wilson Parry and Cindy Nelson-Viljoen

Illustrations by Declan New and Laura Wilson Parry

January 2019

WYN-BRY-CON-REP-00012 v1.2

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Summary

Archaeoleg Brython Archaeology CYF. have completed the excavation of potential prehistoric and medieval features at Hotspot 7-9, Wylfa, Anglesey (NGR SH34879274) in advance of an application to construct the proposed Wylfa Newydd nuclear power station. The excavation area measured 904m^2 and the archaeological remains identified within the area consisted of a Prehistoric stakehole group, pits, burnt mound, troughs, stone surface, well and trackway. All work was undertaken in accordance with the Written Scheme of Investigation (WSI) and monitored by Gwynedd Archaeological Planning Services.

During a phase of archaeological evaluation trenching undertaken in 2015/16 by Wessex Archaeology, a suspected burnt mound and ring gulley was identified. Hotspot 7-9 was located to address the archaeological potential of these remains and was excavated during October and November 2018 by Archaeoleg Brython Archaeology. The excavation revealed a burnt mound and associated troughs, one of which was timber lined, which likely date to the Bronze Age; a prehistoric stakehole and pit group; possible field system; stone surface and well likely to be associated with nearby settlement activity; and an undated trackway.

Based upon the results of the excavation, it is recommended that the archaeological potential of the assemblage and archive produced from the excavation of Hotspot 7-9 be further analysed and the results be disseminated in the form of an assessment report in line with the Written Scheme of Investigation.

1 Introduction

Archaeoleg Brython Archaeology CYF. (ABA) have been commissioned by Horizon Nuclear Power Ltd. (HNP) to undertake a phased programme of strip, map and sample excavation in advance of the submission of a Development Consent Order (DCO) application (PINS Reference Number EN010007) for the proposed construction of the Wylfa Newydd nuclear power station. The purpose of this document is to provide supporting evidence for Horizon's DCO application, and to summarise the results of the excavation in advance of the production of an assessment report.

This report provides a summary of the results of archaeological excavation at Strip, Map and Sample (SMS) Hotspot 7-9 undertaken during 2018 and represents the first phase of the post-excavation analysis regarding the archaeological investigations at the Wylfa Newydd site. Following the production of a Written Scheme of Investigation (WSI) (Horizon, 2017), and in line with paragraphs 5.8.21 of the Overarching National Policy Statement for Energy (EN-1) (2011), the scope of all works was agreed and monitored whilst in progress by Gwynedd Archaeological Planning Service (GAPS), cultural heritage advisors to the Local Authority. Wardell Armstrong LLP. (WA) have been employed by HNP as cultural heritage consultants for the project and within this capacity have provided guidance and advice during the works.

2 Background

Due to their close proximity to each other Hotspot 7 and Hotspot 9 were merged to become Hotspot 7-9. Hotspot 7-9 was located approximately 730m west of Tregele and 980m south of the existing power station on a south-easterly sloping field on the edge of marsh land in a pastural field, previously labelled "A7" during the archaeological trial trench evaluation. The investigation area was at a height of approximately 17m AOD.

Prior to excavation of Hotspot 7-9, 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 (Wessex Archaeology, 2016a,b,c). A number of Strip, Map and Sample areas described as "Hotspots" were identified as a result of the evaluation trenching. These were organised into four zones referred to as 1a, 1b, 2 and 3 within the WSI (Horizon, 2017). Hotspot 7-9 was located in Hotspot Zone 1a. Hotspot 7-9 was selected for excavation based on the results of the evaluation trenching which identified the remains of a bunt mound and ring gulley.

Superficial deposits in the area consist of Till, Devensian – Diamicton. These are sedimentary deposits which formed between 116 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, 2018).

42m

W

Rhwng Dau
Fynydd

Drain

Drain

Tyddyn-g

0 100
metres

5

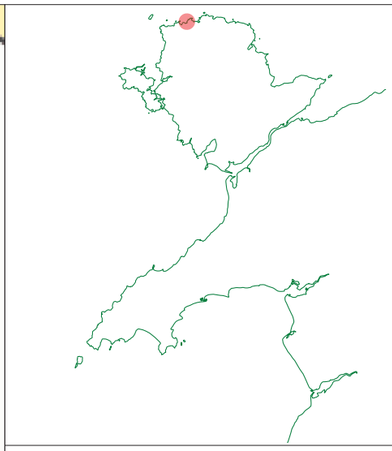


Figure 1
Location Plan, Hotspot 7-9.

Key

Hotspot 7-9

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Drawn By:
LWP

Date:
31/01/19

Location:
SH34879274

Project:
AB1703 Hotspot 7-9

Archaeoleg Brython Archaeology

3 Aims and Objectives

3.1 Archaeological Strip, Map and Sample Aims

The aims of the archaeological strip, map and sample identified in the WSI (Horizon, 2017) were as follows:

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 (so 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; and

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.

3.2 Archaeological Strip, Map and Sample Objectives

The relevant archaeological framework documents identified in the WSI (Horizon 2017) were;

- *Review of the Research Framework for the Archaeology of Wales: North West Wales – Neolithic and Early Bronze Age (Steve Burrow, 2010).*
- *Review of the Research Framework for the Archaeology of Wales: North West Wales – Later Bronze Age and Iron Age (Fiona Gale, 2010).*
- *A Research Framework for the Archaeology of Wales – Romano British (AD 43-AD 410) (Davies, 2011).*
- *A Research Framework for the Archaeology of Wales: North West Wales - Early Medieval c. AD 400-1070 (Nancy Edwards, Tudur Davies and Kate A. Hemer, 2016).*
- *A Research Framework for the Archaeology of Wales: North West Wales – Medieval c.AD 1100 – 1539 (David Longley, 2010).*

These documents identify research objectives, and the WSI presented research questions derived from the objectives of the research frameworks outlined above. As a burnt mound and ring gulley was identified during the evaluation, the questions relevant to Hotspot 7-9 were;

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.

The results of the excavation revealed archaeological remains of a burnt mound, ring gulley, a series of pits and stakeholes, a wooden construction and several ditches. Following the results of the excavation, the following questions should be addressed:

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?

Prehistoric artefacts were discovered, during trial trenching, and consisted of worked lithic artefacts, associated debitage and pottery. As such, questions addressing the research objectives in documents outlined above were identified within the WSI (Horizon, 2017) were identified. These questions were;

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?

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. The following questions should 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?

4 Methodology

4.1 Surveying and Setting Out

The strip, map and sample area was surveyed and set out by the Main Contractor, Jones Brothers Balfour Beatty Joint Venture (JBBBJV). The excavation area and all archaeological features were subsequently surveyed using a Leica Viva GPS system. All surveys were tied in to the Ordnance Survey National Grid.

4.2 Mechanical Excavation

Topsoil and any other overburden was removed using a tracked 360 degree excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under direct archaeological supervision.

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 of the underlying archaeological features were revealed, or when the absence of any archaeological 'horizon' was adequately demonstrated.

After the completion of mechanical excavation, both the spoil heaps and the stripped surface were scanned both with a metal detector and visually. Any artefacts of potential archaeological interest identified because of this work were recovered and their locations accurately recorded.

4.3 Hand Excavation

Immediately after the removal of deposits overlying the archaeological horizon, the area was manually cleaned, and all features investigated and recorded as per standard ABA procedures.

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 taking these signals into account.

All excavations were undertaken in accordance with best practice as set out in Standards and Guidance for Archaeological Excavation (CIfA, 2014a).

All archaeological remains identified were excavated in accordance with the following strategy as set out in the WSI (Horizon, 2017):100% of all positive features likely to obscure earlier archaeological features;

- 100% of all positive features likely to obscure earlier archaeological features;
- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships;
- discrete negative features (more than 1m 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%;

- in addition to the above, all intersections between features and all terminals of linear features; and
- other features: 25%, unless otherwise agreed with the Consultant.
- The location of all small finds, with the exception of those discovered within discrete features, were recorded in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.4 Recording

All excavated contexts were fully recorded in line with the standards set out in the WSI (Horizon, 2017) and 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. Hand drawn plans and photogrammetry models made of excavated features, were tied in to the overall plan through the use of control points.

A full photographic record was maintained during the excavation 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.

4.5 Palaeoenvironmental Sampling Strategy

Environmental sampling was undertaken in accordance with the sampling policies outlined in the CIfA's Standard and Guidance (CIfA, 2014a) and Environmental Archaeology; A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage, 2011).

4.6 Archiving

The creation, compilation, transfer and deposition of the archaeological archive follows in line with the regulations of the Chartered Institute for Archaeologists Standards and Guidance (CIfA, 2014b).

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.

All finds will be stored in accordance with CIfA's Standard and Guidance (CIfA, 2014c). It is recommended that all artefacts are deposited at Oriel Ynys Môn, Llangefni.

Digital copies of the report will be submitted to Horizon who will then distributed to stakeholders. Printed versions will only be produced if specifically requested.

ABA will hold a digital version of the archive indefinitely.

5 Archaeological Results

Site name: Wylfa Newydd Hotspot 7-9

Site code: AB1703HS79

HER Event Code: 45396 PRN: 76057

NGR: SH34879274

Excavated by: Archaeoleg Brython Archaeology CYF. Site Director Iwan Parry

Site type: Strip, map and sample

Topsoil average depth: 0.475m

Subsoil average depth: 0.37m

5.1 Historic Map Evidence and Documentary Data

No evidence of field boundaries, ditches or any other archaeological features was found on historical maps (Wessex Archaeology, 2016a).

5.2 Geophysical Survey Results

Geophysical surveys were carried out during the assessment of the site (Hopewell 2011a,b, Hopewell, 2012). The survey did potentially show the presence of a suspected burnt mound within the excavation area.

5.3 Evaluation Results

Wessex Archaeology undertook a programme of evaluation trenching within field A7. A total of 54 trenches were opened in this field with 26 containing recorded archaeological features (Wessex Archaeology, 2016b). Of these trenches, 14 contained undated ditches, and two contained undated pits (Wessex Archaeology, 2016a).

The original evaluation trench (Trench 252) which was targeted by Hotspot 7, contained a ring-gully (25212) measuring 0.40m wide x 0.30m deep, burnt stones, charcoal and charred plant remains. One internal feature in the form of a pit [25219], measuring 0.58m in diameter was recorded, but not excavated. No dating evidence was recovered but the ring-gully lay 17m north-west of a burnt mound in trench 1345, hinting at a probable contemporary prehistoric date (Wessex Archaeology, 2016a).

The original evaluation trench (Trench 1345) which was targeted by Hotspot 9, contained a burnt mound (134508) measuring approximately 1.36m x 0.36m x 0.15m, which contained low proportions of charred plant remains, being dominated by wood charcoal. There was also a possible hearth (134504) measuring 0.5m x 0.42m x 0.1m, which lay approximately 5m from the burnt mound. The hearth contained heat affected clay above a burnt stone and charcoal deposit (Wessex Archaeology, 2016a).

5.4 Excavation Results

See Figure 2

Excavation at Strip, Map and Sample Hotspot 7-9 was carried out during September and November 2018. The archaeology identified in Hotspot 7-9 comprised a burnt mound and associated troughs, a series of intercutting pits, post holes, stake holes, ditches, gullies and a probable stone built well. At the western edge of the Hotspot a large bedrock outcrop was identified, the outcrop appeared to have been quarried at some point in the past.

5.4.1 Stakehole group and pits

A small pit and 35 stakeholes (Group number 109.0101) were excavated approximately 7m to the north of the burnt mound (109.0136). The stakeholes may have formed 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].

To the south-east of the stakehole group two pits [109.0109] and [109.0163] were identified which are 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 silty sand which was similar in appearance to nearby glacial deposits. A later deposit containing fire-cracked stones (109.0106) was sealed by a silty deposit (109.0100) which contained a fragment of Neolithic or Bronze Age pottery (SF002) and flint scraper (SF003). Pit [109.0163] was also cut into bedrock, measuring up to 1.4m in diameter and 0.14m deep. The primary fill of the pit (109.0165) was a compacted stony grey clay and was overlain by a charcoal rich deposit containing heat affected stones (109.0164).

5.4.2 Burnt Mound

The burnt mound (Group number 109.0136) likely had four main phases of activity represented by four troughs. Firmly establishing the chronology of the four troughs could not be done on site due to the lack of stratigraphic relationships. A number of smaller pits were also likely to be associated with the burnt mound but their function could not be firmly established.

It is possible that the first trough associated with the burnt mound was [109.0190]. The trough was 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 sandy silt (109.0188) and (109.0189), with inclusions of heat altered stones. The trough was truncated by a circular pit [109.0187], which may have been deliberately dug into the ground water table for use as a water source. The pit was backfilled with burnt mound material consisting of a dark blackish-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).

A second 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, fragments of which were recovered and retained. Deposits (109.0169) and (109.0170) were a mixture of grey-orange silty and sandy 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 consisting of soft, friable dark-brown-black silt with inclusions of charcoal fragments and frequent heat altered stones.

The third trough was located to the south-east of the burnt mound and was not fully sealed by burnt mound material, suggesting it may relate to a later phase of activity. Trough [109.0125] was oval shaped and measured 3.50m in length, 1.63m wide and 0.55m deep and was filled with loose, greyish-brown silty sand and clay, with inclusions of charcoal. A possible worked pebble with signs of use (SF018) was recovered from its fill (109.0123). The trough was truncated by a modern field drain [109.0127].

The fourth possible trough [109.0205] was sub-rectangular in shape, measuring 2.4m in length, 1.6m wide and 0.15m deep. The shallow nature of the feature and the fact that it did not contain burnt mound material suggests that it may have served another function. It was filled with compacted silty clay with inclusions of small stones which were not heat affected. It is possible that the feature relates to activity to the east rather than the burnt mound.

Three pits [109.0135], [109.0161] and [109.0187], were likely to associated with the burnt mound and were sealed by the burnt mound material (109.0154). Pit [109.0187] truncated trough [109.0187] and clearly relates to a later phase of activity after the trough had been backfilled. It measured 1m in diameter and 0.5m deep and was filled with burnt mound material. The feature was below the current ground water table, it is possible that this was intentional to provide a water source when the feature was in use.

A potential shallow tree throw or bole [109.0180], located in the south-eastern section of the burnt mound and within the limits of the excavation, consisted of irregular shaped cut measuring 1.6m in length, 0.8m wide and 0.26m deep, and contained a large amount of waterlogged organic material. The four fills consisted of plastic dark-brown peat and clay with occasional inclusions of stones (109.0183), on top off a friable black silt with inclusions of charcoal and small stones (109.0184), that was situated on top of a friable orange-brown sandy clay (109.0182), which overlaid a plastic dark-brown peat clay deposit with occasional inclusions of small stones (109.0181). The feature could represent part of a fifth trough extending beyond the limit of the excavation.

The spread of burnt mound material (109.0154), measured 20m in length, 10m wide and 0.15m deep. It consisted of soft friable black silt with inclusions of heat altered stones. Although the numerous troughs associated with the spread suggest that it was formed in a number of phases they could not be confidently identified during excavation. The deposit is likely to have spread, possibly accelerated by later ploughing, which may have resulted in evidence of phasing being lost. A spindle whorl (SF020) was recovered from this deposit.

5.4.3 Stone surface and associated features

At the southeast corner of the excavation area a number of deposits were identified which appeared to be associated with a possible structure.

Deposit (109.0143) 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. The well comprised a stone structure of schist slabs within the cut, the base of which was below the current ground water table. The well was similar to other examples encountered in Area O5 South which were associated with Iron Age/Romano British roundhouses. A compacted stone surface (109.0210) abutted the stones of the well and is likely to be contemporary. These features may be associated with the Iron Age/Romano British settlement identified in Hotspot 15 to the northeast.

5.4.4 Gullies

A number of gullies of indeterminate function were identified within the excavation area. One of these gullies [109.0130] was later than the burnt mound, by association it is probable that the other gullies of similar nature are also later in date.

Linear gulley [109.0130] was oriented northwest-southeast and measured 2.66m in length, 0.45m wide and 0.14m deep, it contained a fill of firm dark-brown-grey silty clay with occasional inclusions of charcoal fragments and small stones (109.0129). A recut of the gulley [109.0132] running along the same alignment and extending beyond the north-east 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.

At the northern end of the excavation area gulley [109.0008] was of similar dimensions to [109.0130], measuring 0.68m wide and 0.24m deep. It continued beyond the limits of excavation and was orientated northeast to southwest, terminating immediately north of the Bedrock outcrop.

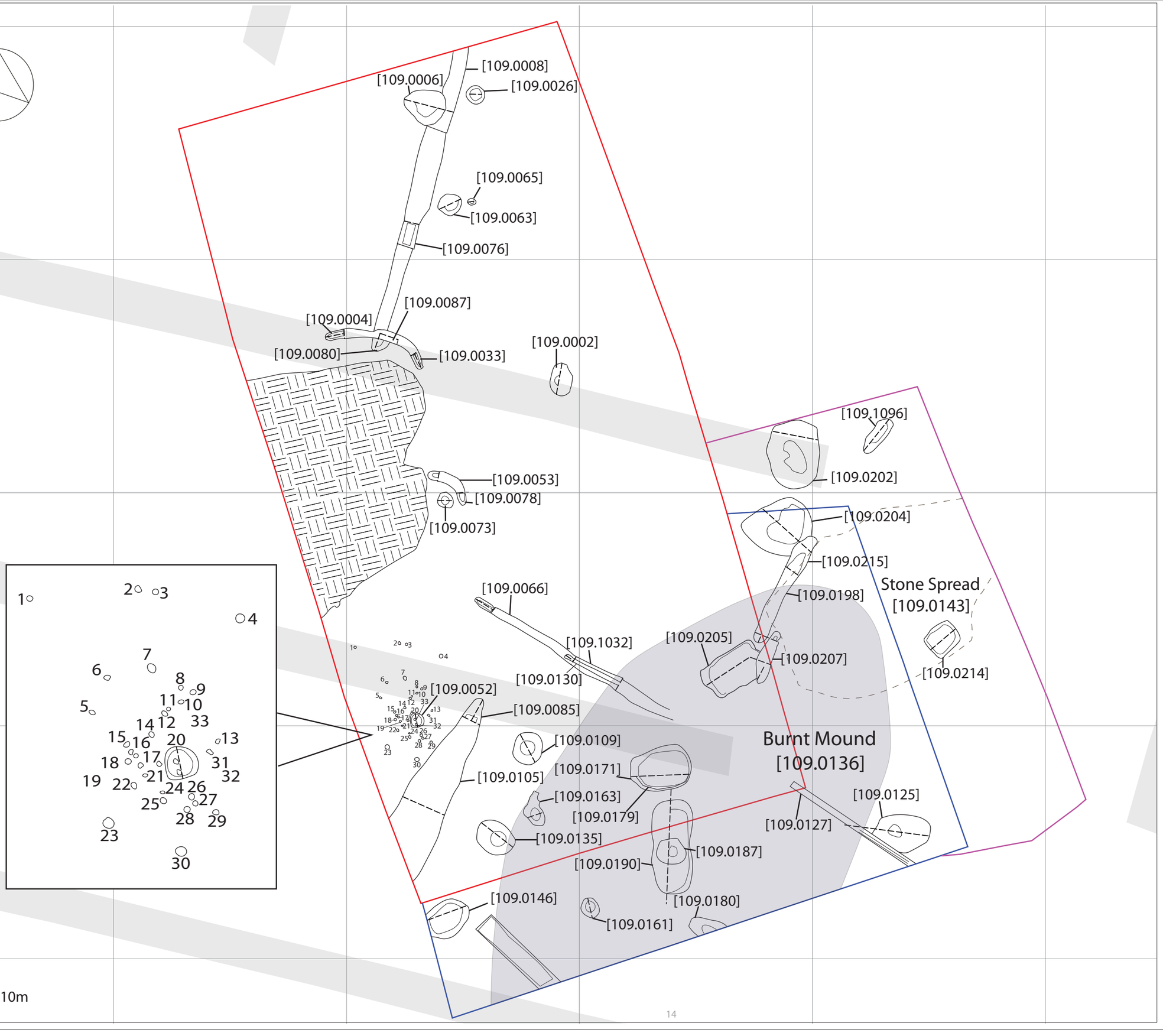
A further possible gulley of similar dimensions is represented by [109.0198] and [109.0196]. Gulley [109.0198] was orientated northeast to southwest and measured 0.7m wide and 0.05m deep, on the same orientation [109.0196] was originally recorded as a pit measuring 0.35m wide and 0.08m deep but is likely to be part of the same feature.

Collectively these gullies appear to form an enclosure, similar to those identified in Hotspot 6 to the west and Hotspot 11-13 to the northeast.

Two features recorded as ring gullies [109.0004] and [109.0053] were identified close to the bedrock outcrop. [109.0004] was located immediately north of the outcrop and was cut by gulley [109.0008], it appeared to respect the outline of the outcrop and measured 4.8m in length, 0.4m wide and 0.14m deep. The second was smaller, measuring 2.2m in length, 0.4m wide and 0.1m deep. The ring gullies did not appear to be associated with any structures and may be associated with the quarrying of the outcrop.

5.4.5 Trackway

A probable trackway [109.0105] was identified at the southwestern corner of the excavation area. The feature consisted of a shallow cut or depression which had been filled with a compacted deposit of small to large sub-angular stones in a clay silt matrix. 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.



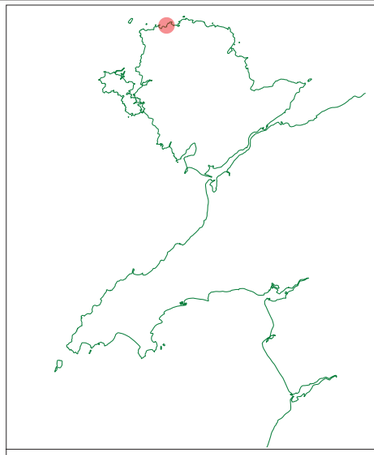


Figure 2
Site Plan, Hotspot 7-9.

Key

- Excavation Area
- First Extension
- Second Extension
- Evaluation Trenches
- Bedrock

STAKEHOLES (GROUP NO:

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

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Drawn By: DPN

Date: 18/12/18

Location: SH34879274

Project: AB1703 Hotspot 7-9

Archaeoleg Brython Archaeology

6 Finds and Dating Evidence

No bulk finds and 1.3985kg of small finds were recovered during the course of the excavation of Strip, Map and Sample Hotspot 7-9.

27 Small finds were retained and include: one modern ceramic fragment, bone, worked stone and lithics. As such a Prehistoric date is tentatively ascribed.

No scientific dating has been undertaken and the lack of datable artefacts may indicate a necessity for radiocarbon dating to establish a robust chronology. Suitable material for radiocarbon dating is likely to be present in the bulk environmental samples, and this material needs to be recovered during the assessment stage of the post-excavation programme.

7 Palaeoenvironmental

A total of 90 bulk environmental samples comprising of 345 10 litre buckets were collected from archaeological deposits at Hotspot 7-9 for processing using a flotation method in order to identify botanical and faunal remains.

Overall, the rate of recovery of dateable artefacts during excavation is notably poor at Hotspot 7-9. As such, far more importance is place on the recovery of palaeoenvironmental samples to provide data to establish chronology and narrative to the sites in this region.

Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to environmental data is assessed following processing

8 Quantification and Recommendations

8.1 Quantification of Excavation Data

Data Category	**Number**
Context	218
Small finds	27 (1.398.5g - 1.3985kg)
Bulk finds	0
Environmental samples	90 (3440 litres / 345 buckets)
Monochrome film	X
Digital photographs	191
Rectified photographs / Photogrammetry	2906
GPS surveyed digital pre-excavation plans	1
GPS surveyed digital excavation plans	1
TST surveyed digital excavation plans	X
Hand drawn plans	6
Hand drawn sections	87

8.2 Recommendation for Further Work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	Contexts, plans and sections Small finds Lithics Ceramics Worked stone Environmental samples C^{14} dating
Publication of key data categories	✓
Deposit archive	✓

9 Discussion

Hotspot 7 was targeted for excavation due to the potential for archaeology identified during evaluation trenching that revealed a ring-gully, burnt stones and charcoal, and a pit (Wessex Archaeology, 2016a). Hotspot 9 was targeted for excavation due to the potential for archaeology identified during evaluation trenching that included a burnt mound and a possible hearth (Wessex Archaeology, 2016a). Due to their close proximity to each other the two hotspots were merged to become Hotspot 7-9.

During excavation an area of 904m^2 was stripped, revealing the presence of a stakehole group, burnt mound, compacted stone surface, well, possible enclosure system and trackway.

Based on the nature of the archaeology it is likely that the first phase of activity at the site was the stakehole group and rock-cut pits. Similar stakehole patterns have been recorded on numerous sites in North West Wales, including at Parc Bryn Cegin, Llandegai where a small stakehole structure around a pit were associated with hot stone technology (Kenney, 2008). Relatively little heat fractured stones were associated with this group of features, suggesting that they were not associated with the main burnt mound. The pottery identified in one of the pits could potentially be Late Neolithic in date and although some burnt mounds have been dated to this period the majority in North West Wales date to the Bronze Age (Kenney, 2011).

The burnt mound was a classic kidney shaped mound of heat affected stone with four, and possibly a fifth, associated troughs. The presence of the four troughs indicates that the burnt mound was probably in use for a considerable length of time, although based on evidence from other examples use may not have been continuous (Kenney, 2011). Three of the identified troughs were fairly standard sub circular pits which did not reveal any evidence of lining material suggesting that they naturally held water due to being below the ground water table. Trough [109.0171] was different in that a wooden tank had been constructed within the cut. Other examples of timber lined troughs have been found in North West Wales, one example was found at Porth Neigwl (Kenney, 2011), so the discovery is not unusual but could provide evidence of why some troughs were constructed this way. No evidence of a hearth was identified in association with the burnt mound, it is possible that once the mound of burnt stone had formed it could have been the favoured location for a hearth as it would have been raised from the surrounding marshy ground. Any evidence of hearths within the mound material is likely to have been lost due to general erosion and ploughing. The function of burnt mounds is widely debated with suggestions including sweat lodges, cooking sites, washing, plant processing and brewing. What is accepted is that burnt mounds are formed as the result of heating water, it is possible that the sites had multiple functions based on the same technology.

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 and well are similar to examples identified at Hotspot 15 and Area O5 South, located 60m and 330m to the east, which were associated with Iron Age/Romano British roundhouse settlements. It can be said with certainty that no associated structures were present within Hotspot 7-9 but it is possible that a structure was located nearby.

The possible enclosure system formed by the linear gullies identified within the excavation area is similar to the examples identified in Hotspots 6 and 11-13. The presence of the enclosures over a relatively large area suggests that these may represent an extensive, but ephemeral, field system. No datable artefacts were recovered from any of the gullies associated with this possible field system, as such radiocarbon dating should be considered a priority.

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 scientific dating. It is likely that the trackway was used to traverse the edge of the wetland to the south.

Determining the chronology for archaeological remains recorded at Hotspot 7-9 from the feature typology and the dearth of finds is difficult. Because of this, the data from the environmental samples is critical in helping to establish the date and function of these features. In particular, should ecofacts recovered during the environmental processing be of a sufficient nature, the radiocarbon dating of the fills of the burnt mound troughs, stakehole group, gullies, well and associated features will be critical.

Processing of the bulk environmental soil samples, through floatation, and analysis of the flots would identify and quantify charred plant remains, if any are present, and the residues from the environmental processing should also be checked for material which could help determine if, and what, processes were occurring nearby.

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Appendix I

Archaeoleg Brython Archaeology

Team AB1703

Archaeoleg Brython Archaeology Team AB1703

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Pedro da Silva

Stuart Elder

Thomas Eley

Marta Estanga Lopez de Murillas

Lucia Fernandez Rabanal

Sean Finlay-Scott

James Fish

Amy Gamman

Catherine Godsiffe

Sergio Gomez-Carrion

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Rocio Jimenez Diaz

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William Jones

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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

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Archaeoloeg Brython Archaeology CYF
Cofrestrwyd yn Lloegr a Chymru - Registered in England and Wales - 10753130

1-12 Hotspot 7-9 photos

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Appendix II

Archaeoleg Brython Archaeology

Hotspot 7-9

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Plate 1: Bedrock cut pit [109.0109]. View from the north east. 1x1m scale.



Plate 2: Working shot showing stakehole group and trackway. View from the south west. 1x1m scale.



Plate 3: Bedrock cut pit [109.0135]. South west facing section. 1x1m scale.



Plate 4: Working shot of slot through burnt mound (109.0136). View from the north west.1x2m scale.



Plate 5: Pre excavation shot of stone built well [109.0214]. View from the south east. 2x1m scales.

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1-13 Wylfa Summary Report Hotspot 8

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Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 8

Document Number WYN-BRY-CON-REP-00006 v1.2

Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 8

Wylfa archaeological works on behalf of Horizon Nuclear Power

Prepared for Horizon Nuclear Power

Text by Laura W. Parry, Cindy Nelson-Viljoen, and Iwan G. Parry

Illustrations by Declan New and Laura W. Parry

October 2018

WYN-BRY-CON-REP-00006 v1.2

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Summary

Archaeoleg Brython Archaeology CYF. have completed the excavation of potential Romano-British features at strip, map and sample Hotspot 8, Wylfa, Anglesey (NGR SH34909278) in advance of an application to construct the Wylfa Newydd nuclear power station. The excavation area measured approximately 375m^2 and the archaeological remains identified within the area consisted of two ditches, two potential post-holes, and fourteen pits. All work was undertaken in accordance with the Written Scheme of Investigation and monitored by Gwynedd Archaeological Planning Services.

During a phase of archaeological evaluation trenching undertaken in 2015 and 2016 four pits were identified. Hotspot 8 was located to address the archaeological potential of these remains and was excavated during September and October 2018. The excavation revealed the remains of furnace lining from a ditch, indicating possible industrial activity in the vicinity. Domestic activity was identified in the form of a spindle whorl and, tenuously, a possibly granary interpreted from pits and potential post-holes. It is possible that the features relate to edge of settlement activity associated with Romano-British archaeology identified to the east in Hotspot 15.

The recovery of furnace lining and a spindle whorl might indicate the activity identified at Hotspot 8 dated either to the Iron Age, Romano-British or early medieval periods. Due to the lack of dateable artefacts and potential industrial and domestic nature of the identified features, the environmental samples collected require processing to help determine date, function and relationships to the archaeology of the wider area.

Based on the results of the excavation, it is recommended the archaeological potential of the assemblage and archive produced from the excavation of Hotspot 8 be further analysed and the results be disseminated in the form of an assessment report in line with the Written Scheme of Investigation.

1 Introduction

Archaeoleg Brython Archaeology CYF. (ABA) have been commissioned by Horizon Nuclear Power Ltd. (HNP) to undertake a phased programme of excavation in advance of the submission of a Development Consent Order application (PINS Reference Number EN010007) for the construction of the proposed Wylfa Newydd Power Station. The purpose of this document is to provide supporting evidence for Horizon's DCO application, and to summarise the results of the excavation in advance of the production of the assessment report.

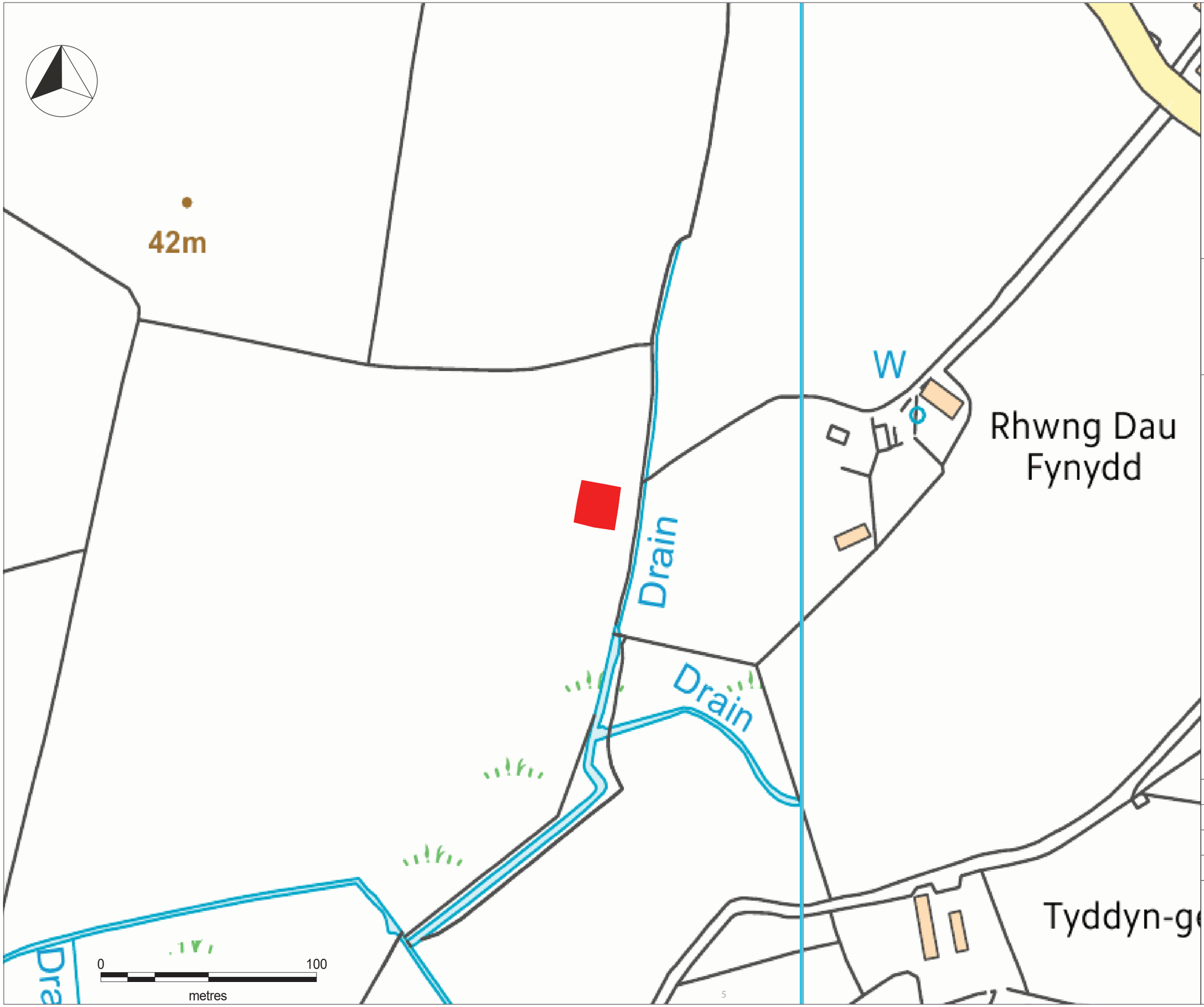
This report provides a summary of the results of archaeological excavation at Strip, Map and Sample (SMS) Hotspot 8, undertaken during 2018. This represents the first phase of the post-excavation analysis regarding the archaeological investigations at the Wylfa Newydd site. Following the production of a Written Scheme of Investigation (WSI) (Horizon, 2017), and in line with paragraphs 5.8.21 of the Overarching National Policy Statement for Energy (EN-1) (Department of Energy and Climate Change, 2011), the scope of all works was agreed and monitored whilst in progress by Gwynedd Archaeological Planning Service (GAPS), cultural heritage advisors to the Local Authority. Wardell Armstrong LLP. (WA) have been employed by HNP as cultural heritage consultants for the project and within this capacity have provided guidance and advice during the works.

2 Background

Hotspot 8 was located approximately 700m west of Tregele, and 900m south of the existing Wylfa power station in a low-lying field, previously labelled A7 during archaeological evaluation trenching. A post-medieval drainage ditch was located approximately 8m east, this in turn drained to a marshy area to the south. The investigation area was at a height of approximately 16m AOD. The field where the hotspot was located was laid to pasture but is likely to have been ploughed in the past.

Prior to excavation of Hotspot 8, it had been subject to an archaeological Desk Based Assessment (DBA) (Cooke et al, 2012), (Hopewell, 2011a,b, 2012) and a thorough programme of evaluation trenching (Wessex Archaeology, 2016a,b,c). Hotspot 8 was selected for excavation based on the results of the evaluation trenching that identified a group of four undated pits (Wessex Archaeology, 2016a). In total 32 strip, map and sample areas described as 'Hotspots' were identified as a result of the evaluation trenching. These were organised into four zones referred to as 1a, 1b, 2 and 3 within the WSI (Horizon, 2017). Hotspot 8 was located in Hotspot Zone 1a.

Superficial deposits in the area consist of Till, Devensian – Diamicton. These are sedimentary deposits which formed between 116 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, 2018).



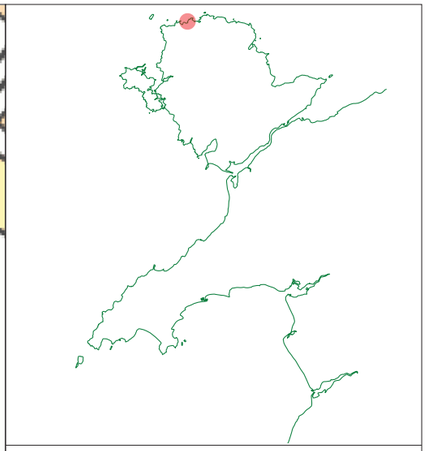


Figure 1
Location Plan, Hotspot 8.

Key

Hotspot 8

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Drawn By: LWP

Date: 22/10/18

Location: SH34909278

Project: AB1703 Hotspot 8

Archaeoleg Brython Archaeology

3 Aims and Objectives

3.1 Archaeological Strip, Map and Sample Aims

The aims of the archaeological strip, map and sample identified in the WSI (Horizon, 2017) were as follows:

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 (so 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;*
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; and*
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.*

3.2 Archaeological Strip, Map and Sample Objectives

The relevant archaeological framework documents identified in the WSI (Horizon, 2017) were;

- Review of the Research Framework for the Archaeology of Wales: North West Wales – Neolithic and Early Bronze Age (Steve Burrow, 2010).
- Review of the Research Framework for the Archaeology of Wales: North West Wales – Later Bronze Age and Iron Age (Fiona Gale, 2010).
- A Research Framework for the Archaeology of Wales – Romano British (AD 43-AD 410) (Davies, 2011).
- A Research Framework for the Archaeology of Wales: North West Wales - Early Medieval c. AD 400-1070 (Nancy Edwards, Tudur Davies and Kate A. Hemer, 2016).
- A Research Framework for the Archaeology of Wales: North West Wales – Medieval c.AD 1100 – 1539 (David Longley, 2010).

These documents identify research objectives, and the WSI presented research questions derived from the objectives of the research frameworks outlined above. As evidence of undated settlement activity in the form of undated pits were identified during the evaluation and possible postholes during the strip, map and sample excavation, the questions relevant to Hotspot 8 were;

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

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

The results of the strip, map and sample excavation revealed further archaeological features, in the form of ditches and as such further relevant research questions should be addressed:

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

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

Prehistoric artefacts were discovered during trial trenching and consisted of worked lithic artefacts (and associated debitage) and pottery. As such, questions addressing the research objectives in documents outlined above were identified within the WSI (Horizon, 2017).

These questions were;

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?

The artefacts recovered from the features at strip, map and sample Hotspot 8 were identified as being possibly Romano-British in origin. Regarding potential Romano-British remains, the following research questions were identified in the WSI (Horizon, 2017);

Q14: How did the culture on the island change, and in what ways, between the Roman and early medieval periods

Q15: What types of Roman Sites are present with the Wylfa Newydd Development Area and how do they relate to their surrounding landscape both in terms of location and utilisation of the landscape

4 Methodology

4.1 Surveying and Setting Out

The strip, map and sample area was surveyed and set out by the Main Contractor, Balfour Beatty Jones Brothers Joint Venture (JBBBJV). The excavation area and all archaeological features were subsequently surveyed using a Leica Viva GPS system. All surveys were tied in to the Ordnance Survey National Grid.

4.2 Mechanical Excavation

Topsoil and any other overburden was removed using a tracked 360 degree excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under direct archaeological supervision.

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 of the underlying archaeological features were revealed, or when the absence of any archaeological 'horizon' was adequately demonstrated.

After the completion of mechanical excavation, both the spoil heaps and the stripped surface were scanned both with a metal detector and visually. Any artefacts of potential archaeological interest identified because of this work were recovered and their locations accurately recorded.

4.3 Hand Excavation

Immediately after the removal of deposits overlying the archaeological horizon, the area was manually cleaned, and all features investigated and recorded as per standard ABA procedures.

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 taking these signals into account.

All excavations were undertaken in accordance with best practice as set out in Standards and Guidance for Archaeological Excavation (CIfA, 2014a).

All archaeological remains identified were excavated in accordance with the following strategy as set out in the WSI (Horizon, 2017):

- 100% of all positive features likely to obscure earlier archaeological features;
- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships;
- discrete negative features (more than 1m 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%;

- in addition to the above, all intersections between features and all terminals of linear features; and
- other features: 25%, unless otherwise agreed with the Consultant.
- The location of all small finds, with the exception of those discovered within discrete features, were recorded in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.4 Recording

All excavated contexts were fully recorded in line with the standards set out in the WSI (Horizon,2017) and 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. Hand drawn plans and photogrammetry models made of excavated features, were tied in to the overall plan through the use of control points.

A full photographic record was maintained during the excavation 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.

4.5 Palaeoenvironmental Sampling Strategy

Environmental sampling was undertaken in accordance with the sampling policies outlined in the CIfA's Standard and Guidance (CIfA, 2014) and Environmental Archaeology; A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage, 2011).

4.6 Archiving

The creation, compilation, transfer and deposition of the archaeological archive follows in line with the regulations of the Chartered Institute for Archaeologists Standards and Guidance (CIfA, 2014b).

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.

All finds will be stored in accordance with CIfA's Standard and Guidance (CIfA, 2014c). It is recommended that all artefacts are deposited at Oriel Ynys Môn, Llangefni.

Digital copies of the report will be submitted to Horizon who will then distributed to stakeholders. Printed versions will only be produced if specifically requested.

ABA will hold a digital version of the archive indefinitely.

5 Archaeological Results

Site name: Wylfa Newydd Hotspot 8

Site code: AB1703HS8

HER Event Code: 45396 PRN: 76058

NGR: SH34909278

Excavated by: Archaeoleg Brython Archaeology CYF.

Site type: Strip, map and sample

Topsoilaveragedepth:0.23m

Subsoil average depth: 0.30m

5.1 Historic Map Evidence and Documentary Data

No evidence of field boundaries, ditches or any other archaeological features was found on historical maps (Wessex Archaeology, 2016a).

5.2 Geophysical Survey Results

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

5.3 Evaluation Results

Wessex Archaeology undertook a programme of evaluation trenching within field A7. A total of 54 trenches were opened in this field with 26 of these containing recorded archaeological features (Wessex Archaeology, 2016a,b,c). Of these trenches, 14 contained undated ditches, and two contained undated pits (Wessex Archaeology, 2016a).

Undated evidence of activity was identified in Trench 1344. During the evaluation the area was noted to be very wet and marshy. The trench was excavated to 1.0m in depth at its south-western end into alluvial deposits and flooded immediately when breaking ground (Wessex Archaeology, 2016a). A coherent but undated pit group consisting of four pits ranging from 0.50m to 0.8m in diameter, and 0.03m to 0.30m in depth were revealed (Wessex Archaeology, 2016a).

5.4 Excavation Results

See Figure 2

Excavation at Strip, Map and Sample Hotspot 8 was undertaken during September 2018 in a trench which measured 375m^2.

Upon stripping the topsoil and subsoil a consolidated deposit of blue schist slabs (108.0041) was encountered between the subsoil and glacial immediately east of ditch [103.0035]. This deposit formed a possible stone platform measuring 2.0m in length, 1.5m wide and 0.10m thick. The platform ran on a north to south orientation with the flat blue schist/slate stones placed closely together. The stones measured between 0.20m and 0.06m in length and were laid in a single course, no obvious cut was observed.

Two ditches were identified within the limits of Hotspot 8. The westerly ditch [108.0011] traversed the site on a north-east to south-west orientation and turned south-east at a right angle towards its terminus. The ditch contained a mottled grey brown clay silt fill with frequent medium sub angular stone inclusions. This ditch measured between 0.60m and 1.0m wide and between 0.16 and 0.26m deep. The ditch cut had a gradual break of slope with concave sides and rounded base with a tapered rounded base at the terminus.

The eastern ditch [108.0035] was orientated north – south, it measured between 0.43m and 0.84m wide and 0.2m deep. The cut of the ditch had gradually sloping sides and a concave to tapered rounded base. The fill of the ditch was a firm mid to dark grey brown silt clay with occasional sub-angular small to medium stone inclusions. A fragment of possible furnace lining was recovered from the fill of the ditch. The ditch was cut by two pits [108.0046] and [108.0033].

Pits [108.0046] and [108.0033] were part of a group of 12 located in the south-east corner of the Hotspot. The pits were positioned in rough rows of two or three, suggestive of a structure, and may relate to archaeological activity identified in Hotspot 15 to the east. Of the 12 pits [108.0006] was the largest measuring 1.45m in diameter. The relationship between pits [108.0008] and [108.0010] could not be determined as the fills of each was identical. These three pits were situated at the west end of the possible structure.

The majority of the 12 pits contained very similar fills of compact mid to dark brown grey to brown silt clay, suggesting they were concurrent, with four exceptions. Pit [108.0046] was observed to contain compact dark grey brown sandy silt and pit [108.0012] contained loose mid grey silt clay. Pits [108.0020] and [108.0016] both contained two fills of similar composition, the lower deposit of each was a compact mid brown black silt clay, overlain by a compact mid brown silt clay. The pits varied in diameter from 0.5m to 1.0m and between 0.12m and 0.3m in depth. If the pits originally accommodated posts for a structure, the depth might suggest the features have been heavily truncated.

The remains of two small post-holes were positioned near the termini of the two ditches and were possibly related. Post-hole [108.0030] was located to the north of the terminus of ditch [108.0035] and was circular in plan with a flat base and measured 0.39m in diameter and 0.05m in depth. Its fill (108.0034) consisted of a loose grey brown sand with a charcoal deposit around the edge. Post-hole [108.0021] was located by ditch [108.0011] terminus and was circular in plan with a flat base, measuring 0.20m in diameter and 0.04m in depth. The fill (108.0022) consisted of loose light grey brown sand with a charcoal ring around the edge. It is possible that the post-holes were associated with the ditches.

The remains of two tree boles [108.0033] and [108.0038] were observed within the boundary of Hotspot 8. The largest of these tree boles, [108.0033] measured up to 2.55m in diameter and evidenced by a surviving mid-grey brown silty sand deposit which contained evidence of root disturbance. No datable finds relating to the tree boles were recovered.

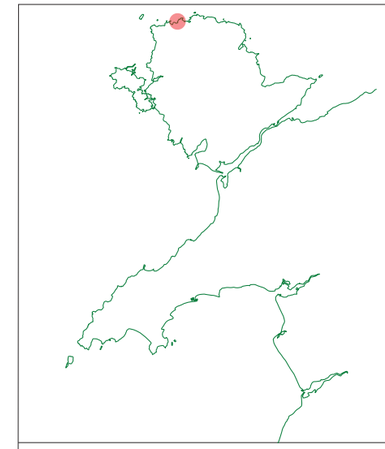


Figure 2
Site Plan, Hotspot 8.

[108.0030]
[108.0011]
[108.0033]
[108.0038]
[108.0035]
[108.0040]
[108.0006]
(108.0041)
[108.0048]
[108.0029]
[108.0013]
[108.0008]
[108.0024]
[108.0043]
[108.0010]
[108.0020]
[108.0046]
[108.0017]
[108.0016]
[108.0050]
[108.0037]
[108.0053]
[108.0021]
[108.0055]
TR1344

Grid - 5m

Key

- Excavation Area
- Evaluation Trenches
- Stone Structure
- Extent Of Excavation
- Evaluation Trenches (No Recorded Archaeology)

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Drawn By:	DPN
Date:	29-10-18
Location:	SH34909278
Project:	AB1703 Hotspot 8

Archaeoleg Brython Archaeology

6 Finds and Dating Evidence

No bulk finds and 0.053kg of small finds were recovered during the course of the excavation of Strip, Map and Sample Hotspot 8.

The small finds comprised a piece of possible furnace lining (SF001) and spindle whorl (SF002). The furnace lining was found within the fill (108.0034) of the eastern ditch [108.0035], and may indicate industrial activity nearby. The spindle whorl made from purple slate (SF002) was unstratified and recovered from the topsoil. Although difficult to date, the presence of the spindle whorl suggests domestic activity in the vicinity sometime between later prehistory and the early medieval period.

A total of nineteen bulk environmental samples (310 litres / 31 buckets) were collected for processing by environmental specialist.

No scientific dating has been undertaken and the lack of datable artefacts indicates a necessity for radiocarbon dating to establish a robust chronology. Suitable material for radiocarbon dating is likely to be present in the bulk environmental samples which will need to be recovered during the assessment stage of the post-excavation programme.

7 Palaeoenvironmental

A total of 19 bulk environmental samples comprising 31 10 litre buckets were collected from archaeological deposits at Hotspot 8 for processing using a floatation method in order to identify botanical and faunal remains.

It is likely that the samples from the features investigated at Hotspot 8 may provide a significant amount of datable charred plant remains, industrial residues and macroscopic artefacts.

Overall, the rate of recovery of datable artefacts during excavation is notably poor in north-west Wales. As such, far more importance is placed on the recovery of paleoenvironmental samples to provide data helping to establish a chronology and narrative to sites in this region.

Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

8 Quantification and Recommendations

8.1 Quantification of Excavation Data

Data Category	**Number**
Context	55
Small finds	2(53.4g / 0.0534kg)
Bulk finds	0
Environmental samples	19 (310ltr / 31 buckets)
Monochrome film	X
Digital photographs	23
Rectified photographs / Photogrammetry	52
GPS surveyed digital pre-excavation plans	1
GPS surveyed digital excavation plans	1
TST surveyed digital excavation plans	X
Hand drawn plans	X
Hand drawn sections	21

8.2 Recommendation for Further Work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	Contexts, plans and sections Small Finds Environmental samples Industrial residues Petrology C^{14} dating
Publication of key data categories	✓
Deposit archive	✓

9 Discussion

Strip, Map and Sample Hotspot 8 was targeted for excavation because of the potential for archaeology identified during evaluation trenching which revealed a pit group, consisting of four pits within Trench 1344.

A number of features comprising 14 pits which may have accommodated posts, two post-holes, two ditches and a stone platform were identified and excavated during the course of the excavations at Hotspot 8. The earliest features at the site are likely to be the ditches, although only the eastern ditch was cut by later activity. The later activity consisted of the erection of a rectangular structure as evidenced by the surviving pits which may have accommodated posts. The function of this building is unclear at present, but the arrangement of the posts would be consistent with other structures, such as those at Cefn Du, Gaerwen (Cuttler et al, 2012), which have been interpreted as grain stores

The recovery of a fragment of probable furnace lining from the fill of the eastern ditch would indicate local industrial activity, although the retrieval of a spindle whorl from the topsoil may suggest a more domestic setting in the vicinity of the site. It is critical that both of these small finds are analysed by specialists to inform date and function to help aid the interpretation of the features identified.

Determining the chronology and function of the archaeological features identified in Hotspot 8 will be aided by the resultant data from the processing of the bulk soil samples. An analysis of the flots would identify and quantify any potential charred plant remains, which could verify the interpretation of the pits representing the remains of a granary. Material associated with industrial activity would be discernible within the palaeoenvironmental evidence and will help determine what potential industrial processes were occurring nearby.

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Wessex Archaeology, 2016c. Wylfa Newydd Isle of Anglesey: Archaeological Trial Trenching, Volume 2: Figures and Plates.

Appendix I

Archaeoleg Brython Archaeology

Team AB1703

Archaeoleg Brython Archaeology Team AB1703

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Brett Connolly

Alexander Coogan

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Brenton Culshaw

Pedro da Silva

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

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Cofrestrwyd yn Lloegr a Chymru - Registered in England and Wales - 10753130

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1-14 Hotspot 8 photos

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Appendix II

Archaeoleg Brython Archaeology

Hotspot 8

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Plate 2: North to south running ditch [108.0035]. South facing section. 1x1m scales. 2



Plate 1: North east to south west running ditch. North east facing section. 1x1m scale.



Plate 2: North to south running ditch [108.0035]. South facing section. 1x1m scales.

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1-15 Wylfa Summary Report Hotspot 10

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Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 10

Document Number WYN-BRY-CON-REP-00005 v1.2

Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 10

Wylfa archaeological works on behalf of Horizon Nuclear Power

Prepared for Horizon Nuclear Power

Text by Laura W. Parry, Cindy Nelson-Viljoen and Iwan G. Parry

Illustrations by Declan New and Laura W. Parry

October 2018

WYN-BRY-CON-REP-00005 v1.2

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Appendix I: Archaeoleg Brython Archaeology Team AB1703
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Summary

Archaeoleg Brython Archaeology CYF. Have completed the excavation of potential Romano-British features at Hotspot 10, Wylfa, Anglesey (NGR SH34939296) in advance of an application to construct the proposed Wylfa Newydd nuclear power station. The excavation area measured 400m^2 and the archaeological remains identified within the area consisted of a number of undated single cut ditches and a single pit. All work was undertaken in accordance with the Written Scheme of Investigation and monitored by Gwynedd Archaeological Planning Services.

Hotspot 10 was identified during a phase of evaluation trenching undertaken in 2015/2016 during which a possible double ringed barrow was identified. Bulk samples taken from two features during the evaluation phase returned Radiocarbon dates indicative of the Romano British period. Hotspot 10 was located to address the archaeological potential of the remains, and was excavated by Strip Map and Sample in September 2018. The excavation revealed no evidence of a double ringed barrow and identified a series of undated intercutting ditches and a pit.

No artefacts were recovered from any of the features excavated in Hotspot 10. Radiocarbon dating from ecofacts obtained from the processing of bulk environmental samples during evaluation stage indicated that the features could be associated with activity at the edge of a Romano-British settlement.

Due to the lack of dateable artefacts and type of features identified during excavation, the environmental samples require processing to help determine function and confirm a date to gain a better understanding of their relationship with other features. Based upon the results of the excavation, it is recommended the archaeological potential of the assemblage and archive produced from the excavation of Hotspot 10 be further analysed and the results be disseminated in the form of an assessment report in line with the Written Scheme of Investigation.

1 Introduction

Archaeoleg Brython Archaeology CYF. (ABA) have been commissioned by Horizon Nuclear Power Ltd. (HNP) to undertake a phased programme of strip, map and sample excavation in advance of the submission of a Development Consent Order application (Pins reference number EN010007) for the proposed construction of the proposed Wylfa Newydd Nuclear Power Station. The purpose of this document is to provide supporting evidence for Horizons DCO application, and to summarise the results of the excavation in advance of the production of an assessment report.

This report provides a summary of the results of archaeological excavation of Strip, Map and Sample (SMS), of Hotspot 10 undertaken during 2018 and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site. Following the production of a Written Scheme of Investigation (WSI) (Horizon, 2017), 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 scope of the works was agreed by Gwynedd Archaeological Planning Services (GAPS). Archaeological works were monitored whilst in progress by GAPS, cultural heritage advisors to the Local Authority. Wardell Armstrong LLP. (WA) have been employed by HNP as cultural heritage consultants for the project and within this capacity have provided guidance and advice during the works.

2 Background

Hotspot 10 was located approximately 750m west of Tregele, and 700m south of the existing Wylfa power station in a marshy area between two hills. The field in which Hotspot 10 was located was laid to pasture but is likely to have been ploughed in the past, and was previously labelled "A4" during the archaeological trail trench evaluation. A post-medieval drainage ditch was located approximately 10m east. The investigation area was at a height of approximately 17m AOD

Prior to excavation of Hotspot 10, 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 (Wessex Archaeology, 2016a, b & c). Hotspot 10 was selected for excavation based on the results of the evaluation trenching which identified a possible double ringed barrow, pits and possible linears within and below illuvial/alluvial deposits (Wessex Archaeology, 2016a) and the results of radiocarbon dating of two features, obtained from ecofacts from bulk environmental samples, which gave dates indicative of the Romano British period. A number of Strip, Map and Sample areas described as "Hotspots" were identified as a result of the evaluation trenching. These were organised into four zones referred to as 1a, 1b, 2 and 3 within the WSI (Horizon, 2017). Hotspot 10 was located in Hotspot Zone 1a.

Geological superficial deposits in the area consist of Till, Devensian – Diamicton. These are sedimentary deposits which formed between 116 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, 2018).

Tan-yr-allt

W

27m

19m

Pennant

27m

42m

W

Rhwng Dau
Fynydd

0 100

metres

5

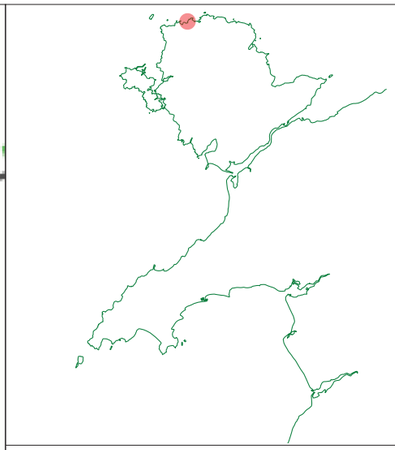


Figure 1
Location Plan, Hotspot 10.

Key

Hotspot 10

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Ordnance Survey Licence Number 100048957

Drawn By: LWP

Date: 22/10/18

Location: SH34939296

Project: AB1703 Hotspot 10

Archaeoleg Brython Archaeology

3 Aims and Objectives

3.1 Archaeological Strip, Map and Sample Aims

The aims of the archaeological strip, map and sample identified in the WSI (Horizon, 2017) were as follows:

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 (so 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;*
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; and*
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.*

3.2 Archaeological Strip, Map and Sample Objectives

The relevant archaeological framework documents identified in the WSI (Horizon 2017) were;

- Review of the Research Framework for the Archaeology of Wales: North West Wales – Neolithic and Early Bronze Age (Steve Burrow, 2010).
- Review of the Research Framework for the Archaeology of Wales: North West Wales – Later Bronze Age and Iron Age (Fiona Gale, 2010).
- A Research Framework for the Archaeology of Wales – Romano British (AD 43-AD 410) (Davies, 2011).
- A Research Framework for the Archaeology of Wales: North West Wales - Early Medieval c. AD 400-1070 (Nancy Edwards, Tudur Davies and Kate A. Hemer, 2016).
- A Research Framework for the Archaeology of Wales: North West Wales – Medieval c.AD 1100 – 1539 (David Longley, 2010).

These documents identify research objectives, and the WSI presented research questions derived from the objectives of the research frameworks outlined above. As a double ditched barrow or funerary ringwork, radiocarbon dated to Romano British dates, was identified during the evaluation, the questions relevant to Hotspot 10 were;

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?

There are no confirmed Roman sites within the Wylfa Newydd Development Area. However recent Geophysical Survey work has identified a possible fortlett site 1km to the west field Q09 (Wessex Archaeology, 2016a) The Research Framework for the Archaeology of Wales (2017) identifies the following research objectives:

Q14: How did the culture on the island change, and in what ways, between the Roman and early medieval periods

Q15: What types of Roman Sites are present with the Wylfa Newydd Development Area and how do they relate to their surrounding landscape both in terms of location and utilisation of the landscape

4 Methodology

4.1 Surveying and Setting Out

The strip, map and sample area was surveyed and set out by the Main Contractor, Balfour Beatty Jones Brothers Joint Venture (JBBBJV). The excavation area and all archaeological features were subsequently surveyed using a Leica Viva GPS system. All surveys were tied in to the Ordnance Survey National Grid.

4.2 Mechanical Excavation

Topsoil and any other overburden was removed using a tracked 360 degree excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under direct archaeological supervision.

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 of the underlying archaeological features were revealed, or when the absence of any archaeological 'horizon' was adequately demonstrated.

After the completion of mechanical excavation, both the spoil heaps and the stripped surface were scanned both with a metal detector and visually. Any artefacts of potential archaeological interest identified because of this work were recovered and their locations accurately recorded.

4.3 Hand Excavation

Immediately after the removal of deposits overlying the archaeological horizon, the area was manually cleaned, and all features investigated and recorded as per standard ABA procedures.

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 taking these signals into account.

All excavations were undertaken in accordance with best practice as set out in Standards and Guidance for Archaeological Excavation (CIfA, 2014a).

All archaeological remains identified were excavated in accordance with the following strategy as set out in the WSI (Horizon, 2017):

- 100% of all positive features likely to obscure earlier archaeological features;
- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships;
- discrete negative features (more than 1m 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%;

- in addition to the above, all intersections between features and all terminals of linear features; and
- other features: 25%, unless otherwise agreed with the Consultant.
- The location of all small finds, with the exception of those discovered within discrete features, were recorded in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.4 Recording

All excavated contexts were fully recorded in line with the standards set out in the WSI (Horizon, 2017) and 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. Hand drawn plans and photogrammetry models made of excavated features, were tied in to the overall plan through the use of control points.

A full photographic record was maintained during the excavation 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.

4.5 Palaeoenvironmental Sampling Strategy

Environmental sampling was undertaken in accordance with the sampling policies outlined in the CIfA's Standard and Guidance (CIfA, 2014a) and Environmental Archaeology; A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage, 2011).

4.6 Archiving

The creation, compilation, transfer and deposition of the archaeological archive will be in line with the regulations of the Chartered Institute for Archaeologists Stand and Guidance (CIfA, 2014b).

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.

All finds will be stored in accordance with CIfA's Standard and Guidance (CIfA, 2014c). It is recommended that all artefacts are deposited at Oriel Ynys Môn, Llangefni.

Digital copies of the report will be submitted to Horizon who will then distributed to stakeholders. Printed versions will only be produced if specifically requested.

ABA will hold a digital version of the archive indefinitely.

5 Archaeological Results

Site name: Wylfa Hotspot 10

Site code: AB1703HS10

HER Event Code: 45396 *PRN: 76059*

NGR: SH34939296

Excavated by: Archaeoleg Brython Archaeology CYF.

Site type: Strip, map and sample

Topsoil average depth: 0.30m

Subsoil average depth: 0.35m

5.1 Historic Map Evidence and Documentary Data

Historic mapping and documentary sources consulted did not provide any evidence of potential archaeology at the site (Wessex Archaeology, 2016a).

5.2 Geophysical Survey Results

Geophysical surveys were carried out during the assessment of the site (Hopewell 2011a,b, Hopewell 2012). The surveys did not demonstrate the presence of significant archaeological remains within the excavation area. Both suggested the presence of 'background' agricultural type remains (field boundary ditches etc).

5.3 Evaluation Results

Wessex Archaeology undertook a programme of evaluation trenching within field A4. A total 36 trenches were opened in this field with 6 of these containing recorded archaeological features (Wessex Archaeology, 2016b). Of these trenches, eight contained undated ditches, two contained undated postholes, and two contained undated pits (Wessex Archaeology, 2016a).

The original evaluation Trench 938 contained four ditches or gullies and a small pit. The trench was waterlogged and required re-excavation with a machine. Unworked chert was present but was not collected (Wessex Archaeology 2016a). It was proposed that the two parallel gullies, set 15.5m apart, and the small pit between them could be the remains of a double ditched barrow or funerary ring work. However due to the lack of diagnostic evidence or human remains, this was deemed unlikely (Wessex Archaeology, 2016a). No datable artefacts were recovered, radiocarbon dates from two of the features suggests a Romano British date (Wessex Archaeology, 2016a).

5.4 Excavation Results

See Figure 2

Excavation at Strip, Map and Sample Hotspot 10 was carried out by Archaeoleg Brython Archaeology in September 2018. An area of approximately 400m^2 was stripped by a 360° mechanical excavator under archaeological supervision. A post medieval stone filed field drain [110.005] was revealed as well as a small undated pit [110.017] and 4 ditches [110.008], [110.014], [110.007], and [110.026].

Two of these ditches, [110.008] and [110.014] ran parallel to each other on an east to west orientation. Both ditches were cut by a later ditch [110.007] which ran perpendicular on a north to south orientation. Ditch [110.026], which was orientated north-east to south-west was 5m in length and ran into to the western baulk, no relationship with other features were observed.

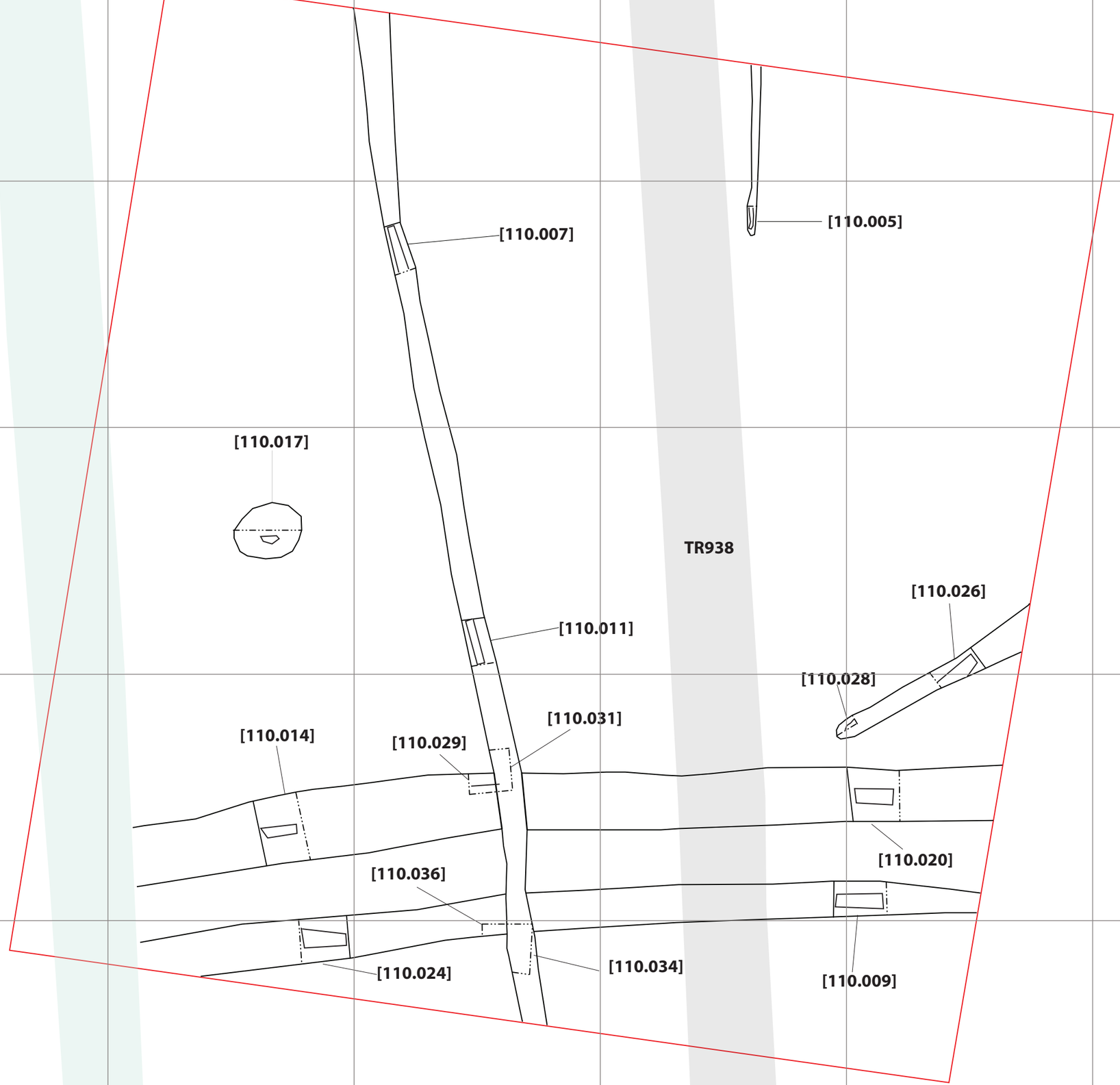
Three slots were excavated through the most southerly of the parallel ditches [110.008]. The cut was generally a straight linear with gradual to irregular sloping sides and a flat base and measured 0.60-1.17m wide and 0.17-0.25m in depth. The fill (110.009) consisted of soft mid dark red brown silt clay. Approximately 20m of the ditch was within the excavation area.

Three slots were also excavated in the northern most of the parallel ditches i.e. [110.014]. This linear had steep to concave sides with a concave base and measured 20m in length, 1.0m-1.54m wide and 0.56-0.65m in depth. The fills consisted of an upper firm mid grey brown silt clay with frequent inclusions of large sub angular stones (110.012). The secondary fill (110.013) was a firm dark to mid grey brown with infrequent inclusions of medium to small sub angular stones.

Ditch [110.007], which cut through ditches [110.008] and [110.014], was linear in plan with concave sides and concave base measuring 0.60m-0.43m wide, 0.25m-0.10m in depth and at a length of approximately 20m. The fill (110.006) consisted of soft to firm mid brown grey silt clay with occasional inclusions of medium sub angular stones.

Pit [110.017], situated near to the west of ditch [110.007] and to the north of ditch [110.014] was sub-circular in plan with sharp almost vertical sides with a concave base. It measured 1.30m in diameter and was approximately 0.45m in depth. It contained two fills; the lower fill (110.018) was a friable mid to dark brown clay silt with frequent inclusions of small to medium sub rounded to sub angular stones and measured 0.30m in depth. The upper fill (110.019) was a compact mid grey brown silt clay and measured 0.15m in depth. The purpose of this pit is unknown.

No material evidence was discovered during excavation, therefore there are no known spot dates for the features and site.



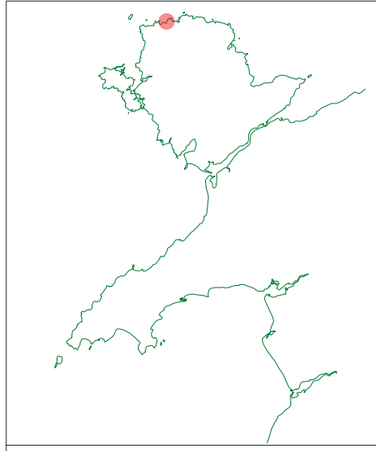


Figure 2
Site Plan, Hotspot 10.

Key

Excavation Area

Evaluation Trenches

Extent Of Excavation

Secondary Evaluation Trenches

© Archaeoleg Brython Archaeology CYF.

Drawn By:	DPN
Date:	29/10/18
Location:	SH34939296
Project:	AB1703 Hotspot 10

Archaeoleg Brython Archaeology

6 Finds and Dating Evidence

During the course of the excavation of Strip, Map and Sample at Hotspot 10 no bulk finds and no small finds were recovered.

Scientific dating had been undertaken during the evaluation phase suggesting a Romano British date for the site; however not material evidence was recovered from the features investigated during the excavation phase to support this. Suitable material for radiocarbon dating is likely to be present in the bulk environmental samples, and this material needs to be recovered during the assessment stage of the post-excavation programme.

7 Palaeoenvironmental

A total of 7 bulk environmental samples comprising of 22 10 litre buckets were collected from archaeological deposits at Hotspot 10 for processing using a flotation method in order to identify botanical and faunal remains.

Generally, the rate of recovery of datable artefacts during excavation is notably poor in the region of North West Wales. As such, more importance has been placed on the recovery of paleoenvironmental samples to provide data to help establish a chronology and narrative to sites in this region. Due to this, it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

8 Quantification and Recommendations

8.1 Quantification of Excavation Data

Data Category	**Number**
Context	34
Small finds	0
Bulk finds	0
Environmental samples	7 (220ltr / 22 buckets)
Monochrome film	X
Digital photographs	18
Rectified photographs / Photogrammetry	X
GPS surveyed digital pre-excavation plans	1
GPS surveyed digital excavation plans	1
TST surveyed digital excavation plans	X
Hand drawn plans	0
Hand drawn sections	12

8.2 Recommendation for Further Work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	Contexts, plans and sections Environmental samples C^{14} dating
Publication of key data categories	✓
Deposit archive	✓

9 Discussion

The evaluation identified a possible double ringed barrow was identified in Trench 938 within field A4. Bulk samples taken from two features during the evaluation phase returned Radiocarbon dates indicative of the Romano British period.

During excavation, a post Medieval stone filed field drain was revealed as well as a small undated pit and four undated ditches. No material evidence was obtained during the mitigation phase. The archaeology excavated does very little to support the Romano British radiocarbon date from two features investigated during the evaluation; as no material evidence was found and the features excavated were not necessarily indicative of the Romano British period.

It is proposed that all bulk soil environmental samples should be processed by floatation and a palaeoenvironmental assessment and analysis should be undertaken. This should recover any possible small finds and charred plant remains that may be suitable for radiocarbon dating.

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Appendix I

Archaeoleg Brython Archaeology

Team AB1703

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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

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Sharon Martin

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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

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1-16 Hotspot 10 photos

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Appendix II

Archaeoleg Brython Archaeology

Hotspot 10

Plates

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Plate 2: North to south running ditch [110.007] which cut parallel ditches [110.008] and [110.014]. West facing section. 1x1m scale. 2



Plate 1: East to west running ditch [110.014]. West facing section. 1x1m scale.



Plate 2: North to south running ditch [110.007] which cut parallel ditches [110.008] and [110.014]. West facing section. 1x1m scale.

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Appendix 1-17 Wylfa Summary Report Hotspot 11-13

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Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 11/13
Document Number:
WYN-BRY-CON-REP-00011 v1.2

Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 11/13

Wylfa archaeological works on behalf of Horizon Nuclear Power

Prepared for Horizon Nuclear Power

Text by Iwan G. Parry, Laura Wilson Parry
and Cindy Nelson-Viljoen

Illustrations by Declan New and Laura Wilson Parry

January 2019

WYN-BRY-CON-REP-00011 v1.2

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Summary

Archaeoleg Brython Archaeology CYF. have completed the excavation of potential Prehistoric, early medieval and post-medieval features at Hotspot 11-13, Wylfa, Anglesey (NGR SH34969288) in advance of an application to construct the Wylfa Newydd nuclear power station. The excavation area measured 920m^2 and the archaeology identified included a Prehistoric wall, pits, stone lined oven or furnace, nineteen graves likely to be early medieval in date and an undated enclosure system. All work was undertaken in accordance with the Written Scheme of Investigation (WSI) and monitored by Gwynedd Archaeological Planning Services.

During a phase of archaeological evaluation trenching undertaken in 2015 and 2016, colluvium layers containing fragments of prehistoric pottery and a small group of post holes and pits were identified. Hotspot 11-13 was located to address the archaeological potential of these remains and was excavated between August and December 2018. The excavation revealed several Prehistoric features intercutting pits, a stone lined oven or small furnace, and wall which was sealed by numerous layers of colluvium. Nineteen graves, likely to be early medieval in date, and a later enclosure system which were cut into the colluvial deposits were also identified. Some broadly datable Prehistoric pottery was recovered from some pits and occupation layers but no datable artefacts were recovered from the majority of features, including graves and gullies. Environmental samples collected during the excavation will require processing to help determine function and date to gain a better understanding of their relationship with other features.

Based upon the results of the excavation, it is recommended that the archaeological potential of the assemblage and archive produced from the excavation of Hotspot 11-13 be further analysed and the results be disseminated in the form of an assessment report in line with the Written Scheme of Investigation.

1 Introduction

Archaeoleg Brython Archaeology CYF. (ABA) have been commissioned by Horizon Nuclear Power Ltd. (HNP) to undertake a phased programme of strip, map and sample excavation in advance of the submission of a Development Consent Order application (PINS Reference Number EN010007) for the proposed construction of a nuclear power station at Wylfa Newydd. The purpose of this document is to provide supporting evidence for Horizons DCO application, and to summarise the results of the excavation in advance of the production of an assessment report.

This report provides a summary of the results of archaeological excavation at Strip, Map and Sample (SMS) Hotspot 11-13 undertaken during 2018 and represents the first phase of the post-excavation analysis regarding the archaeological investigations at the Wylfa Newydd site. Following the production of a Written Scheme of Investigation (WSI) (Horizon, 2017), and in line with paragraphs 5.8.21 of the Overarching National Policy Statement for Energy (EN-1) (2011), the scope of all works was agreed and monitored whilst in progress by Gwynedd Archaeological Planning Service (GAPS), cultural heritage advisors to the Local Authority. Wardell Armstrong LLP. (WA) have been employed by HNP as cultural heritage consultants for the project and within this capacity have provided guidance and advice during the works.

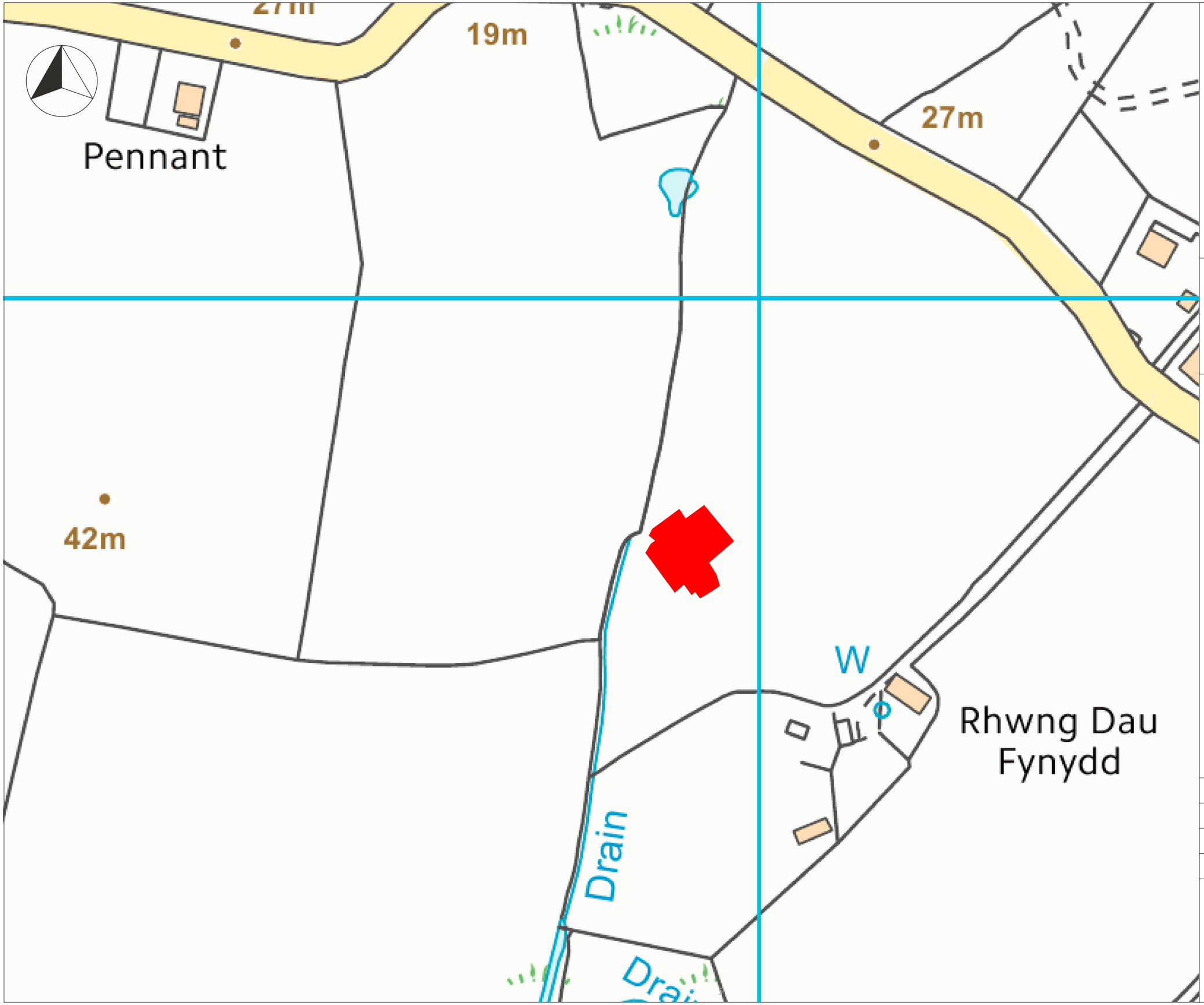
2 Background

Hotspot 11-13 was located approximately 700m northwest of Tregele and 750m south of the existing power station on a westerly sloping field which was laid to pasture on the edge of marshy land, previously labelled "A13" during the archaeological trial trench evaluation. Higher ground was located to the east of the area with the ground gradually levelling out and becoming wetter to the west. A Post-Medieval drainage ditch was located approximately 5m to the west. The investigation area was at a height of approximately 19.5m AOD.

Due to their close proximity to each other Hotspot 11 and Hotspot 13 were merged to become Hotspot 11-13.

Prior to excavation of Hotspot 11-13, 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 (Wessex Archaeology, 2016a,b,c). Hotspot 11-13 was located based on the results of the evaluation trenching which identified colluvial layers containing Prehistoric pottery, and two pits (Wessex Archaeology, 2016a). In total 32 strip, map and sample areas described as 'Hotspots' were identified as a result of the evaluation trenching. These were organised into four zones referred to as 1a, 1b, 2 and 3 within the WSI (Horizon, 2017). Hotspot 8 was located in Hotspot Zone 1a.

Superficial deposits in the area consist of Till, Devensian – Diamicton. These are sedimentary deposits which formed between 116 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, 2018).



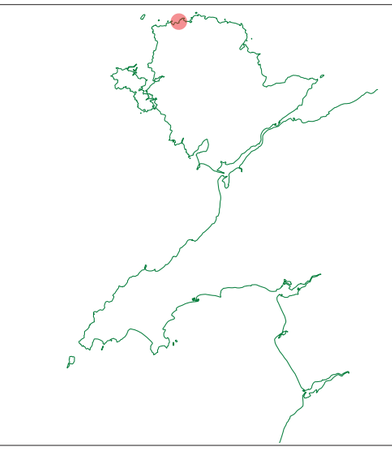


Figure 1
Location Plan, Hotspot 11-13.

Key

Hotspot 11-13

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

Archaeoleg Brython Archaeology

3 Aims and Objectives

3.1 Archaeological Strip, Map and Sample Aims

The aims of the archaeological strip, map and sample identified in the WSI (Horizon, 2017) were as follows:

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 (so 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; and

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.

3.2 Archaeological Strip, Map and Sample Objectives

The relevant archaeological framework documents identified in the WSI (Horizon 2017) were;

- *Review of the Research Framework for the Archaeology of Wales: North West Wales – Neolithic and Early Bronze Age (Steve Burrow, 2010).*
- *Review of the Research Framework for the Archaeology of Wales: North West Wales – Later Bronze Age and Iron Age (Fiona Gale, 2010).*
- *A Research Framework for the Archaeology of Wales – Romano British (AD 43-AD 410) (Davies, 2011).*
- *A Research Framework for the Archaeology of Wales: North West Wales - Early Medieval c. AD 400-1070 (Nancy Edwards, Tudur Davies and Kate A. Hemer, 2016).*
- *A Research Framework for the Archaeology of Wales: North West Wales – Medieval c.AD 1100 – 1539 (David Longley, 2010).*

These documents identify research objectives, and the WSI presented research questions derived from the objectives of the research frameworks outlined above. As two layers of colluvium with inclusions of pre-historic pottery was identified during the evaluation, the questions relevant to Hotspot 11-13 were;

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

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

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

The results of the excavation however revealed archaeological remains differing from those observed within the evaluation trenches. Following the results of the excavation, the following questions should be addressed:

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?

Prehistoric artefacts were discovered, during trial trenching, and consisted of worked lithic artefacts, associated debitage and pottery. As such, questions addressing the research objectives in documents outlined above were identified within the WSI (Horizon, 2017) were identified. These questions were;

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?

A probable Early Medieval cemetery was identified during the excavation of the site. As such the following research objectives were also identified as being relevant in the WSI for known cemeteries within the investigation zones (Horizon, 2016);

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

2. To undertake detailed analysis of (early) medieval artefacts and their contexts in order to understand the chronological and typographic development, and use, of the artefacts.

3. The analysis of human remains for information on date, origins, demography, health, nutrition and transfer of pathogens

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

5. Gaining of insights into the chronology and process of Christian conversion, the evolution and changing functions of religious sites and the broader impact of these on the landscape and (early) medieval society in Wales.

6. Identifying, in so far as is possible, the settlement and ecclesiastical sites associated with cemetery sites in order to understand the interrelationships between settlement sites, parish catchment areas and cemetery catchment areas.

7. Identifying, so far as is possible, the status of the individuals placed within the cemetery and understanding how this relates to the status of the settlement from which they came.

8. 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.

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

10. Establishing the extent of continuity or discontinuity between the late Roman and Early Medieval periods via analysis of environmental evidence (RO8), the agricultural economy (RO8), artefacts recovered (RO2) and changes in settlement patterns (RO6), trade (RO9) and burial / funeral practices (RO5).

11. Understanding how the transition between the Late Roman and Early Medieval period on Anglesey (RO10) compares with the same period elsewhere in Wales and Britain.

12. Understanding what, if any, impact Irish and Scandinavian populations had on (early) medieval Wales (artefacts, agricultural economy, funerary practices etc).

4 Methodology

4.1 Surveying and Setting Out

The strip, map and sample area was surveyed and set out by the Main Contractor, Jones Brothers Balfour Beatty Joint Venture (JBBBJV). The excavation area and all archaeological features were subsequently surveyed using a Leica Viva GPS system. All surveys were tied in to the Ordnance Survey National Grid.

4.2 Mechanical Excavation

Topsoil and any other overburden was removed using a tracked 360 degree excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under direct archaeological supervision.

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 of the underlying archaeological features were revealed, or when the absence of any archaeological 'horizon' was adequately demonstrated.

After the completion of mechanical excavation, both the spoil heaps and the stripped surface were scanned both with a metal detector and visually. Any artefacts of potential archaeological interest identified because of this work were recovered and their locations accurately recorded.

4.3 Hand Excavation

Immediately after the removal of deposits overlying the archaeological horizon, the area was manually cleaned, and all features investigated and recorded as per standard ABA procedures.

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 taking these signals into account.

All excavations were undertaken in accordance with best practice as set out in Standards and Guidance for Archaeological Excavation (CIfA, 2014a).

All archaeological remains identified were excavated in accordance with the following strategy as set out in the WSI (Horizon, 2017):100% of all positive features likely to obscure earlier archaeological features;

- 100% of all positive features likely to obscure earlier archaeological features;
- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships;
- discrete negative features (more than 1m 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%;

- in addition to the above, all intersections between features and all terminals of linear features; and
- other features: 25%, unless otherwise agreed with the Consultant.
- The location of all small finds, with the exception of those discovered within discrete features, were recorded in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.4 Recording

All excavated contexts were fully recorded in line with the standards set out in the WSI (Horizon, 2017) and 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. Hand drawn plans and photogrammetry models made of excavated features, were tied in to the overall plan through the use of control points.

A full photographic record was maintained during the excavation 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.

4.5 Palaeoenvironmental Sampling Strategy

Environmental sampling was undertaken in accordance with the sampling policies outlined in the CIfA's Standard and Guidance (CIfA, 2014a) and Environmental Archaeology; A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage, 2011).

4.6 Archiving

The creation, compilation, transfer and deposition of the archaeological archive follows in line with the regulations of the Chartered Institute for Archaeologists Standards and Guidance (CIfA, 2014b).

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.

All finds will be stored in accordance with CIfA's Standard and Guidance (CIfA, 2014c). It is recommended that all artefacts are deposited at Oriel Ynys Môn, Llangefni.

Digital copies of the report will be submitted to Horizon who will then distributed to stakeholders. Printed versions will only be produced if specifically requested.

ABA will hold a digital version of the archive indefinitely.

5 Archaeological Results

Site name: Wylfa Newydd Hotspot 11-13

Site code: AB1703HS1113

HER Event Code: 45396 PRN: 76060

NGR: SH34829270

Excavated by: Archaeoleg Brython Archaeology CYF. Site Director Iwan Parry

Site type: Strip, map and sample

Topsoil average depth: 0.30m

Subsoil average depth: 0.40m

5.1 Historic Map Evidence and Documentary Data

No evidence of field boundaries, ditches or any other archaeological features was found on historical maps (Wessex Archaeology, 2016a).

5.2 Geophysical Survey Results

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

5.3 Evaluation Results

Wessex Archaeology undertook a programme of evaluation trenching within field A13. A total of 35 trenches were opened in this field with 18 of these containing recorded archaeological features (Wessex Archaeology, 2016b). Of these trenches, seven contained undated ditches and two contained undated pits (Wessex Archaeology, 2016a).

The original evaluation trench (Trench 134), which later became Hotspot 11, contained two layers of colluvium. The upper layer contained sparse charcoal inclusions and 11 sherds of pre-historic pottery with a potential Early Neolithic date (Wessex Archaeology, 2016a). The colluvium deposit below contained abundant charcoal, but no artefacts. The southern section of Trench 134 contained a single layer of colluvium which contained three small fragments of prehistoric pottery. Although these could have been moved from their original location in the hill wash, this does indicate the presence of prehistoric activity within the vicinity (Wessex Archaeology, 2016a). There was a distribution of prehistoric artefacts throughout Trench 134, including prehistoric pottery, and fired clay. A small group of two pits, one posthole and a possible enclosure may be prehistoric as the feature's pre-date an alluvial deposit (Wessex Archaeology, 2016a). The enclosure was formed by two ditches, both around (1.54m wide x 0.48m in depth). There was also a ditch terminus cut by a large pit (3.4m x 0.9m x 0.21m). A second pit (1.55m x 1.20m x 1.0) and a posthole (0.5m x 0.17m) were also present within Trench 134 (Wessex Archaeology, 2016a).

The original evaluation trench (Trench 987), which later became Hotspot 13, contained two isolated pits, similar to those found in Trench 134, suggesting they may have been contemporary.

The pits measured 0.75m in diameter and 0.08m deep, and 0.5m in diameter and 0.28m deep (Wessex Archaeology, 2016a).

5.4 Excavation Results

See Figure 2

Excavation at Strip, Map and Sample Hotspot 11-13 was carried out between August and December 2018. The nature and location of archaeological features within the original excavation area resulted in the excavation are being extended to its final dimensions.

The physical relationship between features suggests four phases of activity within the limits of Hotspot 11-13.

5.4.1 Late Neolithic/Early Bronze Age

Hotspot 11-13 was located to investigate an area where sherds of prehistoric pottery had been identified within layers of colluvium. These deposits were limited to the western corner of the excavation area.

The earliest phase of activity within the area appeared to be represented by two groups of relatively large intercutting pits.

Group I was located at the south-western edge of the excavation area, these continued into the baulk but the area was not extended due to ground conditions. Group I consisted of three intercutting pits [113.0162]; [113.0160]; [113.164]. All three pits appeared to be broadly contemporary and associated with episodes of burning and partial backfilling. The earliest pit in the sequence was [113.0162] which was filled with a mid-grey brown silty clay with inclusions of charcoal and small stones. This had been cut by the largest pit [113.0160], which measured 2.70m in length and 1.64m in width and continued into the baulk, pit [113.0164] was contemporary with [113.0160]. The pits had multiple fills which demonstrated two phases of stone lining and burning, which could relate to industrial or domestic activity.

Group II was located 8m north of Group I and consisted of a pit [113.0195] which had been truncated by a larger pit [113.0183], which was subsequently cut by pit [113.0189]. The original pit measured approximately 2m wide and 3m in length, but the exact dimensions could not be ascertained due to later truncation. Pit [113.0183] truncated the northern end of [113.0195] and substantially larger but again was largely truncated by later pit [113.0189]. Pit [113.0189] measured 3m x 4m and was 0.31m deep. All of the pits were filled with similar material, consisting of mid red-brown silty clay with occasional charcoal inclusions, which very similar to the colluvium which sealed the prehistoric deposits. Occasional patches of concentrated charcoal were present on the edge of the cuts of the pits suggesting that burning may have taken place within the pits or nearby.

Three small pits or potential postholes [113.0147], [113.0107] and [113.0178] were excavated in the vicinity of Pit Group II, the pits did not form a pattern which suggested that they represented a structure and their function is unknown.

In the north-west section of the excavated area, extending from the baulk, two small linear gullies [113.0143] and [113.0153] were excavated. Filled by friable orange-brown silty clay with inclusions of small stones (113.0142); (113.0152) it appears that the gullies may have been created over time by water action or made for drainage.

A well defined line of rubble (113.0186), consisting of small sub-angular stones, was identified at the western edge of the excavation area. The feature was oriented southwest-northeast and measured 2.80m in length and 0.3m wide, petering out to the southwest. It is likely that feature represented a small wall although no substantial foundation/basal stones were observed. The feature was overlain by a friable grey-brown mixed and charcoal rich deposit (113.0182) and colluvial deposits. The wall had no obvious cut and no coursing or bonding and was unlikely to represent a permanent or substantial structure, based on stratigraphy the feature is likely to date to the Late Neolithic or Early Bronze Age.

Immediately west of the probable wall a small charcoal filled pit [113.0173] containing sherds of probable Neolithic pottery (SF021) was identified. The fill of the pit (113.0176) consisted of friable mid reddish-brown silty sand with frequent inclusions of small stones and charcoal. Further sherds of probable Beaker ware were recovered from a colluvial deposit (113.0171) in the vicinity of the feature.

A possible stone lined oven or small furnace [113.0136] and flue [113.0169] were identified cut into the colluvial deposits which overlay the probable wall at the western edge of the excavation area. This feature was surrounded by a group of approximately 30 stakeholes, distributed in clusters of four, which may have been part of a windbreak or structure constructed around the feature.

Numerous distinct colluvial layers, some containing significant amounts of charcoal, were observed in the western and south-western baulks of the Hotspot. Column samples were collected from the western baulk in order to provide insight into the formation of the layers.

5.4.2 Undated Ditch

Ditch [113.0091], which was numbered [113.0124] at the western edge of the excavation area, post-dated the Neolithic/Bronze Age activity but pre-dated the early medieval cemetery. The ditch traversed the entire excavation area on a north-west to south-east orientation. The ditch was steep sided with a rounded base and varied in width between 0.65m and 1.5m, it appeared to have filled due to silting with a grey-brown clay-silt with frequent small stone and gravel inclusions. No artefacts were recovered from the feature. Three graves, [113.0089], [113.0093] and [113.0117], had been cut into the ditch.

5.4.3 Early Medieval

The cemetery, which was not expected at the site, comprised of nineteen graves aligned east-west. Based on size ten graves would have accommodated adults and eight would have accommodated juveniles or neonates one was of unknown size due to heavy truncation. No human remains were recovered from any of the graves. Of the graves, 15 retained evidence of cists, four were simple earth cut graves. Based on other local examples the orientation of the graves and the presence of cists suggest that they are likely to date to the early medieval period (Headland, 2015). Cut [113.0001], oriented east-west and measuring 0.9m in length, 0.5m in depth and 0.25m deep was originally interpreted as a stone lined storage pit or hearth. Based on its proximity to the cemetery it is also likely to have been a grave and may have been truncated during evaluation trenching. Grave [113.0061] was located 10m south of the main group but was on the same alignment as others, there was no evidence to suggest that graves had been present in the area between.

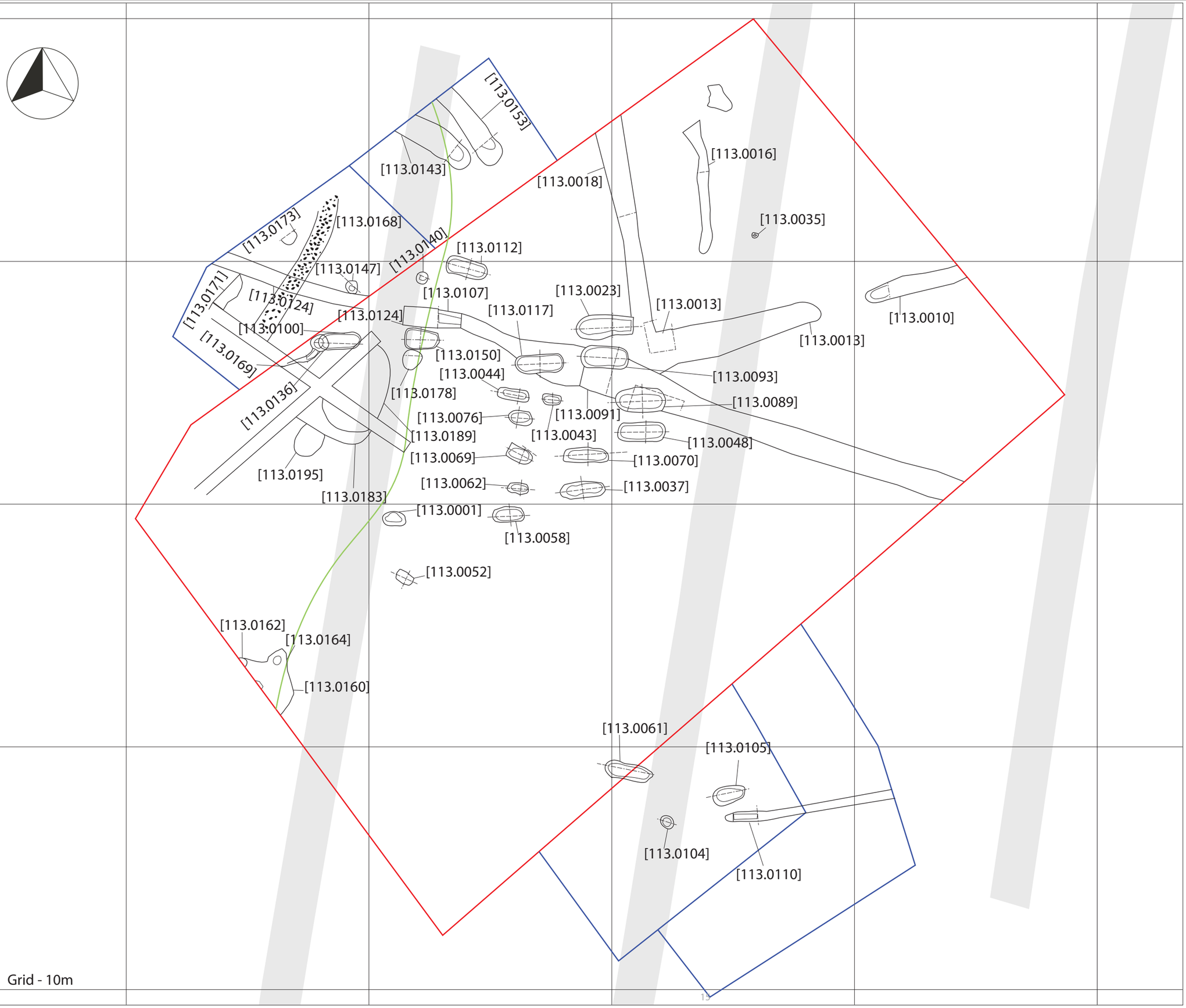
The graves within the main group appeared to be deliberately arranged by size.
The graves which were of a size which would have accommodated adults were generally located on the eastern side of the group whilst the graves of a size to accommodate infants or

neonates were to the west. Whilst some adult sized graves were located to the west of the smaller graves the general pattern appeared to be deliberate.

5.4.4 Undated Gullies

Three graves [113.0018], [113.0093] and [113.0089] were cut by a narrow gully which was orientated north-south and appeared to terminate within the footprint of grave [113.0089]. The gully was likely to be associated with gullies [113.0013] and [113.0010], both of which were orientated north-east to south-west, apparently forming a square or rectangular enclosure with an entrance orientated to the south-east. The full extent of the enclosure was not investigated as it extended beyond the limits of the excavation. At the southern extend of the excavation area a small east-west oriented ditch [113.0110], which may have formed part of the same enclosure system, was excavated and measured 1.55m in length, 0.50m in width and 0.09m deep.

The only features identified within the enclosure were a very shallow gully [113.0016] which was 1.0m long and 0.5m wide and a small, shallow, pit [113.0035] which measured 0.34m in diameter. Both features were very shallow at 0.05m in depth, suggesting that they were heavily truncated. No datable artefacts were recovered from either feature and no relationships were observed to confirm their contemporaneity with the enclosure.



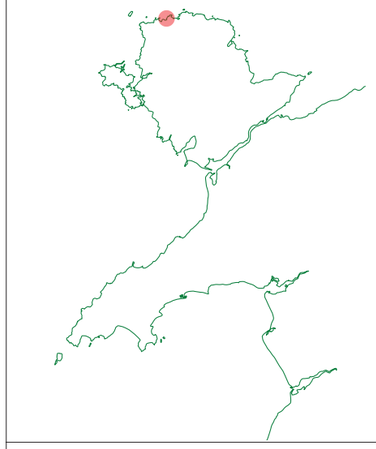


Figure 2
Site Plan, Hotspot 11-13.

Key

- Excavation Area
- Extension
- Evaluation Trenches
- Extent Of Excavation
- Stone Feature
- Limit Of Colluvial Desposit

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Drawn By:	DPN
Date:	29/10/18
Location:	SH34969288
Project:	AB1703 Hotspot 11-13

Archaeoleg Brython Archaeology

6 Finds and Dating Evidence

No bulk find and 0.4009kg of small finds were recovered during the course of the excavation of Strip, Map and Sample Hotspot 11-13.

The majority of small finds from Hotspot 11-13 were sherds of Prehistoric pottery (SF009-017, SF019-24), some of which is decorated. Some sherds appear to be Beaker ware which would broadly date them to the Late Neolithic or Early Bronze Age. With the exception of SF021 which was discovered within the fill of pit [113.0173], all of the pottery sherds were recovered from layer (113.0171) at the western limit of the excavation area.

No datable artefacts were recovered from the probable early medieval graves.

No scientific dating has been undertaken and the lack of datable artefacts may indicate a necessity for radiocarbon dating to establish a robust chronology. Suitable material for radiocarbon dating is likely to be present in the bulk environmental samples, and this material needs to be recovered during the assessment stage of the post-excavation programme.

7 Palaeoenvironmental

A total of 106 bulk environmental samples, comprising 346 10 litre buckets, were collected from archaeological deposits at Hotspot 11-13 for processing using a flotation method in order to identify botanical and faunal remains.

It is likely that the samples from the features investigated at Hotspot 11-13 may provide a significant amount of datable charred plant remains and macroscopic artefacts. It is also possible that some human remains could be present in samples collected from graves.

Overall, the rate of recovery of datable artefacts during excavation is notably poor in north-west Wales. As such, far more importance is placed on the recovery of paleoenvironmental samples to provide data helping to establish a chronology and narrative to sites in this region.

Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

8 Quantification and Recommendations

8.1 Quantification of Excavation Data

Data Category	**Number**
Context	195
Small finds	25 (400.9g / 0.4009kg)
Bulk finds	0
Environmental samples	106 (3453 litres / 346 buckets)
Graves	19
Human Remains	0
Capstones	52
Cist stones	135
Monochrome film	X
Digital photographs	224
Rectified photographs / Photogrammetry	4879
GPS surveyed digital pre-excavation plans	1
GPS surveyed digital excavation plans	1
TST surveyed digital excavation plans	X
Hand drawn plans	57
Hand drawn sections	80

8.2 Recommendation for Further Work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	Contexts, plans and sections Environmental samples Ceramics C^{14} dating
Publication of key data categories	✓
Deposit archive	✓

9 Discussion

Hotspot 11-13 was targeted for excavation because of the potential for Prehistoric archaeology identified during evaluation trenching which revealed multiple colluvium layers containing Neolithic or Bronze Age pottery. (Wessex Archaeology, 2016a). During excavation an area of 921m^2 was striped revealing relatively intensive Prehistoric activity in the form of pits, a possible oven or small furnace and a probable wall of small stones, a probable early medieval cemetery and an undated enclosure system.

The Prehistoric activity was concentrated in the lower lying areas to the southwestern corner of the excavation area. Pottery recovered from the features and deposits in this area, which are likely to be Beaker ware, suggests that the activity probably dates to the Late Neolithic or Early Bronze Age. The identified features did not appear to represent a coherent structure and are more likely to represent an area of activity which clearly involved episodes of burning due to the amount of charcoal present in most of the deposits encountered.

The probable wall of small stones did not appear to be substantial enough to be part of a permanent structure and did not include substantial foundation stones which would be expected in a structure designed to support a roof. The small size of the stones may suggest that the wall was formed through small scale clearance of land for cultivation or general clearance for the activities undertaken in the area.

The intercutting pit groups may suggest that the same activities were undertaken at the site over an extended period of time. The smaller pits in Group I appeared to have been formed to contain some of the material removed from the larger pit, suggesting a repeated process which required maintenance of the feature. The stone lined oven or small furnace with associated stakeholes may have been associated with an industrial process, evidence of which may be recovered from bulk soil samples.

The full extent of the Prehistoric activity was not revealed as conditions at the time of excavation were not suitable for excavation of such ephemeral archaeology.

The Prehistoric activity had been sealed by multiple layers of colluvial deposits which had accumulated to a depth of over 1m. Further archaeological features were identified cut into these deposits.

A group of nineteen graves, likely to have accommodated ten adults and eight infants or neonates, was an unexpected discovery within the Hotspot. Four of the graves were simple earth cut examples and fifteen included cists of local schist. The style of the graves is typical of the early medieval period in North West Wales, two cemeteries likely to be of a similar date have been excavated during the current phase of works at the Wylfa site at Wylfa Head and Area 7. Unlike both other cemeteries which were relatively large and in prominent locations, this cemetery was located on low-lying land at the edge of fairly marshy ground. This may suggest that the cemetery represents a family group.

No dating evidence was recovered from the gullies which formed square or rectangular enclosures. Physical relationships determined that some of the gullies post-dated a number of graves at the cemetery but firm dating could not be established.

Determining the chronology for archaeological remains recorded at Hotspot 11-13 with any certainty is difficult without data from the environmental samples. Because of this, the data from the environmental samples is critical in helping to establish the date and function of these features. In particular, should ecofacts recovered during the environmental processing be of a sufficient nature, the radiocarbon dating of the fills of the graves, prehistoric features and deposits sealed by colluvium, and undated enclosures will be critical.

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Appendix I

Archaeoleg Brython Archaeology

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Stuart Elder

Thomas Eley

Marta Estanga Lopez de Murillas

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Clair Richardson

Louis Roper

Kurt Russell

Karolina Saxerbo Sjoberg

Victoria Scott

James Sinclair

Robert Slabonski

Elena Stefani

Stuart Stokes

Luke Tremlett

Michael Tunnicliffe

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1-18 Hotspot 11-13 photos

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Appendix II

Archaeoleg Brython Archaeology

Hotspot 11-13

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Plate 2: Post excavation of possible oven [113.0136] with associated stakeholes. View from the east south east. 1x1m scale. 2

Plate 3: Stone rubble wall and tumble (113.0186). 1x1m scale. 3

Plate 4: Build-up of colluvial deposits. East facing section. 1x1m scale. 3

Plate 5: Small grave showing cist stones. View from the west south west. 1x1m scale. 4

Plate 6: Large grave showing cist stones. View from the west. 1x1m scale. 4



Plate 1: Possible stone lined oven [113.0136]. View from the south west. 1x0.5m scale.



Plate 2: Post excavation of possible oven [113.0136] with associated stakeholes. View from the east south east. 1x1m scale.



Plate 3: Stone rubble wall and tumble (113.0186). 1x1m scale.



Plate 4: Build-up of colluvial deposits. East facing section. 1x1m scale.



Plate 5: Small grave showing cist stones. View from the west south west. 1x1m scale.



Plate 6: Large grave showing cist stones. View from the west. 1x1m scale.

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1-19 Wylfa Summary Report Hotspot 12

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Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 12

Document Number WYN-BRY-CON-REP-00007 v1.2

Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 12

Wylfa archaeological works on behalf of Horizon Nuclear Power

Prepared for Horizon Nuclear Power

Text by Laura W. Parry, Cindy Nelson-Viljoen and Iwan G. Parry

Illustrations by Laura W. Parry

October 2018

WYN-BRY-CON-REP-00007 v1.2

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Appendix I: Archaeoleg Brython Archaeology Team AB1703

Summary

Archaeoleg Brython Archaeology CYF. have completed the excavation of a site at Hotspot 12, Wylfa, Anglesey (NGR SH34959284) in advance of an application to construct a nuclear power station at Wylfa Newydd.

Hotspot 12 was located to target an area of colluvial deposits containing Prehistoric pottery, including 2 pieces of possible Bronze Age Beaker ware, identified during a phase of evaluation trenching undertaken in 2015 and 2016.

Hotspot 12 measured 106m^2. The only archaeological feature identified within the area was a post-medieval pit containing sherds of 19th to 20th Century pottery. All work was undertaken in accordance with the Written Scheme of Investigation and monitored by Gwynedd Archaeological Planning Services.

No further assessment of the results and material from Hotspot 12 is recommended.

1 Introduction

Archaeoleg Brython Archaeology CYF. (ABA) have been commissioned by Horizon Nuclear Power Ltd. (HNP) to undertake a phased programme of strip, map and sample excavation in advance of the submission of a Development Consent Order application (PINS Reference Number EN010007) for the proposed construction of a nuclear power station at Wylfa Newydd. The purpose of this document is to provide supporting evidence for Horizon's DCO application, and to summarise the results of the excavation in advance of the production of an assessment report.

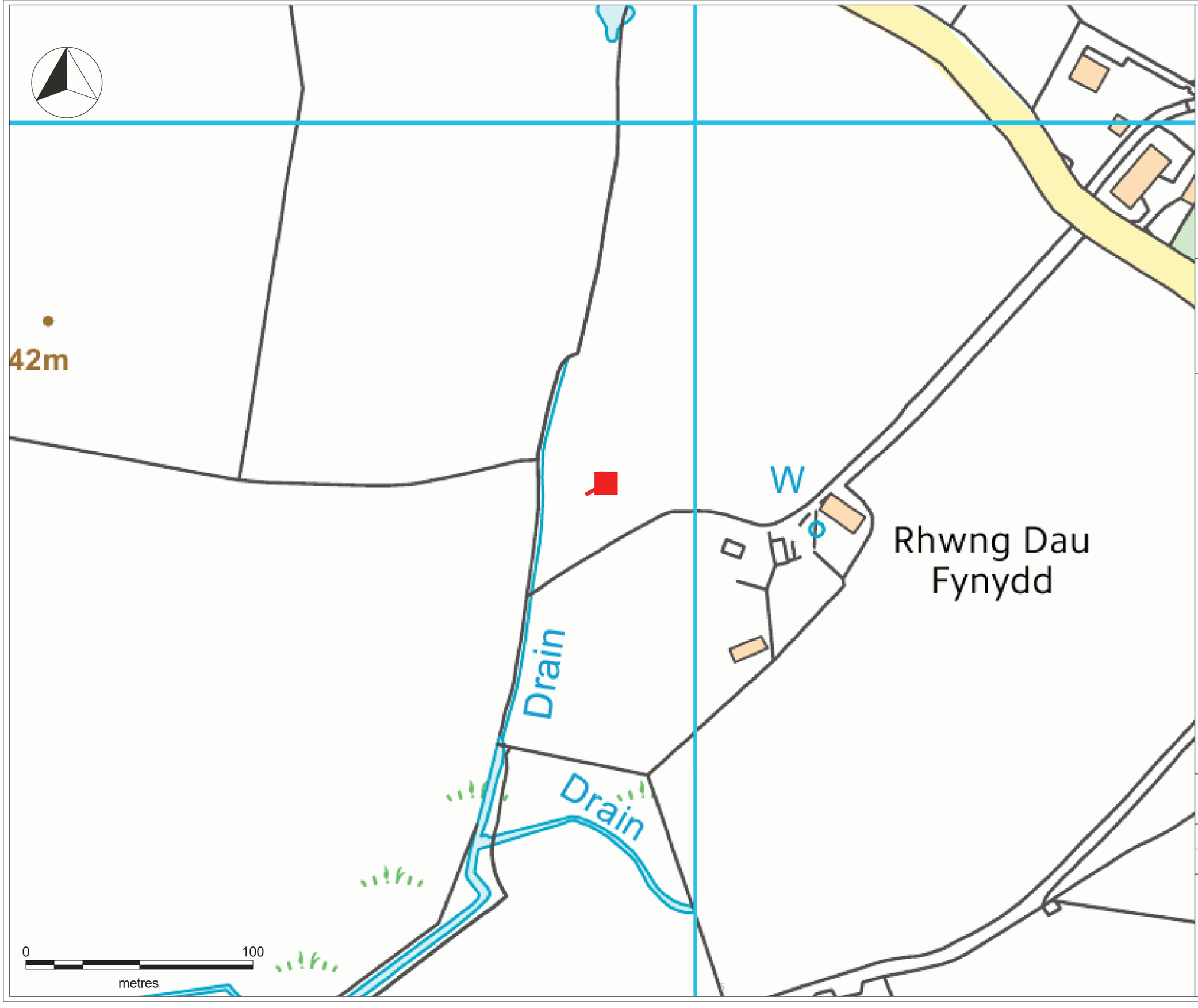
This report provides a summary of the results of archaeological excavations at Strip, Map and Sample (SMS) Hotspot 12 undertaken during 2018 and represents the first phase of the post-excavation analysis regarding the archaeological investigations at the Wylfa Newydd site. Following the production of a Written Scheme of Investigation (WSI) (Horizon, 2017), and in line with paragraphs 5.8.21 of the Overarching National Policy Statement for Energy (EN-1) (2011), the scope of all works was agreed and monitored whilst in progress by Gwynedd Archaeological Planning Service (GAPS), cultural heritage advisors to the Local Authority. Wardell Armstrong LLP. (WA) have been employed by HNP as cultural heritage consultants for the project and within this capacity have provided guidance and advice during the works.

2 Background

Hotspot 12 was located approximately 650m west of Tregele, and 800m south of the existing Wylfa power station at the base of a fairly steep slope, previously labelled "A13" during the archaeological trail trench evaluation. Higher ground was located to the east of the area with the ground levelling out and becoming wetter to the west. A Post-Medieval drainage ditch was located approximately 20m to the west. The investigation area was at a height of approximately 20.5m AOD.

Prior to the excavation of Hotspot 12, 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 (Wessex Archaeology, 2016a, b & c. Hotspot 12 was selected for excavation based on the results of the evaluation trenching that identified Prehistoric pottery within layers of colluvium (Wessex Archaeology, 2016a), and the WSI (Horizon, 2017) that mentioned pits containing Prehistoric and Medieval pottery.

Superficial deposits in the area consist of Till, Devensian – Diamicton. These are sedimentary deposits which formed up to 2 million 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, 2018).



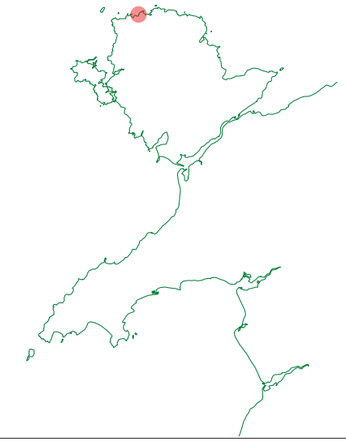


Figure 1
Location Plan, Hotspot 12.

Key

Hotspot 12

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Drawn By: LWP

Date: 22/10/18

Location: SH34959284

Project: AB1703 Hotspot 12

Archaeoleg Brython Archaeology

3 Aims and Objectives

3.1 Archaeological Strip, Map and Sample Aims

The aims of the archaeological strip, map and sample identified in the WSI (Horizon, 2017) were as follows:

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 (so 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; and

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.

3.2 Archaeological Strip, Map and Sample Objectives

The relevant archaeological framework documents identified in the WSI (Horizon 2017) were;

- *Review of the Research Framework for the Archaeology of Wales: North West Wales – Neolithic and Early Bronze Age (Steve Burrow, 2010).*
- *Review of the Research Framework for the Archaeology of Wales: North West Wales – Later Bronze Age and Iron Age (Fiona Gale, 2010).*
- *A Research Framework for the Archaeology of Wales – Romano British (AD 43-AD 410) (Davies, 2011).*
- *A Research Framework for the Archaeology of Wales: North West Wales - Early Medieval c. AD 400-1070 (Nancy Edwards, Tudur Davies and Kate A. Hemer, 2016).*
- *A Research Framework for the Archaeology of Wales: North West Wales – Medieval c.AD 1100 – 1539 (David Longley, 2010).*

These documents identify research objectives, and the WSI presented research questions derived from the objectives of the research frameworks outlined above. As Prehistoric pottery fragments were identified during the evaluation, the questions relevant to Hotspot 12 were;

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

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

No prehistoric archaeology was identified during the excavation of Hotspot 12, as such the results will not contribute to answering the identified research questions.

4 Methodology

4.1 Surveying and Setting Out

The strip, map and sample area was surveyed and set out by the Main Contractor, Jones Brothers Balfour Beatty Joint Venture (JBBBJV). The excavation area and all archaeological features were subsequently surveyed using a Leica Viva GPS system. All surveys were tied in to the Ordnance Survey National Grid.

4.2 Mechanical Excavation

Topsoil and any other overburden was removed using a tracked 360 degree excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under direct archaeological supervision.

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 of the underlying archaeological features were revealed, or when the absence of any archaeological 'horizon' was adequately demonstrated.

After the completion of mechanical excavation, both the spoil heaps and the stripped surface were scanned both with a metal detector and visually. Any artefacts of potential archaeological interest identified because of this work were recovered and their locations accurately recorded.

4.3 Hand Excavation

Immediately after the removal of deposits overlying the archaeological horizon, the area was manually cleaned, and all features investigated and recorded as per standard ABA procedures.

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 taking these signals into account.

All excavations were undertaken in accordance with best practice as set out in Standards and Guidance for Archaeological Excavation (CIfA, 2014a).

All archaeological remains identified were excavated in accordance with the following strategy as set out in the WSI (Horizon, 2017):

- 100% of all positive features likely to obscure earlier archaeological features;
- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships;
- discrete negative features (more than 1m 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%;
- in addition to the above, all intersections between features and all terminals of linear features; and

- other features: 25%, unless otherwise agreed with the Consultant.
- The location of all small finds, with the exception of those discovered within discrete features, were recorded in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.4 Recording

All excavated contexts were fully recorded in line with the standards set out in the WSI (Horizon, 2017) and 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. Hand drawn plans and photogrammetry models made of excavated features, were tied in to the overall plan through the use of control points.

A full photographic record was maintained during the excavation 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.

4.5 Palaeoenvironmental Sampling Strategy

Environmental sampling was undertaken in accordance with the sampling policies outlined in the CIfA's Standard and Guidance (CIfA, 2014a) and Environmental Archaeology; A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage, 2011).

4.6 Archiving

The creation, compilation, transfer and deposition of the archaeological archive will be in line with the regulations of the Chartered Institute for Archaeologists Stand and Guidance (CIfA, 2014b).

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.

All finds will be stored in accordance with CIfA's Standard and Guidance (CIfA, 2014c). It is recommended that all artefacts are deposited at Oriel Ynys Môn, Llangefni.

Digital copies of the report will be submitted to Horizon who will then distributed to stakeholders. Printed versions will only be produced if specifically requested.

ABA will hold a digital version of the archive indefinitely.

5 Archaeological Results

Site name: Wylfa Newydd Hotspot 12

Site code: AB1703HS12

HER Event Code: 45396 PRN:76061

NGR: SH34959284

Excavated by: Archaeoleg Brython Archaeology CYF.

Site type: Strip, map and sample

Topsoil average depth: 0.12m

Subsoil average depth: 0.10m

5.1 Historic Map Evidence and Documentary Data

No evidence of field boundaries, ditches or any other archaeological features was found on historical maps (Wessex Archaeology, 2016a).

5.2 Geophysical Survey Results

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

5.3 Evaluation Results

Wessex Archaeology undertook a programme of evaluation trenching within field A13. A total of 35 trenches were opened in this field with 18 of these containing recorded archaeological features (Wessex Archaeology, 2016a,b,c). Of these trenches, seven contained undated ditches and two contained undated pits (Wessex Archaeology, 2016a,b,c).

Evaluation Trench 135, contained colluvial layers containing three small sherds of Prehistoric pottery, two sherds of which may have possibly been of Beaker type (Wessex Archaeology, 2016a,b). The evaluation report suggested that Trench 135 lay immediately downslope from a partial enclosure identified as a curvilinear ditch measuring 1.20m wide and up to 0.53m deep, and that the enclosure may have been the source of the pottery sherds found (Wessex Archaeology, 2016a)

5.4 Excavation Results

Excavation at Strip, Map and Sample Hotspot 12 was carried out during August 2018. A rectangular area of approximately 100m^2 was stripped by a 360° mechanical excavator under archaeological supervision. Two features were excavated.

Feature [112.0002] was sub circular in plan with concave sides, a gradual break of slope top and irregular base. The feature measured 1.22m in length, 0.60m wide (from edge of the feature to the

section) and 0.24m in depth. It contained a single fill (112.0001) of friable mid grey brown sandy silt with occasional inclusions of small stones and charcoal. The shape and undulating nature of the feature indicates that it was probably a tree bole and not archaeological.

Pit [112.0004] was sub rectangular with rounded corners and a flat base. The pit measured 2.32m in length, 0.92m wide and 0.2m in depth, and was identified running into the eastern baulk of the Hotspot. The pit contained a single fill (112.0003) of moderately loose mid grey brown sandy silt, and small to medium inclusions of sub angular stones. A sherd of Post-Medieval white glazed pottery was recovered from the fill of the pit but not retained. It is likely that the pit related to post-medieval agricultural activity.

6 Finds and Dating Evidence

No bulk finds and no small finds were retained.

No scientific dating has been undertaken.

7 Palaeoenvironmental

No bulk or other environmental samples were collected during excavation of Strip, Map and Sample Hotspot 12. .

8 Quantification and Recommendations

8.1 Quantification of Excavation Data

Data Category	Number
Context	4
Small finds	0
Bulk finds	0
Environmental samples	0
Monochrome film	X
Digital photographs	11
Rectified photographs / Photogrammetry	0
GPS surveyed digital pre-excavation plans	0
GPS surveyed digital excavation plans	1
TST surveyed digital excavation plans	X
Hand drawn plans	0
Hand drawn sections	0

8.2 Recommendation for Further Work

Quantification of archive	√
Assessment of significance	√
Further analysis of key data categories	None
Publication of key data categories	None
Deposit archive	√

No further work is recommended for Hotspot 12.

9 Discussion

Hotspot 12 was excavated due to the potential for Prehistoric archaeology identified during evaluation trenching. The information from the evaluation report stated that three sherds of Prehistoric pottery (two probable sherds of Beaker type vessels) were obtained from colluvial layers (Wessex Archaeology, 2016a).

For the mitigation phase partially revealed pit [112.0004] and a probable tree bole. The post-medieval pottery sherds identified within the fill of [112.0004] date it to the 19th century and suggest it may have been associated with general post-medieval agricultural activity. The extension along the line of the original evaluation trench did not reveal the presence of any archaeological features but did identify a bedrock outcrop.

Nothing of archaeological note was observed, no environmental soil samples were taken and no post-medieval pottery sherds were retained. It is therefore proposed that no further post excavation assessment it required. The documentary archive has been ordered, checked and is ready for deposition.

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Appendix I

Archaeoleg Brython Archaeology

Team AB1703

Archaeoleg Brython Archaeology Team AB1703

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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

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Stephen Porter

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Gary Reid

Clair Richardson

Louis Roper

Kurt Russell

Karolina Saxerbo Sjoberg

Victoria Scott

James Sinclair

Robert Slabonski

Elena Stefani

Stuart Stokes

Luke Tremlett

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1-20 Wylfa Summary Report Hotspot 14

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Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 14

Document Number WYN-BRY-CON-REP-00009 v1.2

Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 14

Wylfa archaeological works on behalf of Horizon Nuclear Power

Prepared for Horizon Nuclear Power

Text by Vickki Hudson, Cindy Nelson-Viljoen,
Laura Wilson Parry and Iwan G. Parry

Illustrations by Iwan G. Parry

October 2018

WYN-BRY-CON-REP-00009 v1.2

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Summary

Archaeoleg Brython Archaeology CYF. have completed the excavation of potential Prehistoric features at Hotspot 14, Wylfa, Anglesey (NGR SH34969272) in advance of an application to construct a nuclear power station at Wylfa Newydd nuclear power station. The excavation area measured 342m^2 and the archaeological remains identified within the area was the remains of a Bronze Age roundhouse which consisted of a series of 6 postholes surrounding a hearth with an associated drip gulley, as well as a complex series of colluvial deposits. All work was undertaken in accordance with the Written Scheme of Investigation and monitored by Gwynedd Archaeological Planning Services.

During a phase of archaeological evaluation trenching undertaken in 2016, a suspected burnt mound sealed under alluvial deposits and 3 postholes were recorded. Sherds of Prehistoric/Bronze Age pottery recovered from a during environmental processing from the presumed burnt mound material. Hotspot 14 was located to address the archaeological potential of these remains. A preliminary excavation in May 2018 identified the remains of a Bronze Age roundhouse comprising a number of postholes, a hearth and a drip gulley, a sherd of decorated Bronze Age pottery was recovered from one posthole. The excavation continued in September 2018 and revealed layers of intentional deposition of silt and stone layers to the south west of a Bronze age roundhouse structure, one of the upper most of these deposits contained stones and charcoal that was originally recorded as a burnt mound in the evaluation phase and a ditch in the preliminary excavation.

A total of 17 finds were recovered from the Strip Map and Sample of Hotspot 14. They comprised of unstratified lithics; a spindle whorl, burnt clay, burnt stone and Prehistoric/Bronze Age pottery sherds. The likely earliest activity identified was a piece of deliberately struck flint recovered from the fill of a ditch terminus and sherds of decorated Bronze Age pottery found within the fill of one of the postholes of the roundhouse. The environmental samples require processing to help to recover any finds within the samples and recover ecofacts, if present, to confirm a Bronze Age date and gain a better understanding of the roundhouse, its relationship with other features and place it in context within the wider area.

Based upon the results of the excavation, it is recommended the archaeological potential of the assemblage and archive produced from the excavation of Hotspot 14 be further assessed and the results be disseminated in the form of an assessment report in line with the Written Scheme of Investigation

1 Introduction

Archaeoleg Brython Archaeology CYF. (ABA) have been commissioned by Horizon Nuclear Power Ltd. (HNP) to undertake a phased programme of strip, map and sample excavation in advance of the submission of a Development Consent Order application (Pins reference number EN010007) for the proposed construction of the proposed Wylfa Newydd Nuclear Power Station. The purpose of this document is to provide supporting evidence for Horizons DCO application, and to summarise the results of the excavation in advance of the production of an assessment report.

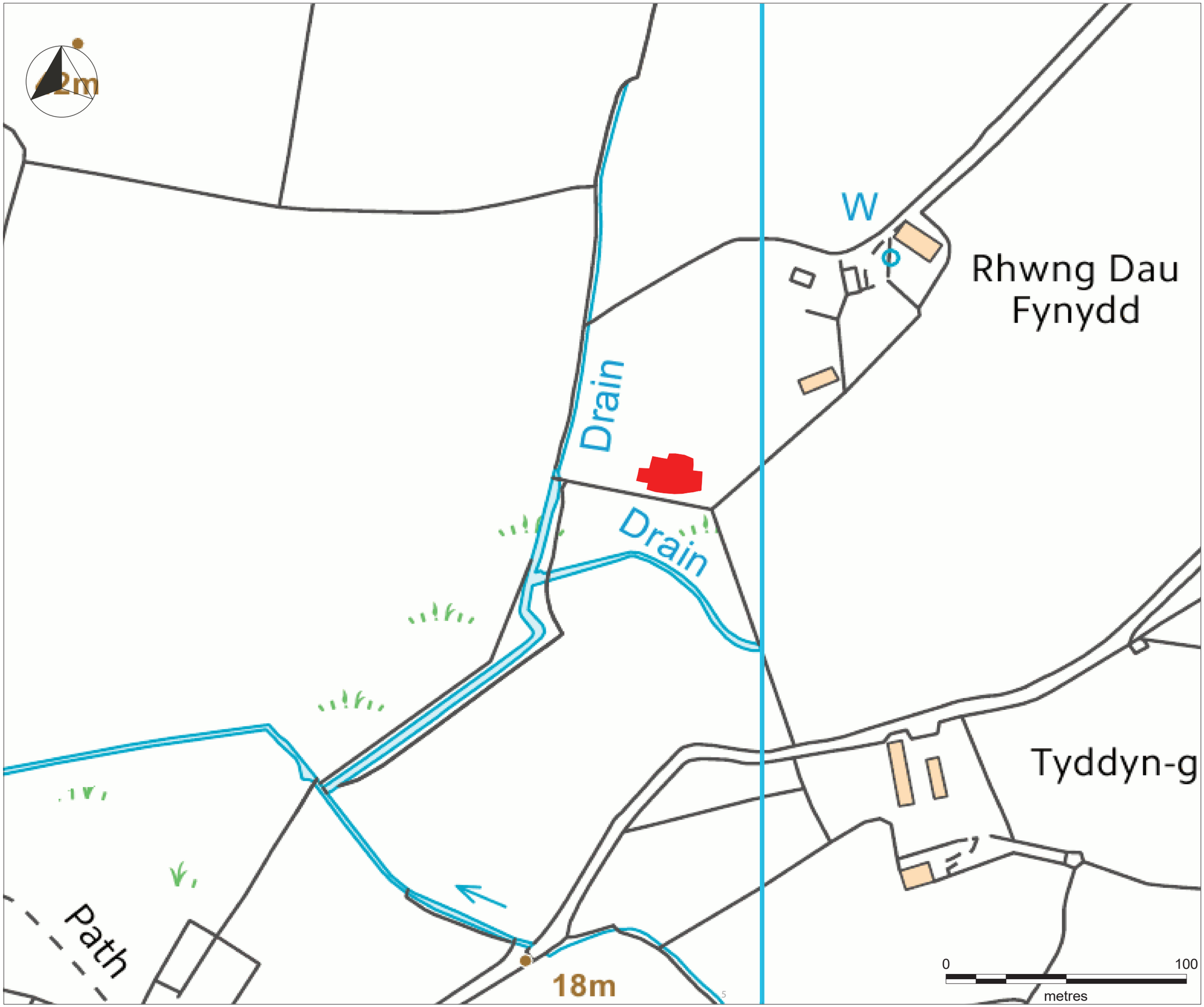
This report provides a summary of the results of archaeological excavation of Strip, Map and Sample (SMS), of Hotspot 14 undertaken during 2018 and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site. Following the production of a Written Scheme of Investigation (WSI) (Horizon, 2017), 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 scope of the works was agreed. Archaeological works were monitored whilst in progress by Gwynedd Archaeological Planning Service (GAPS), cultural heritage advisors to the Local Authority. Wardell Armstrong LLP. (WA) have been employed by HNP as cultural heritage consultants for the project and within this capacity have provided guidance and advice during the works.

2 Background

Hotspot 14 was located approximately 650m west of Tregele and 900m south of the existing Wylfa power station in a coastal field laid to pasture to the south-east of Mynydd y Wylfa (Wylfa Head) on a hill, the crest of which was on the western edge, to the east was a small, flat plateau. The field was previously labelled "A12" during the archaeological trial trench evaluation. The investigation area was at a height of approximately 9.0m AOD.

Prior to the excavation of the Hotspot 14 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 (Wessex Archaeology, 2016). Hotspot 6 was selected for excavation based on the results of the evaluation trenching as the remains of a burnt mound sealed by alluvial deposits, 3 postholes and a sherd of Bronze Age pottery was encountered during these investigations. A number of Strip, Map and Sample areas described as "Hotspots" were identified as a result of the evaluation trenching. These were organised into four zones referred to as 1a, 1b, 2 and 3 within the WSI (Horizon, 2017). Hotspot 14 is located in Hotspot Zone 1a.

The geological superficial deposits in the area consist of Till, Devensian – Diamicton. These are sedimentary deposits which formed between 116 and 11.8 thousand years ago during the Quaternary period, indicating a landscape dominated by Ice Age conditions. The underlying bedrock geology consist of schist of the Gwna Group. This is a metamorphic bedrock which formed approximately 508 to 635 million years ago during the Cambrian and Ediacaran periods. These were originally sedimentary rocks formed in deep seas by chaotic deposition from underwater gravity slide, later altered by low-grade metamorphism (BGS, 2018).



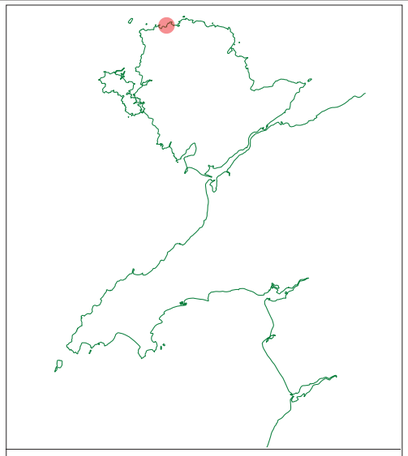


Figure 1
Location Plan, Area 14.

Key

Excavation Area

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Drawn By:	DPN
Date:	19/10/18
Location:	SH34969272
Project:	AB1703 Area 14

Archaeoleg Brython Archaeology

3 Aims and Objectives

3.1 Archaeological Strip, Map and Sample Aims

The aims of the archaeological strip, map and sample identified in the WSI (Horizon, 2017) were as follows:

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 (so 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;*
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; and*
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.*

3.2 Archaeological Strip, Map and Sample Objectives

The relevant archaeological framework documents identified in the WSI (Horizon 2017) were;

- Review of the Research Framework for the Archaeology of Wales: North West Wales – Neolithic and Early Bronze Age (Steve Burrow, 2010).
- Review of the Research Framework for the Archaeology of Wales: North West Wales – Later Bronze Age and Iron Age (Fiona Gale, 2010).
- A Research Framework for the Archaeology of Wales – Romano British (AD 43-AD 410) (Davies, 2011).
- A Research Framework for the Archaeology of Wales: North West Wales - Early Medieval c. AD 400-1070 (Nancy Edwards, Tudur Davies and Kate A. Hemer, 2016).
- A Research Framework for the Archaeology of Wales: North West Wales – Medieval c.AD 1100 – 1539 (David Longley, 2010).

These documents identify research objectives, and the WSI presented research questions derived from the objectives of the research frameworks outlined above. As a burnt mound was identified during the evaluation, the questions relevant to Hotspot 12 were;

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.

The results of the excavation however revealed archaeological remains differing from those observed within the evaluation trenches. Following the results of the excavation, the following questions should be addressed:

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?

Prehistoric artefacts were discovered, during trial trenching, and consisted of worked lithic artefacts, associated debitage, pottery sherds and a loom weight. As such, questions addressing the research objectives in documents outlined above were identified within the WSI (Horizon, 2017) were identified. These questions were;

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?

4 Methodology

4.1 Surveying and Setting Out

The strip, map and sample area was surveyed and set out by the Main Contractor, Jones Brothers Balfour Beatty Joint Venture (JBBBJV). The excavation area and all archaeological features were subsequently surveyed using a Leica Viva GPS system. All surveys were tied in to the Ordnance Survey National Grid.

4.2 Mechanical Excavation

Topsoil and any other overburden was removed using a tracked 360 degree excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under direct archaeological supervision.

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 of the underlying archaeological features were revealed, or when the absence of any archaeological 'horizon' was adequately demonstrated.

After the completion of mechanical excavation, both the spoil heaps and the stripped surface were scanned both with a metal detector and visually. Any artefacts of potential archaeological interest identified because of this work were recovered and their locations accurately recorded.

4.3 Hand Excavation

Immediately after the removal of deposits overlying the archaeological horizon, the area was manually cleaned, and all features investigated and recorded as per standard ABA procedures.

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 taking these signals into account.

All excavations were undertaken in accordance with best practice as set out in Standards and Guidance for Archaeological Excavation (CIfA, 2014a).

All archaeological remains identified were excavated in accordance with the following strategy as set out in the WSI (Horizon, 2017):

- 100% of all positive features likely to obscure earlier archaeological features;
- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships;
- discrete negative features (more than 1m 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%;

- in addition to the above, all intersections between features and all terminals of linear features; and
- other features: 25%, unless otherwise agreed with the Consultant.
- The location of all small finds, with the exception of those discovered within discrete features, were recorded in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.4 Recording

All excavated contexts were fully recorded in line with the standards set out in the WSI (Horizon, 2017) and 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. Hand drawn plans and photogrammetry models made of excavated features, were tied in to the overall plan through the use of control points.

A full photographic record was maintained during the excavation 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.

4.5 Palaeoenvironmental Sampling Strategy

Environmental sampling was undertaken in accordance with the sampling policies outlined in the CIfA's Standard and Guidance (CIfA, 2014a) and Environmental Archaeology; A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage, 2011).

4.6 Archiving

The creation, compilation, transfer and deposition of the archaeological archive follows in line with the regulations of the Chartered Institute for Archaeologists Standards and Guidance (CIfA, 2014b).

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.

All finds will be stored in accordance with CIfA's Standard and Guidance (CIfA, 2014c). It is recommended that all artefacts are deposited at Oriel Ynys Môn, Llangefni.

Digital copies of the report will be submitted to Horizon who will then distributed to stakeholders. Printed versions will only be produced if specifically requested.

ABA will hold a digital version of the archive indefinitely.

5 Archaeological Results

Site name: Wylfa Newydd Hotspot 14

Site code: AB1703HS14

HER Event Code: 45396 PRN: 76062

NGR: SH35769384

Excavated by: Archaeoleg Brython Archaeology CYF.

Site type: Strip, map and sample

Topsoilaveragedepth:0.40m

Subsoil average depth: 0.10m

5.1 Historic Map Evidence and Documentary Data

No evidence of field boundaries, ditches or any other archaeological features was found on historical maps (Wessex Archaeology, 2016a).

5.2 Geophysical Survey Results

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

5.3 Evaluation Results

In 2016 Wessex Archaeology undertook a programme of evaluation trenching within field A12. A total of 9 trenches were opened in this field with 2 of these containing recorded archaeological features (Wessex Archaeology, 2016a,b,c). Of these trenches, 1 contained an undated drip gulley, and 1 contained 3 undated postholes and a presumed burnt mound, this was evaluation Trench 233 and was excavated as Strip Map and Sample of Hotspot 14.

Evidence of Prehistoric activity was identified in Trench 233 (Wessex Archaeology, 2016a) and comprised of a potential Bronze Age burnt mound deposit overlain by an alluvial deposit and 3 aligned postholes, interpreted as a windbreak (Wessex Archaeology, 2016a). A sherd of decorated prehistoric Bronze Age pottery was recovered during environmental processing of the soil samples from the presumed burnt mound deposit which also recovered evidence of low proportions of charred plant remains with a low concentration of charred cereal grains, dominated by wood charcoal (Wessex Archaeology, 2016a).

5.4 Excavation Results

The excavation of Hotspot 14 by Strip, Map and Sample was carried out by Archaeoleg Brython Archaeology CYF. during September 2018, a preliminary excavation was carried out by Wessex

Archaeology in May 2018 during which they identified a curving gulley which was recorded as the remains of a Bronze Age roundhouse with a centrally located hearth, surrounded by a ring of six post holes that were revealed and investigated but not fully excavated, other presumed postholes were investigated which were located within the drip gulley . A north to south presumed linear ditch in the west corner of the site was also identified. Excavation by ABA in 2018 identified the same series of six post holes [114.0002], [114.0024], [114.0026], [114.0038], [114.0040] and [114.0042] surrounding a hearth [114.0065] that was associated with a drip gulley. The post holes around the hearth were all circular with steep to vertical sides and concave bases with similar clay silt fills (114.0021), (114.0047), (114.0025), (114.0039), (114.0040), (114.0043), with diameters between 0.35m and 0.23m. These postholes formed a circular roundhouse structure around the hearth. The drip gulley [114.0036] was located up slope of the hearth, it formed a semi circle around the hearth and postholes which would have diverted rainwater away from the roundhouse.

The hearth [114.0065] was situated slightly off centre to the south-east within the ring of post holes and contained a stone lining (114.0052) which showed little evidence of in situ high temperature burning and had silted up once no longer in use. A heat affected clay deposit (114.0062) directly to the east of the hearth could relate to the removal of hot material. Two postholes, [114.0064] and [114.0063] were located either side of the hearth, they both contained clay silt charcoal rich fills and measured between 0.46m and 0.48m in diameter and between 0.20m and 0.22m in depth. These postholes suggest a possible structure associated with cooking.

A cluster of 11 postholes [114.0004], [114.0006], [114.0008], [114.0010], [114.0012], [114.0018], [114.0020], [114.0031], [114.0033], [114.0034], and [114.0035] were excavated to the north east of the hearth, [114.0033], [114.0034], and [114.0035] of which were originally identified during the evaluation phase as forming a possible wind break. This cluster of postholes were generally circular in plan with steep sides and filled with brown grey silt. They were to the east of a storage /dumping pit [114.0069] which contained a series of fills, an initial silting episode (114.0070), followed by dumping fills of compact grey yellow clay (114.0071), (114.0073) and charcoal rich sand silt (114.0072), likely to have been material dumped from the hearth.

A large posthole [w22009] measuring approximately 0.70m in diameter and 0.40m located 1.0m from the southern terminus of the ring gulley contained sherds of Bronze Age pottery (wSF4), of which was decorated. An intentional deposition of material along marginal wetland including a stony layer (114.0046) immediately to the south west of the roundhouse was observed. This deposition was to perhaps provide a stable more compacted area of ground in the a marshland which may have encroached the roundhouse. Deposit (114.0044) was compact with small frequent charcoal inclusions, below this was a silt layer (114.0045) and a stony layer (114.0046). These deposits were likely the presumed burnt mound identified during the evaluation phase and later described as a ditch in the preliminary excavation.

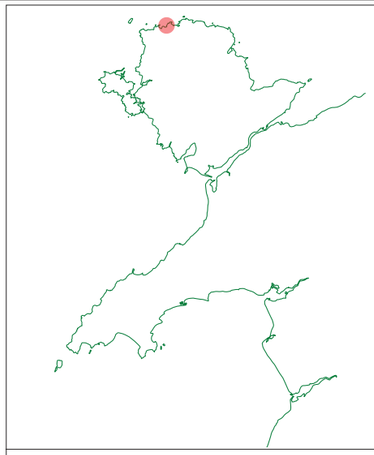
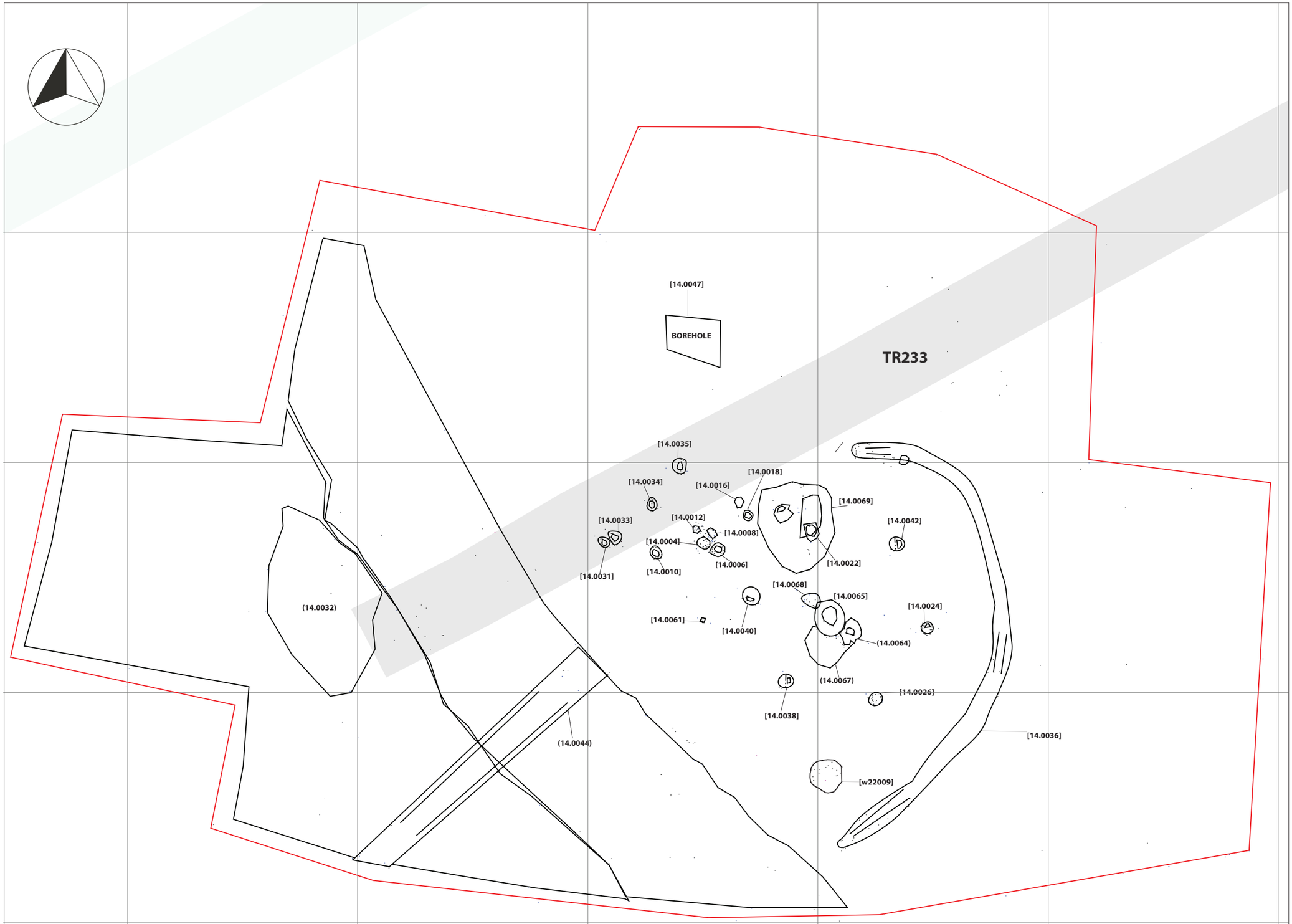


Figure 2
Site Plan, Hotspot 14.



Grid - 5m

Key

- Excavation Area
- Evaluation Trenches
- Extent Of Excavation
- Secondary Evaluation Trenches

© Archaeoleg Brython Archaeology CYF.

Drawn By:	DPN
Date:	29/10/18
Location:	SH34969272
Project:	AB1703 Hotspot 14

Archaeoleg Brython Archaeology

6 Finds and Dating Evidence

During the course of the excavation of Strip, Map and Sample at Hotspot 14 no bulk finds and 1.79278kg of small finds were recovered. A total of 17 small finds numbers were allocated; 1 was voided; 6 were unstratified lithics; and 10 were discovered in secure contexts.

Small finds which indicate Bronze Age activity were recovered from the Strip Map and Sample of Hotspot 14. Sherds of pottery (wSF4), spot dated as Bronze Age in date, were recovered from the fill (w22009) of post hole [w22010]. Fragments of burnt clay or possible degraded Prehistoric pottery sherds (wSF3) were recovered from the ring gulley's southern terminus [114.0036]. A large chunk of burnt clay (SF007) was found within the fill (114.0021) of roundhouse post hole [114.0022].

A spindle whorl (SF005) and 1 sherd of spot dated Bronze Age pottery (SF006) was discovered in the stony layer (114.0032) which formed part of the consolidation of the wetland area directly to the south west of the roundhouse structure. The charcoal rich consolidation layer (114.0044) give a number of small finds indicating a Bronze Age date for the site; a small lithic (wSF1); x2 flint flakes (wSF2); x10 spot dated Bronze Age pottery sherd, one of which was decorated (SF001), (SF004) and (SF014); and some heat affected stones (SF002).

No scientific dating has been undertaken. Suitable material for radiocarbon dating is likely to be present in the bulk environmental samples, and this material needs to be recovered during the assessment stage of the post-excavation programme.

7 Palaeoenvironmental

A total of 29 bulk environmental samples were collected from archaeological deposits at Hotspot 14 comprising of 40 10 litre buckets for processing using a flotation method in order to identify botanical and faunal remains.

Generally, the rate of recovery of datable artefacts during excavation is notably poor in the region of North West Wales. As such, more importance has been placed on the recovery of paleoenvironmental samples to provide data to help establish a chronology and narrative to sites in this region. Due to this, it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

8 Quantification and Recommendations

8.1 Quantification of Excavation Data

Data Category	**Number**
Context	96
Small finds	18 (1792.78g / 1.79278kg)
Bulk finds	0
Environmental samples	29
Monochrome film	0
Digital photographs	94
Rectified photographs / Photogrammetry	456
GPS surveyed digital pre-excavation plans	2
GPS surveyed digital excavation plans	2
TST surveyed digital excavation plans	0
Hand drawn plans	29
Hand drawn sections	35

8.2 Recommendation for Further Work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	Contexts, plans and sections Small Finds Environmental samples Lithics C^{14} Dating
Publication of key data categories	✓
Deposit archive	✓

9 Discussion

The evaluation identified a presumed Bronze Age burnt mound and a series of related post holes in Trench 233 which became Hotspot 14. Excavation of Strip Map and Sample of Hotspot 14 determined that what was initially interpreted as a burnt mound was a series of intentional dumps of material as part of the consolidation of marginal wetland immediately to the south west of a Bronze Age roundhouse. The roundhouse was defined by six postholes forming a circular structure around a central hearth and a semi-circular drip gulley upslope on its north east side. Probable Bronze Age pottery sherds discovered in one of the postholes and dumped material for wetland consolidation, along with flint flakes from the drip gulley terminus, all suggest a Bronze Age date for activity at the site.

A piece of spot dated decorated pottery sherd within the fill of one of the posthole of the roundhouse suggests a Bronze Age date, however all Prehistoric pottery from Hotspot 14 needs to be analysed and assessed by a specialist.

Though it is presumed the site is Bronze Age in date, mostly implied from the feature typology and the presence of spot dated pottery sherds within the consolidation layers and a posthole, an absolute date would make it conclusive; therefore recovery of any ecofacts from the environmental processing from the consolidation layers, postholes hearth and drip gulley would be recommended for radiocarbon dating. It would be essential to date these features and deposits to ascertain if they are all in fact contemporary. Pollen and microfauna from the environmental samples could provide information on the immediate landscape during the active life of the site and place it within the chronological and economic development of the local and wider area in accordance with the Framework for the Archaeology of Wales (2017).

Based upon the results of the excavation, it is recommended the archaeological potential of the assemblage and archive produced from the excavation of Hotspot 14 be further analysed and the results be disseminated in the form of an assessment report in line with the Written Scheme of Investigation.

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Appendix I

Archaeoleg Brython Archaeology

Team AB1703

Archaeoleg Brython Archaeology Team AB1703

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Alexander Coogan

Sophie Cooledge

Rebecca Costella

Brenton Culshaw

Pedro da Silva

Stuart Elder

Thomas Eley

Marta Estanga Lopez de Murillas

Lucia Fernandez Rabanal

Sean Finlay-Scott

James Fish

Amy Gamman

Catherine Godsiffe

Sergio Gomez-Carrion

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Clair Richardson

Louis Roper

Kurt Russell

Karolina Saxerbo Sjoberg

Victoria Scott

James Sinclair

Robert Slabonski

Elena Stefani

Stuart Stokes

Luke Tremlett

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1-21 Hotspot 14 photos

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Appendix II

Archaeoleg Brython Archaeology

Hotspot 14

Plates and Photogrammetry

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Plate 2: Post excavation of hearth [114.0065], after the removal of a stone lining (114.0052) with associated stakeholes. View from the south. 1x1m scale. *2*

Photogrammetry (not georeferenced)



Plate 1: Showing postholes of the roundhouse structure with hearth [114.0065] and drip gully [114.0065] to the north east. View from the south south east. 2x2m scales.

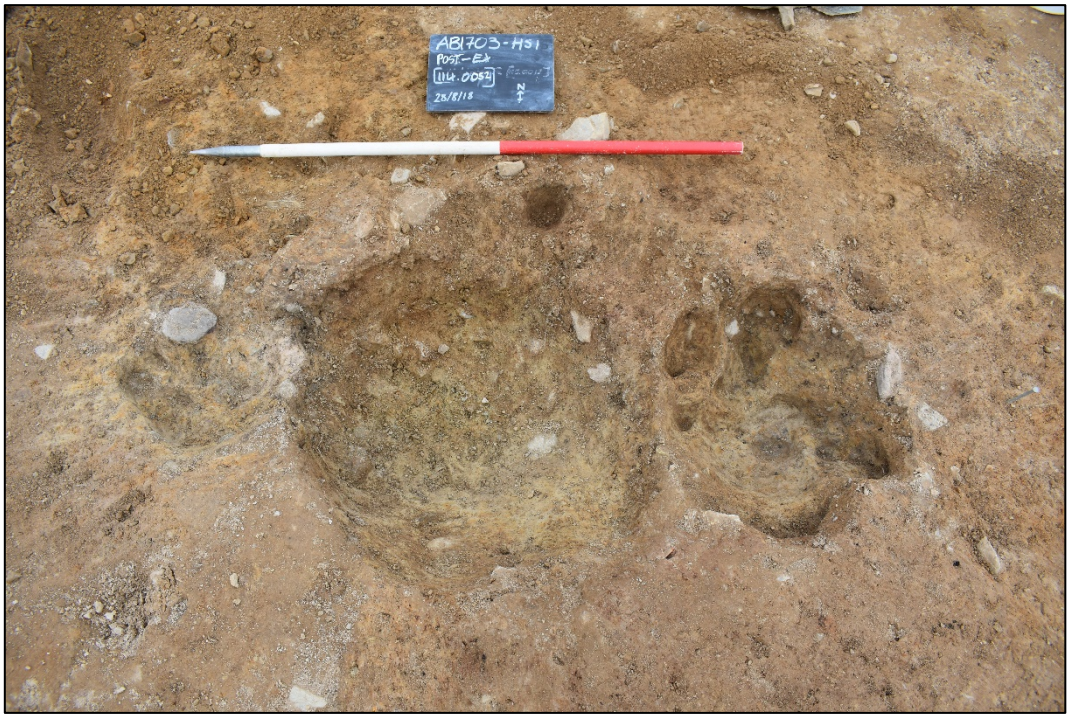


Plate 2: Post excavation of hearth [114.0065], after the removal of a stone lining (114.0052) with associated stakeholes. View from the south. 1x1m scale.



Phototgrammetry(unregisterd) of Hotspot 14 post excavation.

1-22 Wylfa Summary Report Hotspot 15

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Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 15
Document Number:
WYN-BRY-CON-REP-00014 v1.1

Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 15

Wylfa archaeological works on behalf of Horizon Nuclear Power

Prepared for Horizon Nuclear Power

Text by Karl Macrow, Iwan G. Parry and Cindy Nelson-Viljoen

Illustrations by Sophie Cooledge and Iwan G. Parry

January 2019

WYN-BRY-CON-REP-00014 v1.1

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Appendix I: Archaeoleg Brython Archaeology Team AB1703

Appendix II: Plates and Photogrammetry

Summary

Archaeoleg Brython Archaeology CYF. have completed the excavation of an enclosed Romano-British settlement at Hotspot 15, Wylfa, Anglesey (NGR SH34939277) in advance of an application to construct the proposed Wylfa Newydd nuclear power station. The excavation area measured 1002m^2. All works were undertaken in accordance with the Written Scheme of Investigation (WSI) and monitored by Gwynedd Archaeological Planning Service.

During a phase of evaluation trenching in 2016 a possible ring gulley and burnt mound were identified. Hotspot 15 was located to address the archaeological potential of these remains. Excavation of the Hotspot revealed extensive stone-built structures on both sides of a post-medieval drainage ditch and field boundary. Excavation of the features revealed multiple phases of activity at the site.

The earliest activity at the site was a series of pits and postholes, likely to be associated with ditches forming an enclosure. Overlying these features were a series of stone-built structures including a roundhouse, enclosure wall, well and what appeared to be a nine-post structure which may have supported a suspended timber floor. Artefacts associated with these structures include sherds of Roman pottery, spindle whorls, loom weights and fragments of decorated bone, all of which suggests a domestic setting. A later phase of light industrial activity utilised some of the structures but could not be accurately dated.

Based upon the results of the excavation, it is recommended the archaeological potential of the assemblage and archive produced from the excavation of Hotspot 15 be further analysed and the results be disseminated in the form of an assessment report in line with the Written Scheme of Investigation.

1 Introduction

Archaeoleg Brython Archaeology CYF. (ABA) have been commissioned by Horizon Nuclear Power Ltd. (HNP) to undertake a phased programme of strip, map and sample excavation in advance of the submission of a Development Consent Order (DCO) application (PINS Reference Number EN010007) for the proposed construction of the Wylfa Newydd nuclear power station. The purpose of this document is to provide supporting evidence for Horizon's DCO application, and to summarise the results of the excavation in advance of the production of an assessment report.

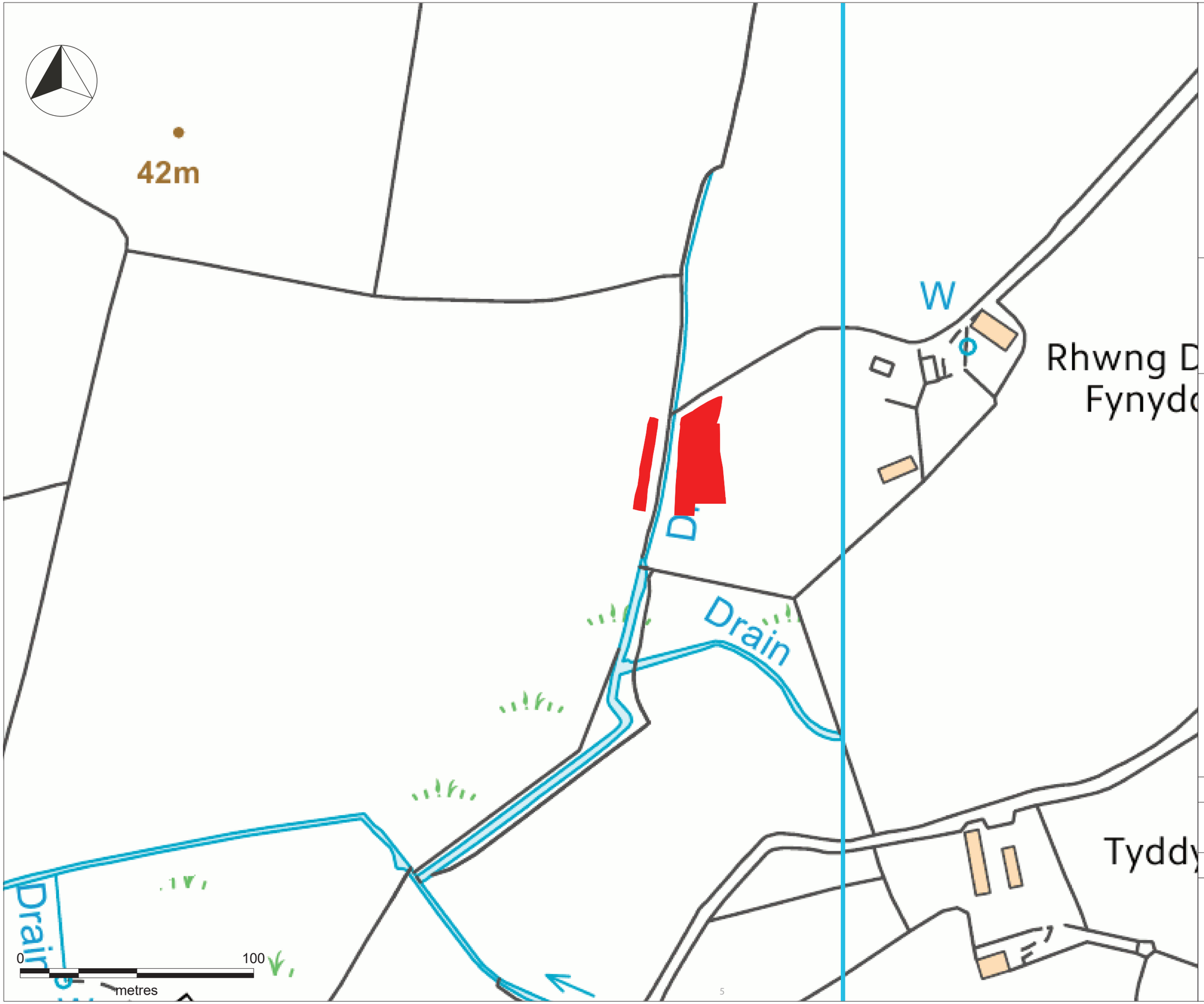
This report provides a summary of the results of archaeological excavation at Strip, Map and Sample (SMS) Hotspot 15 undertaken during 2018 and 2019 and represents the first phase of the post-excavation analysis regarding the archaeological investigations at the Wylfa Newydd site. Following the production of a Written Scheme of Investigation (WSI) (Horizon, 2017), and in line with paragraphs 5.8.21 of the Overarching National Policy Statement for Energy (EN-1) (2011), the scope of all works was agreed and monitored whilst in progress by Gwynedd Archaeological Planning Service (GAPS), cultural heritage advisors to the Local Authority. Wardell Armstrong LLP. (WA) have been employed by HNP as cultural heritage consultants for the project and within this capacity have provided guidance and advice during the works.

2 Background

Hotspot 15 was located approximately 680m west of Tregele and 870m south of the power station on relatively flat ground at the base of a south-westerly sloping field on the edge of marsh land in a pastural field, previously labelled "A12" during the archaeological trial trench evaluation. Immediately west of the excavation area was a modern drainage ditch. Due to the extent and nature of the archaeology identified in Hotspot 15 a supplementary excavation area (Hotspot 15 West) was opened on the opposite side of the drainage ditch. This was located in the field previously labelled "A7" during the archaeological trial trench evaluation, immediately east of Hotspot 8. The investigation area was at a height of approximately 18m AOD.

Prior to excavation of Hotspot 15, 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 (Wessex Archaeology, 2016a,b,c). A number of Strip, Map and Sample areas described as "Hotspots" were identified as a result of the evaluation trenching. These were organised into four zones referred to as 1a, 1b, 2 and 3 within the WSI (Horizon, 2017). Hotspot 15 was located in Hotspot Zone 1a. Hotspot 15 was selected for excavation based on the results of the evaluation trenching which identified the remains of a bunt mound and ring gulley (Wessex Archaeology, 2016a).

Superficial deposits in the area consist of Till, Devensian – Diamicton. These are sedimentary deposits which formed between 116 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, 2018).



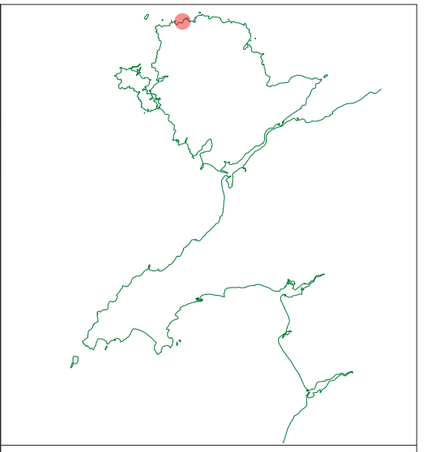


Figure 1
Location Plan, Hotspot 15.

Key

Hotspot 15

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Ordnance Survey Licence Number 100048957

Drawn By:
SC

Date:
05/02/19

Location:
SH34939277

Project:
AB1703 HS15

Archaeoleg Brython Archaeology

3 Aims and Objectives

3.1 Archaeological Strip, Map and Sample Aims

The aims of the archaeological strip, map and sample identified in the WSI (Horizon, 2017) were as follows:

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 (so 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; and

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.

3.2 Archaeological Strip, Map and Sample Objectives

The relevant archaeological framework documents identified in the WSI (Horizon 2017) were;

- *Review of the Research Framework for the Archaeology of Wales: North West Wales – Neolithic and Early Bronze Age (Steve Burrow, 2010).*
- *Review of the Research Framework for the Archaeology of Wales: North West Wales – Later Bronze Age and Iron Age (Fiona Gale, 2010).*
- *A Research Framework for the Archaeology of Wales – Romano British (AD 43-AD 410) (Davies, 2011).*
- *A Research Framework for the Archaeology of Wales: North West Wales - Early Medieval c. AD 400-1070 (Nancy Edwards, Tudur Davies and Kate A. Hemer, 2016).*
- *A Research Framework for the Archaeology of Wales: North West Wales – Medieval c.AD 1100 – 1539 (David Longley, 2010).*

These documents identify research objectives, and the WSI presented research questions derived from the objectives of the research frameworks outlined above. As a burnt mound and ring gulley was identified during the evaluation, the questions relevant to Hotspot 15 were;

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.

The results of the excavation revealed archaeological remains of an Iron Age/Romano British settlement, associated ditches and potential industrial features. Following the results of the excavation, the following questions should be addressed:

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?

Prehistoric artefacts were discovered during excavation, and consisted of worked stone artefacts, associated debitage, pottery, worked bone artefacts and metalwork. As such, questions addressing the research objectives in documents outlined above were identified within the WSI (Horizon, 2017) were identified. These questions were;

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?

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. The following questions should 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?

The pottery recovered during the excavation of the settlement identified in Hotspot 15 demonstrates activity during the Romano British period, as such the following questions should be addressed:

Q14: How did the culture on the island change, and in what ways, between the Roman and early medieval periods

Q15: What types of Roman Sites are present with the Wylfa Newydd Development Area and how do they relate to their surrounding landscape both in terms of location and utilisation of the landscape

4 Methodology

4.1 Surveying and Setting Out

The strip, map and sample area was surveyed and set out by the Main Contractor, Jones Brothers Balfour Beatty Joint Venture (JBBBJV). The excavation area and all archaeological features were subsequently surveyed using a Leica Viva GPS system. All surveys were tied in to the Ordnance Survey National Grid.

4.2 Mechanical Excavation

Topsoil and any other overburden was removed using a tracked 360 degree excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under direct archaeological supervision.

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 of the underlying archaeological features were revealed, or when the absence of any archaeological 'horizon' was adequately demonstrated.

After the completion of mechanical excavation, both the spoil heaps and the stripped surface were scanned both with a metal detector and visually. Any artefacts of potential archaeological interest identified because of this work were recovered and their locations accurately recorded.

4.3 Hand Excavation

Immediately after the removal of deposits overlying the archaeological horizon, the area was manually cleaned, and all features investigated and recorded as per standard ABA procedures.

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 taking these signals into account.

All excavations were undertaken in accordance with best practice as set out in Standards and Guidance for Archaeological Excavation (CIfA, 2014a).

All archaeological remains identified were excavated in accordance with the following strategy as set out in the WSI (Horizon, 2017):100% of all positive features likely to obscure earlier archaeological features;

- 100% of all positive features likely to obscure earlier archaeological features;
- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships;
- discrete negative features (more than 1m 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%;

- in addition to the above, all intersections between features and all terminals of linear features; and
- other features: 25%, unless otherwise agreed with the Consultant.
- The location of all small finds, with the exception of those discovered within discrete features, were recorded in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.4 Recording

All excavated contexts were fully recorded in line with the standards set out in the WSI (REF) and 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. Hand drawn plans and photogrammetry models made of excavated features, were tied in to the overall plan through the use of control points.

A full photographic record was maintained during the excavation 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.

4.5 Palaeoenvironmental Sampling Strategy

Environmental sampling was undertaken in accordance with the sampling policies outlined in the CIfA's Standard and Guidance (CIfA, 2014a) and Environmental Archaeology; A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage, 2011).

4.6 Archiving

The creation, compilation, transfer and deposition of the archaeological archive follows in line with the regulations of the Chartered Institute for Archaeologists Standards and Guidance (CIfA, 2014b).

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.

All finds will be stored in accordance with CIfA's Standard and Guidance (CIfA, 2014c). It is recommended that all artefacts are deposited at Oriel Ynys Môn, Llangefni.

Digital copies of the report will be submitted to Horizon who will then distributed to stakeholders. Printed versions will only be produced if specifically requested.

ABA will hold a digital version of the archive indefinitely.

5 Archaeological Results

Site name: Wylfa Newydd Hotspot 15

Site code: AB1703HS15

HER Event Code: 45396 *PRN: 76063*

NGR: SH34939277

Excavated by: Archaeoleg Brython Archaeology CYF. Site Director Iwan Parry

Site type: Strip, map and sample

Topsoil average depth: 0.475m

Subsoil average depth: 0.37m

5.1 Historic Map Evidence and Documentary Data

No evidence of field boundaries, ditches or any other archaeological features was found on historical maps (Wessex Archaeology, 2016a).

5.2 Geophysical Survey Results

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

5.3 Evaluation Results

The original evaluation trench (Trench 236) which was targeted by Hotspot 15, contained a ring gulley measuring 0.48m wide by 0.16m deep, and a burnt mound. There was no colluvium or alluvium present within the trench which could indicate possible phasing, however the burnt mound within the trench suggested a potential prehistoric date. The burnt mound could not be excavated due to flooding (Wessex Archaeology, 2016a). Excavation of Hotspot 15 demonstrated that no burnt mound was present at this location, it is likely that the evaluation identified burnt deposits associated with industrial activity.

5.4 Excavation Results

See Figure 2

5.4.1 Pits, Postholes and Enclosure Ditch.

The earliest phase of activity identified within the excavation area was a group of pits containing sandy fills which were located centrally within the excavation area below the later settlement activity. Four of the larger pits at the north-west corner of the excavation area may have potentially formed a subcircular shape but this was obscured by the unexcavated area where the current modern field boundaries converge. The other features associated with this phase did not

appear to form a coherent pattern and there was no suggestion that they were associated with a structure.

At least one of the pits was cut by a posthole which also pre-dated the overlying settlement activity. The arrangement of the postholes was unclear, especially without the presence of dating evidence, but they may represent multiple phases of timber buildings which predate some of the stone-built elements of the settlement.

A shallow ditch underlying the eastern enclosure wall may form part of an earlier enclosure associated with the pits and postholes. Although this ditch was the only one which could be confidently phased by physical relationship, other ditches at the southern end of the excavation area may have been associated with this phase of activity. No significant archaeological features were identified to the east of the probable enclosure ditch, suggesting that the later activity respected the boundaries of the earlier phase of the site.

To the south of the eastern enclosure wall was what appeared to be a convergence of two trackways. One running north-south; its northern end was indistinct whilst to the south it extended beyond the limit of excavation. The second 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.

5.4.2 Stone phase of settlement

The second phase of activity at the site appears to have been the construction of a stone-built roundhouse, well, raised floor building, internal enclosures and an enclosure wall. A probable stone building identified in Hotspot 15 West also probably relates to this phase of activity.

The remains of a roundhouse were identified on the western edge of the excavation area and were probably truncated by the modern drainage ditch to the west. Based on the projected dimensions of the roundhouse it would have an outer diameter of 8m and a probable inner diameter of 6m. The external skin of the wall was constructed using relatively large orthostats which bounded a rubble core, the internal side of the wall was not identified within the excavation area. The threshold of the roundhouse was well defined with schist slabs laid on edge, the floor of the doorway had been laid with pebbles which had been well compacted into a clay rich matrix. Beneath this pebble layer was a flagstone surface made of local schist. A flagstone surface also ran around the outside of the roundhouse. These external flagstones sat on a metalled gravel surface which may indicate the surface on which people were walking prior to, or during the construction of the stone structures. Beneath the northern end of the outer flagstone surface was a shallow V shaped drain lined with pieces of schist which cut the gravel surface and natural deposit below.

Immediately to the north of the roundhouse was a well. This well was cut through the gravel surface. The lower part of the well was constructed of large stone blocks set into the natural clay whilst the upper part was of well coursed schist stones all of similar dimensions approximately 0.22m x 0.05m x 0.25m. The coursed layer started below the level of the gravel surface. There was no construction cut for the well evident in any of the layers above the gravel surface indicating that its upper portion may have sat above ground. The well was capped by a single large stone 1m in diameter. From the base of the cut to the top of the capstone the well was 0.81m.

Northeast of the well was a large stone structure. This structure only had walls on the north, east and south sides with the western side being open. The ground level on the inner side of this wall was lower than on its outer side. The inner face of the wall was constructed from flat orthostats set on edge with the natural clay deposits. On top of the natural clay deposit and abutting the inner face orthostats was the rubble core of the wall. The outer face of the wall was less distinct and where present constructed from larger blocks of stone set on bed. In the middle of the east side of

the wall was a rounded projection into the internal space which may have been a step. The rubble core of this step abutted the boundary wall. In the centre of the internal space were nine large orthostats each set into a pit with stone packing. The tops of these orthostats was at the same level as the tops of the inner face of the wall and the possible step on the eastern wall. These may have supported a suspended floor. In the centre of the building and overlying the construction cuts for the orthostats was a layer of burnt material, containing large fragments of daub, from which several small finds were recovered including some decorated burnt bone and a number of stone weights and spindle whorls.

A section of enclosure wall ran east to west on the southern edge of the settlement which probably abutted the southern edge of the roundhouse. The interaction of the two walls lay just beyond the limit of excavation so their true relationship could not be discerned during the excavation. To the south of this wall were several pits which are believed to be industrial in nature. The largest portion of enclosure wall ran north to south on the eastern edge of the site. No features were found to the east of this wall. The rubble core of the eastern wall of the central raised floor structure abutted the enclosure wall. The surviving courses of the enclosure wall were at a higher level than the surface of the central structures wall core and step. To the north of the raised floor structure were two stone walls running roughly east to west which appeared to be later additions as they abutted the enclosure wall rather than being keyed in. A portion of the eastern enclosure wall was truncated by later activity immediately south of the raised floor structure.

Several fragments of Romano British pottery were recovered from the layers associated with these stone structures.

5.4.3 Later industrial activity

The final phase of activity identified appeared to relate to small-scale industrial activity which reused some of the structural elements of the previous phase. A roughly coursed low wall made of schist rubble was built to the north of the southern enclosure wall running parallel to it, the wall was built to the same height as the remaining portion of the enclosure wall. At the west end of the wall a number of flagstones from the surface outside the roundhouse had been up ended and used to match the height of the two parallel east-west walls to form a north-south wall linking the two. The space between these two walls had a thick layer of burnt material and charcoal. Similar burnt layers were also seen over the threshold of the roundhouse and between the round house and up-ended flagstones.

To the north-east of this activity was a circular construction which contained a large amount of charcoal, possibly representing a kiln or oven. A gap within the wall of the structure and a corresponding charcoal spread on the south-western edge of the feature indicating the structure had been raked out at least once.

Hotspot 15 West

Ditch

Trackway

Modern Drainage Ditch/ Field Boundary

0 10m

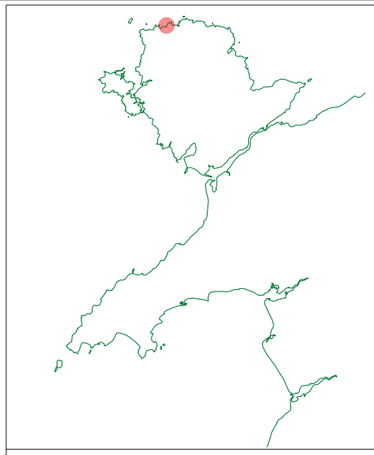


Figure 2a
Site Plan, Hotspot 15/15 West
Features pre-dating stone-built phase

Key

- Excavation area
- Features pre-dating stone phase
- Stone-built phase (structures)
- Stone-built phase (cut features)
- Later industrial phase (cut features)
- Areas of industrial activity
- Post-medieval

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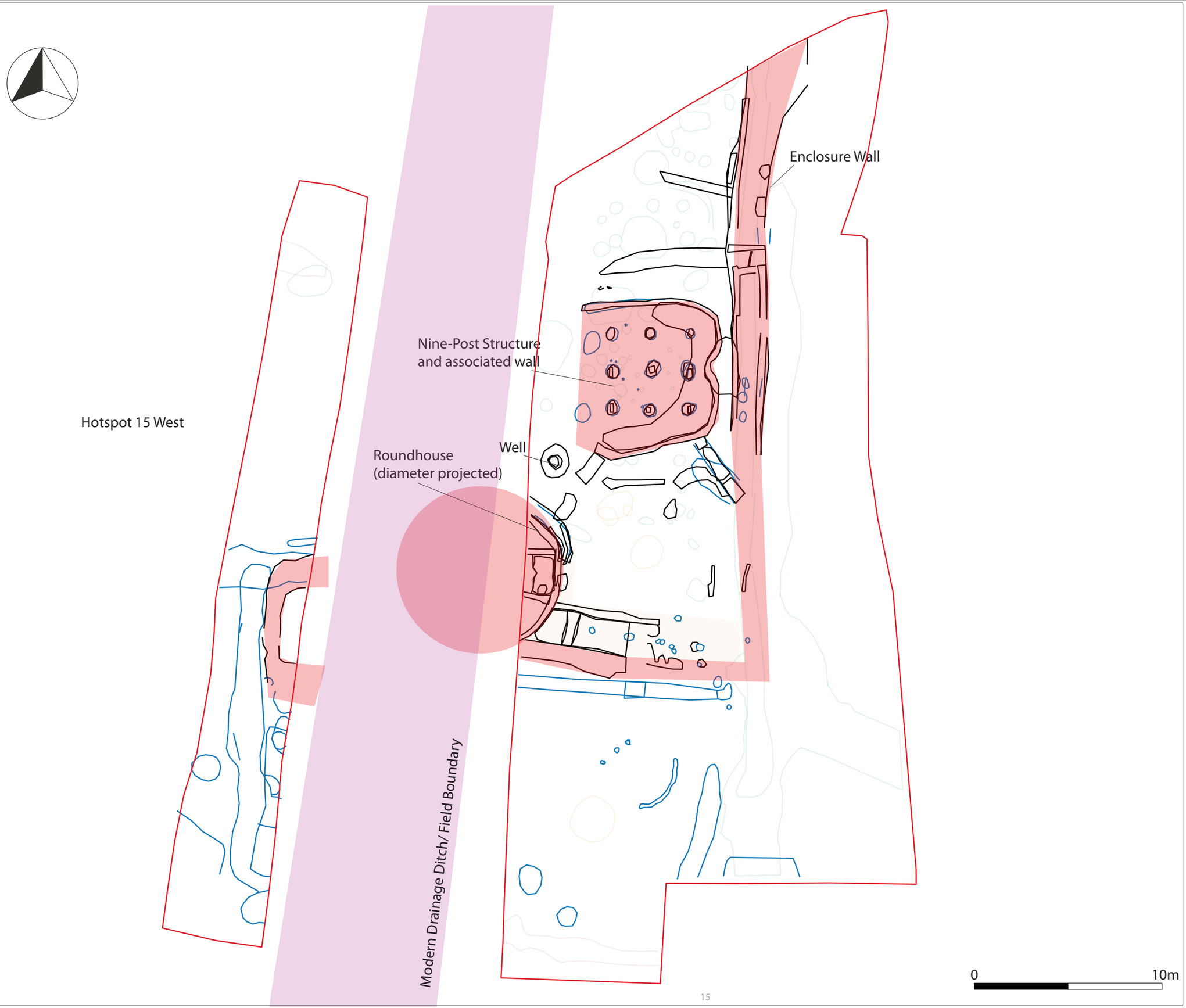
Drawn By: IGP

Date: 08/02/19

Location: SH349392774

Project: AB1703 Hotspot 15

Archaeoleg Brython Archaeology



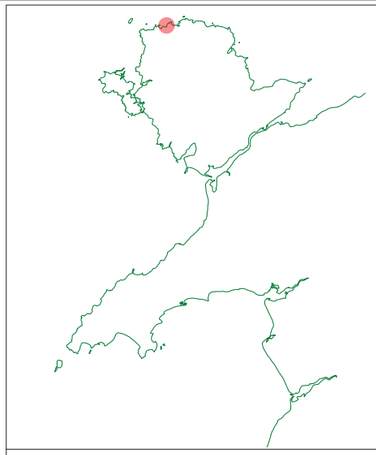


Figure 2b
Site Plan, Hotspot 15/15 West
Stone-built phase

Key

- Excavation area
- Features pre-dating stone phase
- Stone-built phase (structures)
- Stone-built phase (cut features)
- Later industrial phase (cut features)
- Areas of industrial activity
- Post-medieval

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Drawn By: IGP

Date: 08/02/19

Location: SH349392774

Project: AB1703 Hotspot 15

Archaeoleg Brython Archaeology



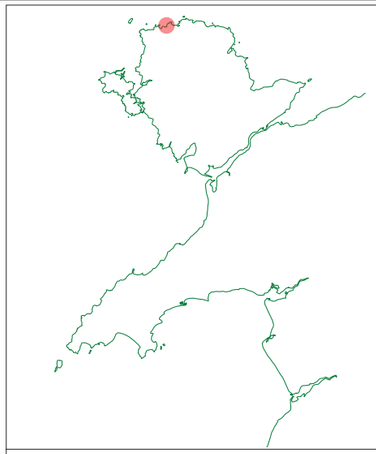


Figure 2c
Site Plan, Hotspot 15/15 West
Features post-dating stone-built phase

Key

- Excavation area
- Features pre-dating stone phase
- Stone-built phase (structures)
- Stone-built phase (cut features)
- Later industrial phase (cut features)
- Areas of industrial activity
- Post-medieval

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Drawn By: IGP

Date: 08/02/19

Location: SH349392774

Project: AB1703 Hotspot 15

Archaeoleg Brython Archaeology

6 Finds and dating Evidence

During the course of the excavation of Strip, Map and Sample at Hotspot 15 no bulk finds and 34.29kg of small finds were recovered. A total of 166 small finds numbers were allocated; the majority were discovered in secure contexts.

Most of the finds from Hotspot 15 can be attributed to the Romano-British period. Ceramics recovered include Black Burnished ware and Samian ware.

Finds of particular interest from Hotspot 15 include a number of burnt bone fragments, some of which have been decorated by carving, others are identifiable as combs associated with weaving.

A number of perforated stones, likely to be loom weights were identified in association with the stone built structures. A number of spindle whorls were also present in the assemblage.

7 Palaeoenvironmental

A total of 124 bulk environmental samples comprising of 288 10 litre buckets were collected from archaeological deposits at Hotspot 15 for processing using a flotation method in order to identify botanical and faunal remains.

Overall, the rate of recovery of dateable artefacts during excavation is poor in north-west Wales, as such, far more importance is placed on the recovery of palaeoenvironmental samples to provide data to establish chronology and narrative to the sites in this region. The earliest and later phases of activity at Hotspot 15 were notably lacking in any datable artefacts.

Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to environmental data is assessed following processing.

8 Quantification and Recommendations

8.1 Quantification of Excavation Data

Data Category	Number
Context	453
Small finds	166 (34290.91g / 34.29091kg)
Bulk finds	-
Environmental samples	124 (2876 ltr / 288 buckets)
Monochrome film	X
Digital photographs	604
Rectified photographs / Photogrammetry	9413
GPS surveyed digital pre-excavation plans	1
GPS surveyed digital excavation plans	1
TST surveyed digital excavation plans	X
Hand drawn plans	76
Hand drawn sections	145

8.2 Recommendation for Further Work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	Environmental samples Lithics Ceramics C14 dating Fauna Metal objects
Publication of key data categories	✓
Deposit archive	✓

9 Discussion

Hotspot 15 was targeted for excavation due to the potential for archaeology identified during evaluation trenching that revealed a ring gulley and a burnt mound (Wessex Archaeology 2016a).

An area of 1002m² was excavated revealing the presence of a series of pits and postholes, a stone-built roundhouse, well, large stone structure with a possible raised floor, a number of burnt deposits and a circular structure which may have been a kiln or oven.

The earliest activity on site is represented by a series of pits, post holes and enclosure ditches, no dateable artefacts were recovered from these features as such radiocarbon dating should be considered a priority.

The threshold of the stone built roundhouse may indicate two phases of use, one being represented by the pebble surface and an earlier phase being represented by the underlying flagstone floor. This suggests that the settlement may have been occupied for a considerable length of time.

The well shows evidence of being in a state of disrepair at some point during its use with a primary fill of silty clay that had been washed in over time, followed by a 0.2m thick layer of rubble which seems to indicate a partial collapse of the well sides or top or a small amount of rubble being dumped or knocked in. Above this rubble layer were various layers of silt and alluvial deposits indicating that the well was open for a portion of time after the rubble entered the well before the capstone was finally put in place. There was a void between the final layer of silt and the capstone implying that human activity was still going on in the vicinity of the well after it was no longer needed. The absence of a construction cut for the upper half of the well indicates that it was probably an above ground structure rather than entirely subterranean. The presence of a possible stone surface around the capstone also indicate later activity taking place after the ground level had risen sufficiently to bury the upper portion of the well. As no dateable artefacts were recovered from the well processing the environmental samples from the well should be considered a priority.

The large stone structure with a raised floor could be a granary, this may explain why only the north, east and south sides were protected by a wall with the west side being left open for access. The dimensions are comparable to examples such as those from Cefn Du, Gaerwen (Cuttler et al, 2012), but no other examples constructed of stone have been identified during research. Although the presence of finds associated with textile production in the northeast quarter of the nine post structure could indicate that it was a domestic dwelling with a raised floor, possibly in a crude attempt to copy a hypocaust system or simply to deal with occasional flooding or damp conditions that were likely present on a site located in the bottom of a valley next to a wetland area.

The two stone walls to the north which abut the boundary wall are set at slightly different angles which may indicate more than one phase of alterations or additions to the enclosure structures.

A number of Romano British pottery fragments were recovered from the stone structures and associated layers giving a good indication of the date.

The roughly coursed wall parallel to the southern boundary wall and the associated burnt layers indicate a reuse of the material once the stone structures were out of use. These structures may have been altered and used as corn driers or for some other process requiring prolonged heating. The presence of other features which appeared to have had a light industrial function suggests that such activities were focused at the site after it ceased to be a domestic area. This re use of the material may also account for a portion of the missing enclosure wall.

The processing of samples from these industrial features should be prioritised in order to determine function and to recover material suitable for radiocarbon dating.

The enclosed settlement identified at Hotspot 15 demonstrates a prolonged period of activity which was observed in the multiple phases of activity. The settlement appears to have been in use during the Romano-British period, as demonstrated by the pottery and other artefacts, but no artefacts were recovered from features which pre and post-dated this activity. It is possible therefore that the site may have been in use from the Iron Age to the early medieval period. The features identified in Hotspot 15 bear similarities to those encountered on a larger scale at Area O5 South, located approximately 230m to the south-west, and may be contemporary. The processing and assessment of the palaeoenvironmental samples will be critical in providing interpretation and a firm chronology of the activity at the site, as such it should be prioritised.

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Appendix I

Archaeoleg Brython Archaeology

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Pedro da Silva

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

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Elena Matteacci

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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

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1-23 Hotspot 15 photos

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Appendix II

Archaeoleg Brython Archaeology

Hotspot 15

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Plate 2: Mid excavation of Hotspot 15 showing the original limit of excavation. View from the south east. 1x1m and 1x2m scales. *2*

Plate 3: Entrance of roundhouse. View from the west. 1x1m scale. *3*

Plate 4: Large industrial pit to the south of the enclosure. South facing section. 1x1m scale *3*

Plate 5: Nine post structure. View from the west. 1x2m scale. *4*

Plate 6: Stone built well. View from the east south east. 2x1m scale. *4*

Photogrammetry (not georeferenced)



Plate 1: Pre excavation of Hotspot 15, showing the original limit of excavation. View from the south. 1x1m and 1x2m scales.



Plate 2: Mid excavation of Hotspot 15 showing the original limit of excavation. View from the south east. 1x1m and 1x2m scales.



Plate 3: Entrance of roundhouse. View from the west. 1x1m scale.



Plate 4: Large industrial pit to the south of the enclosure. South facing section. 1x1m scale.



Plate 5: Nine post structure. View from the west. 1x2m scale.



Plate 6: Stone built well. View from the east south east. 2x1m scale.



Photogrammetry (unregistered) of Hotspot 15 post excavation of stone-built phase.

1-24 Wylfa Summary Report Hotspot 16

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Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 16

Document Number WYN-BRY-CON-REP-00004 v1.2

Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 16

Wylfa archaeological works on behalf of Horizon Nuclear Power

Prepared for Horizon Nuclear Power

Text by Laura W. Parry, Cindy Nelson-Viljoen and Iwan G. Parry

Illustrations by Declan New

October 2018

WYN-BRY-CON-REP-00004 v1.2

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Appendix I: Archaeoleg Brython Archaeology Team AB1703
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Summary

Archaeoleg Brython Archaeology CYF. have completed the excavation of potential prehistoric and post medieval features at Hotspot 16, Wylfa, Anglesey (NGR SH34919260) in advance of an application to construct the proposed Wylfa Newydd nuclear power station. The excavation area measured 275m^2 and the archaeological remains identified within the area consisted of six pits and a ditch. All work was undertaken in accordance with the Written Scheme of Investigation and monitored by Gwynedd Archaeological Planning Services.

During a phase of archaeological evaluation trenching undertaken in 2015/2016 three pits and a ditch terminus were identified as evidence of potential prehistoric settlement. Hotspot 16 was located to address the archaeological potential of the remains and was excavated during September 2018. The excavation revealed three post medieval pits, three undated pits and an undated ditch.

Recovered artefacts comprised two fragments of Neolithic polished stone axe recovered from unstratified contexts, post-medieval post sherds from a pit and fragments of wood, also from a pit. As such the features in Hotspot 16 were likely to range in date from the Neolithic to post-medieval periods. Due to the lack of dateable artefacts in secure contexts and type of features identified, the environmental samples require processing to help determine function and date to gain a better understanding of their relationship with other features and within a wider archaeological context.

Based upon the results of the excavation, it is recommended the archaeological potential of the assemblage and archive produced from the excavation of Hotspot 16 be further analysed and the results be disseminated in the form of an assessment report in line with the Written Scheme of Investigation.

1 Introduction

Archaeoleg Brython Archaeology CYF. (ABA) have been commissioned by Horizon Nuclear Power Ltd. (HNP) to undertake a phased programme of strip, map and sample excavation in advance of the submission of a Development Consent Order application (Pins reference number EN010007) for the proposed construction of the proposed Wylfa Newydd Nuclear Power Station. The purpose of this document is to provide supporting evidence for Horizons DCO application, and to summarise the results of the excavation in advance of the production of an assessment report.

This report provides a summary of the results of archaeological excavation of Strip, Map and Sample (SMS), of Hotspot 16 undertaken during 2018 and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site. Following the production of a Written Scheme of Investigation (WSI) (Horizon, 2017), 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 scope of the works was agreed by Gwynedd Archaeological Planning Services (GAPS). Archaeological works were monitored whilst in progress by GAPS, cultural heritage advisors to the Local Authority. Wardell Armstrong LLP. (WA) have been employed by HNP as cultural heritage consultants for the project and within this capacity have provided guidance and advice during the works.

2 Background

Hotspot 16 was located approximately 650m west of Tregele in a low-lying field, previously labelled 'A11' during the archaeological trial trench evaluation, at the northern edge of a flat plateau on the edge of a marshland to the west. The investigation area was at a height of approximately 18m AOD.

Prior to the excavation of the Hotspot 16 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 (Wessex Archaeology, 2016a,b & c). Hotspot 16 was selected for excavation based on the results of the evaluation trenching as a number of pits and possible linears within and below illuvial/alluvial deposits (Wessex Archaeology, 2016a) were encountered during these investigations. A number of Strip, Map and Sample areas described as "Hotspots" were identified as a result of the evaluation trenching. These were organised into four zones referred to as 1a, 1b, 2 and 3 within the WSI (Horizon, 2017). Hotspot 16 was located in Hotspot Zone 1a.

Geological superficial deposits in the area consist of Till, Devensian – Diamicton. These are sedimentary deposits which formed between 116 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, 2018).



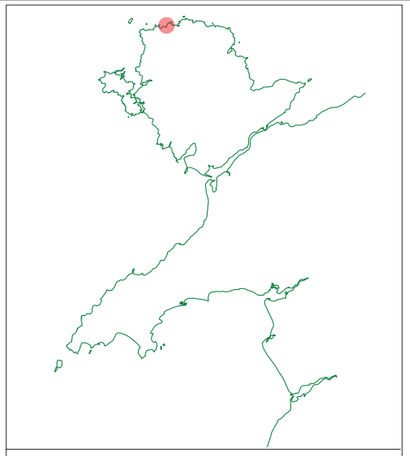


Figure 1
Location Plan, Hotspot 16 .

Key

Hotspot 16

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Ordnance Survey Licence Number 100048957

Drawn By:	DPN
Date:	22/10/18
Location:	SH34919260
Project:	AB1703 Hotspot 16

Archaeoleg Brython Archaeology

3 Aims and Objectives

3.1 Archaeological Strip, Map and Sample Aims

The aims of the archaeological strip, map and sample identified in the WSI (Horizon, 2017) were as follows:

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 (so 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;*
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; and*
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.*

3.2 Archaeological Strip, Map and Sample Objectives

The relevant archaeological framework documents identified in the WSI (Horizon 2017) were;

- Review of the Research Framework for the Archaeology of Wales: North West Wales – Neolithic and Early Bronze Age (Steve Burrow, 2010).
- Review of the Research Framework for the Archaeology of Wales: North West Wales – Later Bronze Age and Iron Age (Fiona Gale, 2010).
- A Research Framework for the Archaeology of Wales – Romano British (AD 43-AD 410) (Davies, 2011).
- A Research Framework for the Archaeology of Wales: North West Wales - Early Medieval c. AD 400-1070 (Nancy Edwards, Tudur Davies and Kate A. Hemer, 2016).
- A Research Framework for the Archaeology of Wales: North West Wales – Medieval c.AD 1100 – 1539 (David Longley, 2010).

These documents identify research objectives, and the WSI presented research questions derived from the objectives of the research frameworks outlined above. As pits and ditch believed to be ephemeral prehistoric features were identified during the evaluation, the questions relevant to Hotspot 16 were;

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

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

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

The results of the excavation however revealed archaeological some remains differing from those observed within the evaluation trenches. Following the results of the excavation, the following questions should 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?

Two fragments of Neolithic polished stone axe and post-medieval pottery sherds were recovered during excavation. As such, questions addressing the research objectives in documents outlined above were identified within the WSI (Horizon, 2017) were identified. These questions were;

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?

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?

4 Methodology

4.1 Surveying and Setting Out

The strip, map and sample area was surveyed and set out by the Main Contractor, Jones Brothers Balfour Beatty Joint Venture (JBBBJV). The excavation area and all archaeological features were subsequently surveyed using a Leica Viva GPS system. All surveys were tied in to the Ordnance Survey National Grid.

4.2 Mechanical Excavation

Topsoil and any other overburden was removed using a tracked 360 degree excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under direct archaeological supervision.

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 of the underlying archaeological features were revealed, or when the absence of any archaeological 'horizon' was adequately demonstrated.

After the completion of mechanical excavation, both the spoil heaps and the stripped surface were scanned both with a metal detector and visually. Any artefacts of potential archaeological interest identified because of this work were recovered and their locations accurately recorded.

4.3 Hand Excavation

Immediately after the removal of deposits overlying the archaeological horizon, the area was manually cleaned, and all features investigated and recorded as per standard ABA procedures.

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 taking these signals into account.

All excavations were undertaken in accordance with best practice as set out in Standards and Guidance for Archaeological Excavation (CIfA, 2014a).

All archaeological remains identified were excavated in accordance with the following strategy as set out in the WSI (Horizon, 2017):

- 100% of all positive features likely to obscure earlier archaeological features;
- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships;
- discrete negative features (more than 1m 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%;

- in addition to the above, all intersections between features and all terminals of linear features; and
- other features: 25%, unless otherwise agreed with the Consultant.
- The location of all small finds, with the exception of those discovered within discrete features, were recorded in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.4 Recording

All excavated contexts were fully recorded in line with the standards set out in the WSI (Horizon, 2017) and 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. Hand drawn plans and photogrammetry models made of excavated features, were tied in to the overall plan through the use of control points.

A full photographic record was maintained during the excavation 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.

4.5 Palaeoenvironmental Sampling Strategy

Environmental sampling was undertaken in accordance with the sampling policies outlined in the CIfA's Standard and Guidance (CIfA, 2014a) and Environmental Archaeology; A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage, 2011).

4.6 Archiving

The creation, compilation, transfer and deposition of the archaeological archive follows in line with the regulations of the Chartered Institute for Archaeologists Standards and Guidance (CIfA, 2014b).

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.

All finds will be stored in accordance with CIfA's Standard and Guidance (CIfA, 2014c). It is recommended that all artefacts are deposited at Oriel Ynys Môn, Llangefni.

Digital copies of the report will be submitted to Horizon who will then distributed to stakeholders. Printed versions will only be produced if specifically requested.

ABA will hold a digital version of the archive indefinitely.

5 Archaeological Results

Site name: Wylfa Newydd Hotspot 16

Site code: AB1703HS16

HER Event Code: 45396 PRN:76064

NGR: SH34919260

Excavated by: Archaeoleg Brython Archaeology CYF.

Site type: Strip, map and sample

Topsoilaveragedepth:0.20m

Subsoil average depth: 0.40m

5.1 Historic Map Evidence and Documentary Data

No historical map evidence indicating the presence of field boundary ditches (Wessex Archaeology, 2016a). The edge of the gravel island can be identified on LiDAR data.

5.2 Geophysical Survey Results

Geophysical surveys were carried out during the assessment of the site (Hopewell 2011a & b, Hopewell 2012, WYAS, 2015). These pieces of work did not demonstrate the presence of significant archaeological remains within the excavation area.

5.3 Evaluation Results

In 2016 Wessex Archaeology undertook a programme of evaluation trenching within field A11. A total of 11 trenches were opened in this field with 6 of these containing recorded archaeological features (Wessex Archaeology, 2016a,b,c). Of these trenches, 6 contained undated ditches, and one contained undated pits (Wessex Archaeology, 2016a).

Evidence of Prehistoric activity was identified in Trench 1383 (Wessex Archaeology, 2016a) and comprised of 3 pits and a ditch. It was suggested that the features were ephemeral prehistoric settlement features roughly dated between the Neolithic to Bronze Age (Wessex Archaeology, 2016a).

5.4 Excavation Results

See Figure 2

The excavation of Hotspot 16 by Strip, Map and Sample was carried out by Archaeoleg Brython Archaeology CYF. during September 2018.

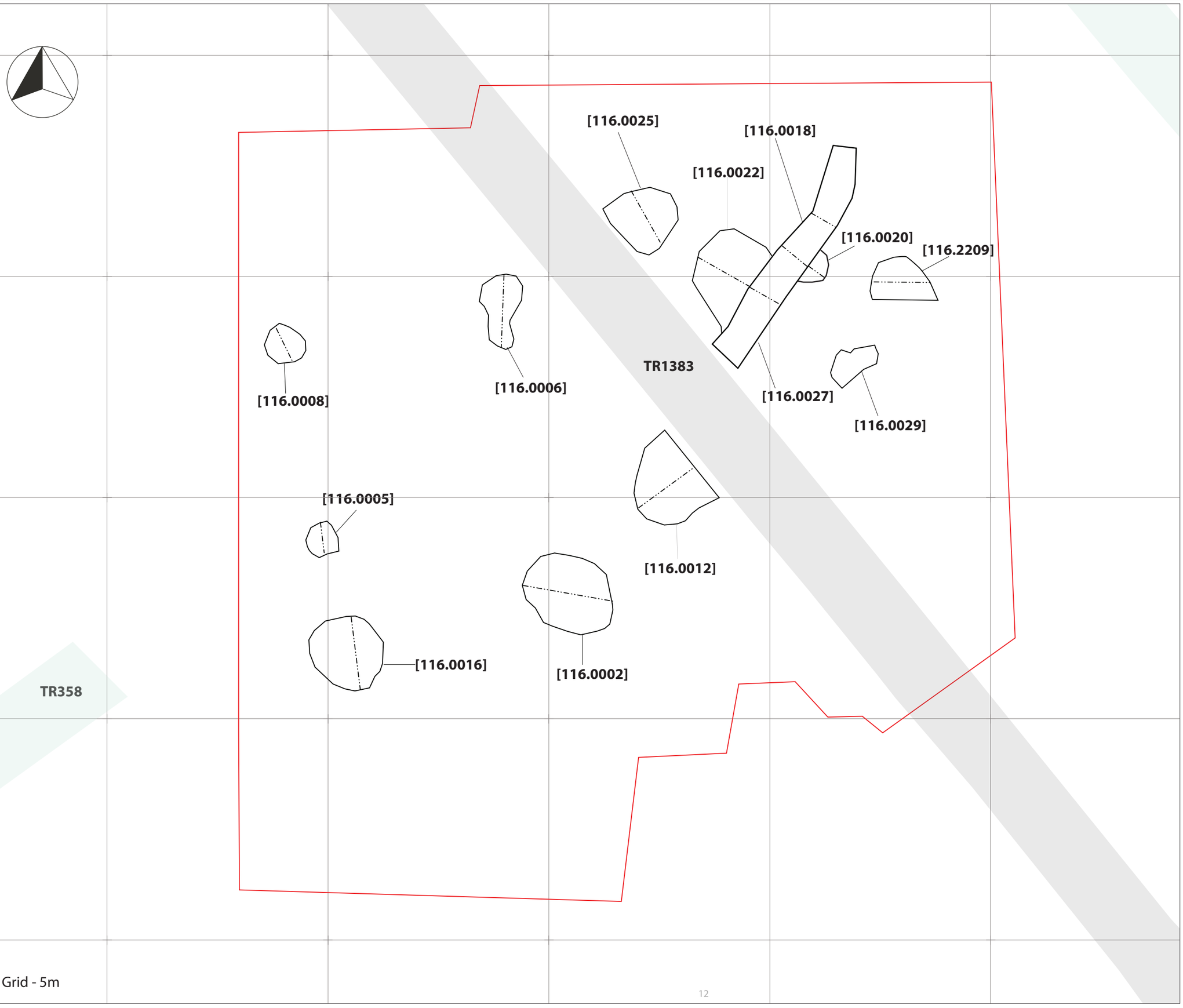
A number of features were excavated including six pits, a ditch, and four other features later deemed natural due to their irregular shape and diffuse fill.

Situated in a wetland area and cut into alluvial deposits, circular pit [116.0005] had moderately steep sides and a concave base, it measured 0.90m in diameter and 0.37m in depth. It contained two fills; the lower fill (116.0004) was a soft dark red brown clay silt with small sub angular stones and measured 0.23m in depth. Some tree fragments in the form of twigs were found in the lower fill. The upper fill (116.0003) was a soft mid grey brown clay silt with rare small sub angular stones and measured 0.14m in depth. It was likely filled by a natural silting process with alluvium deposits being washed back in to the feature. A second shallow circular pit [116.008] was cut into the subsoil, it had a shallow depth of 0.15m and may have been truncated by later activity. It measured 0.71m in diameter and was filled by a compact dark grey brown silt clay with small pebbles (116.0009).

A third stone filled pit [116.0016] was subcircular with gradual sides and a flat base. It measured 1.60m in diameter and 0.30m in depth and contained three fills. The lower fill (116.0015) consisted of a thin (0.04m) red grey clay lining below (116.0014) but did not cover the entire base of the pit. The secondary fill was a mid blue clay (116.0014) which lined the base of the pit under the stones and measured 0.10m in depth. The upper fill (116.0013), measuring 0.20m in depth, was a concentration of large stones and included post-medieval pottery sherds (SF003).

The fill of a small semi-circular pit [116.0020], with steep sides and a flat base measuring 0.80m in diameter and 0.40m in depth was truncated by linear ditch [116.0018], on its west side. Pit [116.0022] which measured 1.96m in diameter and 0.28m in depth and was circular in plan with gradually sloping sides and an undulating base. Its fill (116.0021) was compact with dark grey brown clay with large schists stones concentrated at its base and was also cut by ditch [116.0018], on its east side. The ditch [116.0018] was orientated north to south and was cut at its southern end by evaluation trench 1383 and did not continue beyond the trench. It measured 0.90m wide and 0.40m in depth, it had near vertical sides with a concave yet undulating base. It was filled (116.0017) with a firm mid grey clay.

A large oval pit [116.0025], situated to the east of [116.0022], had concave sides and an undulating base. It had a primary fill (116.0023) of compact black grey silt clay with a significant amount of charcoal inclusions. The upper fill (116.0024) consisted of a brown grey silt clay and contained a large piece of possibly worked wood. The wood was not structural within the pit and was likely part of the backfill.



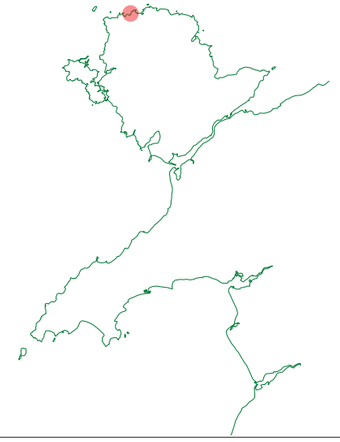


Figure 2
Site Plan, Hotspot 16.

Key

- Excavation Area
- Evaluation Trenches
- Extent Of Excavation
- Secondary Evaluation Trenches

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Drawn By:	DPN
Date:	29/10/18
Location:	SH34919260
Project:	AB1703 Hotspot 16

Archaeoleg Brython Archaeology

6 Finds and Dating Evidence

During the course of the excavation of Strip, Map and Sample at Hotspot1 6 no bulk finds and 1.0555kg of small finds were recovered.

The small finds comprised of; two unstratified polished stone axe fragment (SF001) and (SF008); unstratified lithic flake (SF007); wood fragments (SF002) from fill (116.0004) from pit [116.0005]; wood fragments (SF004) from the upper fill (116.0023) of pit [116.005]; post-medieval pot sherd (SF003) from fill (116.0013) of pit (116.0016); and unstratified sherds of post-medieval pottery.

No scientific dating has been undertaken. Suitable material for radiocarbon dating is likely to be present in the bulk environmental samples however it is not recommended to radiocarbon date the post medieval features.

7 Palaeoenvironmental

A total of 7 bulk environmental samples were collected from archaeological deposits at Hotspot 16 comprising of 28 10 litre buckets for processing using a flotation method in order to identify botanical and faunal remains.

Generally, the rate of recovery of datable artefacts during excavation is notably poor in North West Wales. As such, more importance has been placed on the recovery of paleoenvironmental samples to provide data to help establish a chronology and narrative to sites in this region. Due to this, it is possible that charred plant remains will be present for use in absolute dating methods in samples from the undated archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

8 Quantification and Recommendations

8.1 Quantification of Excavation Data

Data Category	**Number**
Context	29
Small finds	7(1055.5g / 1.0555kg)
Bulk finds	0
Environmental samples	7 (280ltr / 28 buckets)
Monochrome film	X
Digital photographs	21
Rectified photographs / Photogrammetry	714
GPS surveyed digital pre-excavation plans	1
GPS surveyed digital excavation plans	1
TST surveyed digital excavation plans	X
Hand drawn plans	9
Hand drawn sections	10

8.2 Recommendation for Further Work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	Lithics Worked stone Environmental samples C^{14} dating
Publication of key data categories	✓
Deposit archive	✓

9 Discussion

Hotspot 16 targeted three pits, a ditch and the edge of a gravel island discovered during the evaluation, with the suggestion that they were ephemeral prehistoric settlement features roughly dated between the Neolithic and Bronze Age (Wessex Archaeology, 2016a). Upon excavation six pits and a ditch were investigated, one pit contained post medieval pottery sherds (SF003), suggesting a post-medieval date for the features, including the ditch which truncated two pits. A pit containing fragments of wood (SF002) and (SF004) could not be dated during the excavation.

Evidence of prehistoric activity was not identified in secured contexts associated with features but was demonstrated by unstratified worked lithic finds consisting of two fragments of polished stones axes (SF001) and (SF008) and a lithic flake (SF007).

Determining a definite chronology for archaeological remains recorded at Hotspot 16 from the feature typology and the lack of stratified finds was difficult. Due to this, the data from the environmental samples is critical in helping to establish the date and function of these features. In particular, should ecofacts recovered during the environmental processing be of a sufficient nature, the radiocarbon dating of the fills of the undated pits may be useful.

The processing of the bulk environmental soil samples, through floatation, and analysis of the flots would identify and quantify charred plant remains, if any are present, and the residues from the environmental processing should also be checked for small finds and possible industrial material which could help determine if, and what, industrial processes were occurring nearby. It is recommended that post-excavation analysis should include analysis of bulk environmental samples and lithics should undergo petrological analysis, would be beneficial in determining the origin of the raw material as well as a lithic report.

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Appendix I

Archaeoleg Brython Archaeology

Team AB1703

Archaeoleg Brython Archaeology Team AB1703

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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

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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

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1-25 Hotspot 16 photos

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Appendix II

Archaeoleg Brython Archaeology

Hotspot 16

Plates

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Plate 2: Large oval pit [116.0012] containing preserved wood SF004. North east facing section. 1x1m scale. 2



Plate 1: Feature [116.0012], deemed natural due to its irregular shape and undulating base. South facing section. 1x1m scale.



Plate 2: Large oval pit [116.0012] containing preserved wood SF004. North east facing section. 1x1m scale.

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1-26 Wylfa Summary Report Hotspot 17

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Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 17

Document Number WYN-BRY-CON-REP-00003 v1.2

Archaeoleg Brython Archaeology

Site Summary Report
Hotspot 17

Wylfa archaeological works on behalf of Horizon Nuclear Power

Prepared for Horizon Nuclear Power

Text by Laura W. Parry, Cindy Nelson-Viljoen and Iwan G. Parry

Illustrations by Laura Parry

October 2018

WYN-BRY-CON-REP-00003 v1.2

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Appendix I: Archaeoleg Brython Archaeology Team AB1703

Summary

Archaeoleg Brython Archaeology CYF. have completed the excavation of a high gravel 'island' at Hotspot 17, Wylfa, Anglesey (NGR SH34879257) in advance of an application to construct Wylfa Newydd nuclear power station. Hotspot 17 was located to investigate a high gravel 'island' which was identified during a programme of evaluation trenching undertaken during 2015 and 2016.

The excavation area measured 100m^2, no archaeological features, deposits or artefacts were identified during the excavation. All work was undertaken in accordance with the Written Scheme of Investigation (WSI) and monitored by Gwynedd Archaeological Planning Service.

No further assessment is recommended.

1 Introduction

Archaeoleg Brython Archaeology CYF. (ABA) have been commissioned by Horizon Nuclear Power Ltd. (HNP) to undertake a phased programme of strip, map and sample excavation in advance of the submission of a Development Consent Order application (PINS Reference Number EN010007) for the proposed construction of a nuclear power station at Wylfa Newydd. The purpose of this document is to provide supporting evidence for Horizon DCO application, and to summarise the results of the excavation in advance of the production of an assessment report.

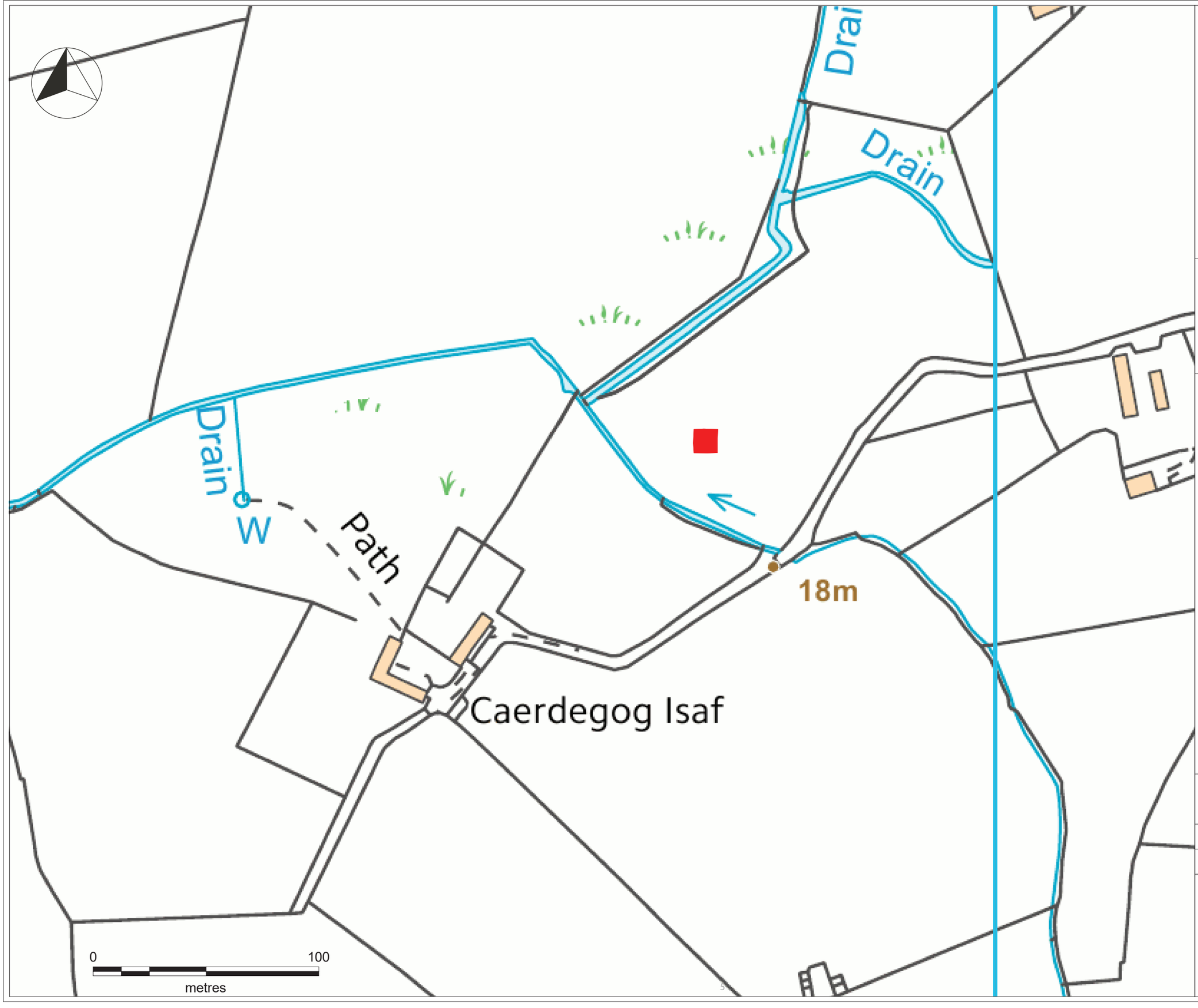
This report provides a summary of the results of archaeological excavation at Strip, Map and Sample (SMS) Hotspot 17 undertaken during 2017 and 2018 and represents the first phase of the post-excavation analysis regarding the archaeological investigations at the Wylfa Newydd site. Following the production of a Written Scheme of Investigation (WSI) (Horizon, 2017), and in line with paragraphs 5.8.21 of the Overarching National Policy Statement for Energy (EN-1) (2011), the scope of all works was agreed and monitored whilst in progress by Gwynedd Archaeological Planning Service (GAPS), cultural heritage advisors to the Local Authority. Wardell Armstrong LLP. (WA) have been employed by HNP as cultural heritage consultants for the project and within this capacity have provided guidance and advice during the works.

2 Background

Hotspot 17 was located approximately 650m west of Tregele in a relatively low lying field, on a flat plateau at the edge of a marshy area to the north-west, previously labelled as Field "A11" during the archaeological trial trench evaluation. The investigation area was at a height of approximately 18m AOD. The plateau was notably raised from the marshy ground to the west and is likely to have been an island or promontory at the edge of a stream or small lake.

Prior to the excavation of Hotspot 17, it had been subject to an an archaeological Desk Based Assessment (DBA) (Cooke et al., 2012), magnetometer geophysical survey (Hopewell 2011a,b, Hopewell 2012, WYAS, 2015) and a programme of evaluation trenching (Wessex Archaeology, 2016a,b,c). Hotspot 17 was selected for excavation based on the results of the evaluation trenching which identified a possible ditch (Wessex Archaeology, 2016a). A number of Strip, Map and Sample areas described as "Hotspots" were identified as a result of the evaluation trenching. These were organised into four zones referred to as 1a, 1b, 2 and 3 within the WSI (Horizon, 2017). Hotspot 17 was located in Hotspot Zone 1a.

Superficial deposits in the area consist of Till, Devensian – Diamicton. These are sedimentary deposits which formed between 116 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, 2018).



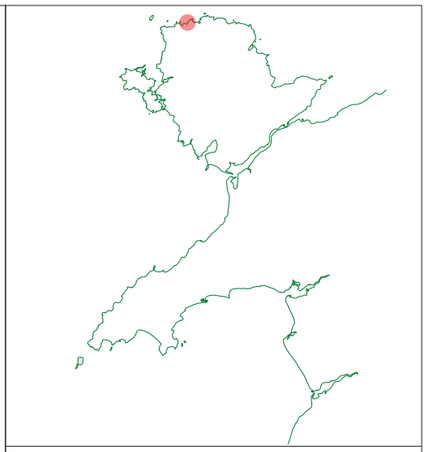


Figure 1
Location Plan, Hotspot 17.

Key

Hotspot 17

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Drawn By:
DPN

Date:
22/10/18

Location:
SH34879257

Project:
AB1703 Hotspot 17

Archaeoleg Brython Archaeology

3 Aims and Objectives

3.1 Archaeological Strip, Map and Sample Aims

The aims of the archaeological strip, map and sample identified in the WSI (Horizon, 2017) were as follows:

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 (so 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; and

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.

3.2 Archaeological Strip, Map and Sample Objectives

The relevant archaeological framework documents identified in the WSI (Horizon 2017) were;

- *Review of the Research Framework for the Archaeology of Wales: North West Wales – Neolithic and Early Bronze Age (Steve Burrow, 2010).*
- *Review of the Research Framework for the Archaeology of Wales: North West Wales – Later Bronze Age and Iron Age (Fiona Gale, 2010).*
- *A Research Framework for the Archaeology of Wales – Romano British (AD 43-AD 410) (Davies, 2011).*
- *A Research Framework for the Archaeology of Wales: North West Wales - Early Medieval c. AD 400-1070 (Nancy Edwards, Tudur Davies and Kate A. Hemer, 2016).*
- *A Research Framework for the Archaeology of Wales: North West Wales – Medieval c.AD 1100 – 1539 (David Longley, 2010).*

These documents identify research objectives, and the WSI presented research questions derived from the objectives of the research frameworks outlined above. As the 'gravel island' was identified as an area of high potential for prehistoric activity at the edge of wetland the relevant research questions were;

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

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

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

No prehistoric archaeology was identified during the excavation of Hotspot 17, as such the results will not contribute to answering the identified research questions.

4 Methodology

4.1 Surveying and Setting Out

The strip, map and sample area was surveyed and set out by the Main Contractor, Jones Brothers Balfour Beatty Joint Venture (JBBBJV). The excavation area and all archaeological features were subsequently surveyed using a Leica Viva GPS system. All surveys were tied in to the Ordnance Survey National Grid.

4.2 Mechanical Excavation

Topsoil and any other overburden was removed using a tracked 360 degree excavator fitted with a toothless ditching bucket. All mechanical excavation was undertaken under direct archaeological supervision.

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 of the underlying archaeological features were revealed, or when the absence of any archaeological 'horizon' was adequately demonstrated.

After the completion of mechanical excavation, both the spoil heaps and the stripped surface were scanned both with a metal detector and visually. Any artefacts of potential archaeological interest identified because of this work were recovered and their locations accurately recorded.

4.3 Hand Excavation

Immediately after the removal of deposits overlying the archaeological horizon, the area was manually cleaned, and all features investigated and recorded as per standard ABA procedures.

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 taking these signals into account.

All excavations were undertaken in accordance with best practice as set out in Standards and Guidance for Archaeological Excavation (CIfA, 2014a).

All archaeological remains identified were excavated in accordance with the following strategy as set out in the WSI (Horizon, 2017):

- 100% of all positive features likely to obscure earlier archaeological features;
- discrete negative features (less than 1m diameter): at least 50% by area in addition to all stratigraphic relationships;
- discrete negative features (more than 1m 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%;
- in addition to the above, all intersections between features and all terminals of linear features; and

- other features: 25%, unless otherwise agreed with the Consultant.
- The location of all small finds, with the exception of those discovered within discrete features, were recorded in in 3D by a GPS system tied into the OS NGR system, with an accuracy of ¬+/- 5mm.

4.4 Recording

All excavated contexts were fully recorded in line with the standards set out in the WSI (REF) and 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. Hand drawn plans and photogrammetry models made of excavated features, were tied in to the overall plan through the use of control points.

A full photographic record was maintained during the excavation 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.

4.5 Palaeoenvironmental Sampling Strategy

Environmental sampling was undertaken in accordance with the sampling policies outlined in the CIfA's Standard and Guidance (CIfA, 2014a) and Environmental Archaeology; A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (English Heritage, 2011).

4.6 Archiving

The creation, compilation, transfer and deposition of the archaeological archive will be in line with the regulations of the Chartered Institute for Archaeologists Stand and Guidance (CIfA, 2014b).

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.

All finds will be stored in accordance with CIfA's Standard and Guidance (CIfA, 2014c). It is recommended that all artefacts are donated to Oriel Ynys Môn, Llangefni.

Digital copies of the report will be submitted to Horizon who will then distributed to stakeholders. Printed versions will only be produced if specifically requested.

ABA will hold a digital version of the archive indefinitely.

5 Archaeological Results

Site name: Wylfa Newydd Hotspot 17

Site code: AB1703HS17

HER Event Code: 45396 PRN:76065

NGR: SH34879257

Excavated by: Archaeoleg Brython Archaeology CYF.

Site type: Strip, map and sample

Topsoil average depth: 0.27m

Subsoil average depth: No subsoil was observed

5.1 Historic Map Evidence and Documentary Data

No evidence of field boundaries, ditches or any other archaeological features was found on historical maps (Wessex Archaeology, 2016a).

5.2 Geophysical Survey Results

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

5.3 Evaluation Results

Wessex Archaeology undertook a programme of evaluation trenching within field A11. A total 11 trenches were opened in this field with eight of these containing recorded archaeological features (Wessex Archaeology, 2016b). Of these trenches, six contained undated ditches, and three contained undated pits (Wessex Archaeology, 2016a)

Hotspot 17 targeted the location of Evaluation Trench 358 which identified a high gravel 'island'. No archaeological finds were recorded in the evaluation report (Wessex Archaeology, 2016a).

5.4 Excavation Results

Excavation at Strip, Map and Sample Hotspot 17 was carried out during September 2018. An area of 100m^2 was stripped by a 360° excavator under archaeological supervision. The topsoil was a light grey brown sand silt and no subsoil was observed. The natural horizon was a gravelly clay. No archaeological features were observed within the stripped area.

6 Finds and Dating Evidence

No bulk finds or small finds were identified during the excavation of Strip, Map and Sample Hotspot 17.

7 Palaeoenvironmental

No bulk or other environmental samples were collected during the excavation of Hotspot 17.

8 Quantification and Recommendations

8.1 Quantification of Excavation Data

Data Category	Number
Context	0
Small finds	0
Bulk finds	0
Environmental samples	0
Graves	0
Human remains (skeleton)	0
Capstones	0
Cist stones	0
Base stones	0
Monochrome film	0
Digital photographs	4
Rectified photographs / Photogrammetry	0
GPS surveyed digital pre-excavation plans	0
GPS surveyed digital excavation plans	1
TST surveyed digital excavation plans	X
Hand drawn plans	0
Hand drawn sections	0

8.2 Recommendation for Further Work

Quantification of archive	√
Assessment of significance	√
Further analysis of key data categories	None
Publication of key data categories	None
Deposit archive	√

No further work is recommended for Hotspot 17.

9 Discussion

Hotspot 17 was excavated because of the potential for archaeology indicated by the evaluation trenching, which revealed a ditch and gravel island. An area of 100m^2 was stripped under archaeological supervision, it revealed nothing of archaeological note, no environmental soil samples were collected and no material evidence was obtained. It is therefore proposed that no further post-excavation assessment it required. The documentary archive has been ordered, checked and is ready for deposition.

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Appendix I

Archaeoleg Brython Archaeology

Team AB1703

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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

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1-27 Area 1-fields L3 L4

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Document Information

Document title	Wylfa Area 1 Fields L3, L4
Document subtitle	Site Summary Report
Wessex Doc ref	209730.001
Horizon Doc ref	WYN-WES-CON-REP-00004
Client name	Horizon Nuclear Power
Address	5210 Valiant Court Gloucester Business Park Delta Way Gloucester Gloucestershire GL3 4FE
Site location	Cemaes, Anglesey
County	Gwynedd
National grid reference	236300 393700
Statutory designations	None
Planning authority	Isle of Anglesey
Planning Inspectorate reference (DCO application)	EN010007
Museum name	Anglesey Archives (paper and digital), Oriel Ynys Môn (artefacts)
Museum accession code	35/2016
HER event number	PRN45392; PRN76002
WA project name	Wylfa remaining works 2018
WA project code	209730
Date of fieldwork	25/07/2017–08/08/2017
Fieldwork directed by	Pete Noble
Project management by	Matthew Williams
Document compiled by	Matthew Williams, Ashley Tuck
Contributions from	Liz Chambers, Lorraine Mepham
Graphics by	Joanna Debska

Quality Assurance

Issue and date	Status	Author	Approved by
1		MW	
2		AWT	
3		VH/AWT	
4		AWT	

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Summary

Wessex Archaeology was commissioned to carry out archaeological excavation and recording in Fields L3 and L4 in advance of an application to construct a nuclear power station at Wylfa Newydd. The archaeological works within these fields form Area 1. All works were carried out in accordance with the Written Scheme of Investigation (Horizon Nuclear Power 2015) and Technical Update (Horizon Nuclear Power 2016) and monitored by Gwynedd Archaeology Planning Service (GAPS).

The site consisted of three areas centred on NGR 236300 393700 and covering 11,659 sq.m. The eastern area contained evidence for a field system which pre-dates Ordnance Survey mapping and the central area contained three burnt mounds, each with an associated trough feature.

Assessment is recommended for all data categories. The data from this site should be considered in the analysis and publication of the whole Wylfa Newydd site.

Wylfa Area 1, Fields L3, L4

Site Summary Report

1 INTRODUCTION

1.1.1 Wessex Archaeology undertook archaeological excavation in Area 1 located in fields known as L3 and L4 (**Fig. 1**; 'The Site').

1.1.2 The work was carried out in accordance with the technical update for Fields L3 and L4 (Horizon Nuclear Power (HNP) 2016), and the original Written Scheme of Investigation produced for all trial trench evaluation and excavation (HNP 2015). These documents were produced in line with the overarching National Policy Statement for Energy (EN-1) (Department for Energy and Climate Change 2011) and detailed the rationale, aims, methodologies, and standards to be employed during the work. Both documents were agreed with Gwynedd Archaeology Planning Services (archaeological planning advisor to Isle of Anglesey Council) prior to work starting. This document has been produced in accordance with briefing and guidance from Wardell Armstrong LLP.

1.1.3 This excavation was one element in a large scheme of works associated with the proposed construction of a nuclear power station at Wylfa. This Site Summary Report (SSR) has been commissioned by Horizon Nuclear Power (HNP) as a supporting document for the application for Development Consent Order (DCO) and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site.

1.1.4 Historic Environment Record event numbers ('PRNs') were assigned following discussion with Nina Steel, Senior Historic Environment Record Archaeologist at Gwynedd Archaeological Trust. PRN45392 has been assigned to the Wylfa Newydd project as a whole and further event numbers have also been assigned to 'noteworthy components' of the project. Within Area 1, PRN76002 has been assigned to burnt mounds.

2 BACKGROUND

2.1.1 The works were centred on NGR 236300 393700 (**Fig. 1**). The area of each excavation area was as follows: L3 south 2323 sq.m; L3 north 5452 sq.m; L4 3884 sq.m. The total excavation footprint of Area 1 measured 11,659 sq.m.

2.1.2 Area 1 lay on undulating coastal ground between 13 m and 22 m above Ordnance Datum (aOD). The ground slopes down to the south-west towards the Tre'r Gof SSSI. Immediately north-west of field L4 the ground slopes steeply down to the sea.

2.1.3 The overlying soil is freely draining slightly acidic loam (Cranfield Soil and Agrifood Institute 2019). The superficial geology comprises Devensian till with an underlying bedrock of New Harbour Group mica schist and psammite (BGS 2019).

2.1.4 Archaeological work carried out in association with the project prior to the excavation of Area 1 included:

- Desk based assessment (Cooke et al. 2012)

- Geophysical surveys (ASWYAS 2015; Hopewell 2011a-b; Hopewell 2012); and,
- Trial trenching (Wessex Archaeology 2016; Headland 2017).

2.1.5 The results of the preceding phases of work are summarised below. No other significant archaeological investigation has taken place within the area prior to the excavation of Area 1.

3 AIMS AND OBJECTIVES

3.1 Specific aims

3.1.1 The specific aims of the work within this site, as described in the WSI (HNP 2015, 2016), were:

- *to establish the nature and function of the various archaeological remains present, specifically to identify the presence of any agricultural, domestic, industrial or ritual activity and the character of such;*
- *to establish the condition, age and stratigraphic sequence of any archaeological/historical remain identified;*
- *to gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills; and,*
- *to understand how the remains seen within the investigation area relate to other known features across the landscape (chronologically, stratigraphically as well as spatially), with particular reference to the prehistoric activity in fields K1, K4, C15 to the south and C16 to the west as well as the medieval activity seen in field L3 on the other side of the SSSI, to the north.*

3.2 Research objectives

3.2.1 In addition, a series of research objectives for the excavation of Area 1 were defined in the technical update (HNP 2016) based on a review of relevant archaeological research framework documents.

4 METHODOLOGY

4.1.1 All work was undertaken in accordance with the detailed methodology set out in the WSI (HNP 2015) and technical update (HNP 2016) and in compliance with current standards and guidance, e.g. CIfA guidance (CIfA 2014a-c) and Historic England guidance (Historic England 2015).

4.1.2 All archaeological features were investigated and recorded as per standard procedure set out in the Wessex Archaeology fieldwork manual (Wessex Archaeology 2015).

4.1.3 Environmental sampling was undertaken in accordance with Wessex Archaeology's Guidelines for Environmental Sampling (Wessex Archaeology nd) along and current guidance provided by Historic England (English Heritage 2011).

5 ARCHAEOLOGICAL RESULTS

5.1 Historic map evidence and documentary data

5.1.1 The HER records few prehistoric sites in the vicinity. The closest is the site of an urned Bronze Age cremation burial at Plas Penryhyn located almost 3 km to the east (HER3050).

5.1.2 The remains of post-medieval field boundary systems have been recorded nearby (within 1 km) at both Natorman (HER 61111) and Nant-y-gof (HER 61127).

5.1.3 The Desk-Based Assessment (Cooke et al. 2012) noted that the linear features identified by the geophysical survey (see below) matched field boundaries marked on first edition OS mapping onwards. It concluded that the area may contain 'background agricultural features' such as field boundaries and ditches.

5.2 Geophysical survey results

5.2.1 Geophysical survey (ASWYAS 2015; Hopewell 2011a-b and 2012) identified a ring ditch feature, around 35 m wide in the north-west of Field L3. Linear field boundary type ditches were also identified to the east in Fields L3 and L4.

5.3 Evaluation results

5.3.1 Evaluation trial trenching took place in spring 2016 (Wessex 2016). Eleven trenches were excavated in Field L3, and 14 trenches in Field L4. The trenches were 1.8 m wide and between 30 m and 50 m long.

5.3.2 Three trenches were located to investigate the large ring ditch feature identified by the geophysical survey (ASWYAS 2015, Hopewell 2011a, 2011b and 2012). An apparent feature was identified in Trench 525, where it was recorded as 3.15 m wide and 1 m deep; however, it was not seen in the other two trenches (TR1235 and TR524). It now appears that this apparent feature was disturbance and did not relate to a ring-ditch.

5.3.3 Other trenches revealed smaller ditches, which were interpreted as the remains of early field boundary systems.

5.4 Excavation results

5.4.1 The topsoil comprised dark brown silt sand with mudstone inclusions and was up to 0.36 m thick. Relict ploughsoil subsoil was identical to the topsoil except mid brown rather than dark brown and was up to 0.36 m thick. A layer of colluvium up to 0.4 m thick was present intermittently below the subsoil. The underlying natural geological substrate was at a depth of 0.38 m to 0.57 m below ground level (BGL) and comprised orange brown sandy clay.

5.4.2 Three spreads of burnt mound material were identified (1070, 1071 and 1072; PRN76002; **Fig. 1**). Burnt mound 1071 is shown on **Plate 2.** Each spread was relatively small, and the largest (1070) measured 3.4 m by 2.65 m in plan. Each burnt mound measured up to 0.1 m thick and comprised burnt stones in a matrix of black silty clay. In plan two of the burnt mounds were sub-circular (1071 and 1072) and one was elongated with a 'hook' at the east end (1070; **Fig. 1**). A chert blade was recovered from burnt mound 1071. Each burnt mound spread appeared to be accompanied by a nearby trough (1067, 1073 and 1076). Trough 1073 is shown on **Plate 2**. The troughs were situated at the edge of the group of mounds. Each trough was oval in plan and bowl-shaped in profile; the largest (1076) was 1.5 m by 1 m and 0.15 m deep. Each trough contained a lining of silt clay or sand clay

between 0.04 m and 0.08 m thick (eg 1078). Above the clay lining, two of the troughs (1067 and 1073) were filled with material identical to the burnt mound spreads (burnt stones in a matrix of black silt clay, eg 1068). However, trough 1076 was instead filled with mid-grey brown sand silt, possibly ashy material derived from burnt mound activity (1077).

5.4.3 A former field system comprising six ditch features (1039, 1052, 1079, 1080, 1081 and 1082; **Plate 1**) was observed in the eastern third of Area 1, located within field L4. The field system was not seen to extend westwards into field L3 (**Fig. 1**).

5.4.4 Seven tree throws were recorded in Field L3 (Figure 1). The fills of two contained charcoal, suggesting the roots had been burnt, either deliberately (perhaps as clearance for agriculture) or as the result of wildfire.

5.4.5 The ring-ditch identified by geophysical survey was not present as an archaeological cut feature. The results of the geophysical survey were not reliable in this location of the Wylfa Newydd site.

5.5 Finds and dating evidence

5.5.1 A total of 11 g of bulk finds were recovered from the excavation of archaeological deposits at Area 1. No small finds were identified.

5.5.2 This represents a very small finds assemblage, comprising three small pieces of stone found in the subsoil (1002), only one of which shows possible signs of working (a flint/chert flake broadly dated as prehistoric); a worked chert from burnt mound (1071) and two small fragments of very corroded iron from fill 1030 of ditch 1081, possibly from a nail of unknown date.

5.6 Environmental

5.6.1 A total of seven environmental samples comprising 28 10 litre buckets were collected from archaeological deposits in Area 1 for processing using a flotation method in order to identify potential botanical and faunal remains that may be present in the samples.

5.6.2 All features were sampled and there is high potential for the recovery of environmental information. Radiocarbon dates may be obtained from the burnt mound features.

5.6.3 Overall, the rate of recovery of datable artefacts during excavation is notably poor in the region. As such, environmental samples are of high importance to provide data helping to establish a chronology and narrative. Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

5.7 Quantification of excavation data

Table 1 Quantification of excavation data

Data Category	Number
Contexts	82
Small finds	None
Bulk finds	0.011kg
Environmental samples	7 (280 litres)
Monochrome film	None

Digital photographs	224
Rectified photographs	0
GPS surveyed digital pre-excavation plans	✓
GPS surveyed digital excavation plans	✓
TST surveyed digital excavation plans	X
Hand drawn plans	0
Hand drawn sections	46

5.8 Recommendations for further work

5.8.1 All data categories should go to assessment and an assessment report should be produced for this site.

Table 2 Recommendations for further work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	All categories likely to warrant further analysis as part of overall project analysis
Publication of key data categories	All categories likely to warrant publication as part of overall project publication
Deposit archive	✓

6 DISCUSSION

6.1.1 Area 1 was targeted for excavation because of the archaeological potential revealed by the geophysical survey and the results of the trial trenching programme. The geophysical survey (ASWYAS 2015, Hopewell 2011a, 2011b and 2012) revealed the potential existence of a ring ditch feature, and while the presence of a ditch was substantiated in one evaluation trench, others targeting this feature failed to find it (Wessex Archaeology 2016).

6.1.2 The excavation has demonstrated that the geophysical survey and trial trenching were not reliable in this area of the Wylfa Newydd site. The investigation at Area 1 did not identify a ring ditch feature, but did identify a hitherto unknown group of burnt mound deposits and associated trough features. Furthermore, a field enclosure system that does not correlate with any consulted historic map was also identified within the eastern third of the site.

6.1.3 No reliable dating evidence was identified from any deposits relating to the archaeological features, with only a single fragment of possibly worked stone and two fragments of heavily corroded iron recovered. Local examples of burnt mound material (eg Wessex Archaeology 2016) have concluded these originate in the Bronze-Age, but at present no evidence exists to substantiate that the burnt mounds identified at Area 1 were of this period. The enclosed field system remains undated and does not appear on any consulted historic map.

6.1.4 As such, although all data categories should go forward to assessment level and form part of the overall analysis and publication of the Wylfa Newydd site, special regard should be

considered in the potential for the environmental samples for aiding the dating and function of the archaeological features identified at Area 1. The dating, characterisation and pattern of historic field systems is identified as a specific research aim in the WSI (HNP 2015, 2016); and the dating, characterisation and distribution of burnt mounds contributes to research aims on the wider setting of prehistoric sites and exploitation of the natural environment.

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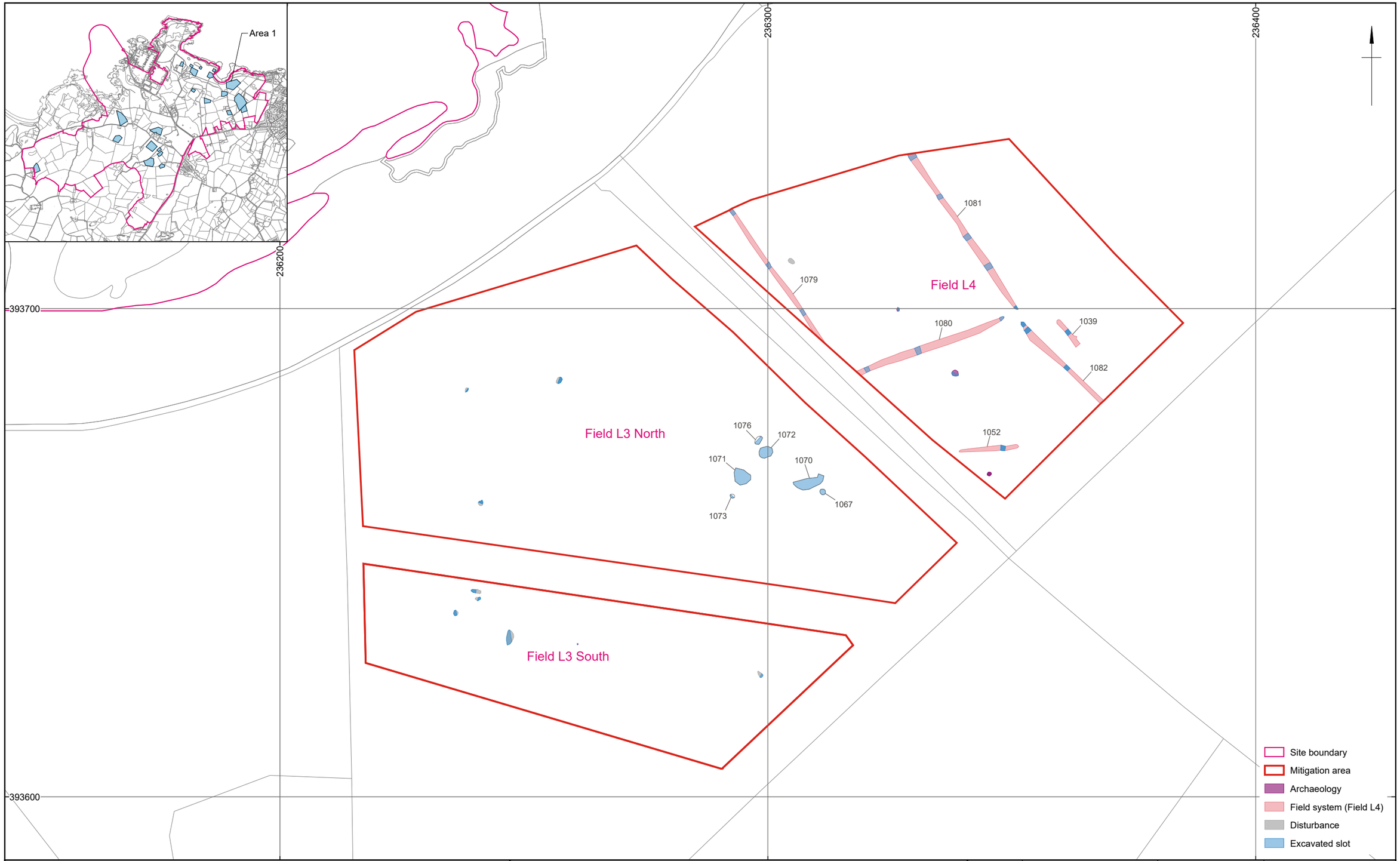
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Wylfa mitigation Area 1 plan

Figure 1



Plate 1: Section of field boundary 1079 (intervention 1025) from south



Plate 2: North-east quadrant of burnt mound 1071 and trough 1073 from west

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Planning authority	Isle of Anglesey
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Summary

Wessex Archaeology was commissioned to carry out archaeological excavation and recording in Area 2 in Fields L8, L9, L11, L12, L13 and L16 in advance of an application to construct a nuclear power station at the Wylfa Newydd site. All works were carried out in accordance with the Written Scheme of Investigation (HNP 2015), Technical Update (HNP 2017a) and Community Dig scope (HNP 2017b), and monitored by Gwynedd Archaeology Planning Service (GAPS).

The Site was centred on NGR 236350 393450 and included parts of six fields with a total excavation area of 18,088 sq.m. The Site covered the top and north-east face of a small hill and the highest point was located towards the northern extent of field L12.

The remains of a large prehistoric ring ditch were identified at the highest point of the site. The large ring ditch (2803) was at least partially revetted with stones. The chronology of the origin of the feature is at this stage uncertain, as is interpretation of its function. Later fills contained Romano-British material including pottery, a bronze nail scraper and charcoal from which a radiocarbon date was obtained during the evaluation (Wessex Archaeology 2016; UBA-32265). Ring ditch 2803 was therefore in decline as a prominent landscape feature during the Romano-British period, although the origins of the feature are likely older. No features of clear Romano-British origin were identified. There is potential for further radiocarbon dating to clarify the chronology and interpretation of many of the features in Area 2, including ring ditch 2803.

Up to four smaller ring ditches were identified, probably representing eaves drip gullies of roundhouses, suggesting a focus of prehistoric settlement activity.

A series of stone surfaces may be related to the ring ditch or may be associated with (early) medieval activity. This medieval activity probably included two furnaces (2230 and 2678) although the chronology of the furnaces is tentative. A double-ditched boundary had previously been dated to the medieval period by radiocarbon analysis (Wessex Archaeology 2016; UBA-32267). The composition of the early medieval landscape in this region should be considered when this activity is interpreted during any further assessment, as this industry will likely be related to nearby settlement not immediately obvious within the vicinity of Area 2.

Assessment is recommended for all data categories. The data from this site should be considered in the analysis and publication of the whole Wylfa Newydd site.

Wylfa Area 2, Fields L8, L9, L11, L12, L13, L16

Site Summary Report

1 INTRODUCTION

1.1.1 Wessex Archaeology undertook archaeological excavation in Area 2 in fields known as L8, L9, L11, L12, L13 and L16 (**Fig. 1**, 'the Site'). Field L13 contained the site of the former Park Lodge.

1.1.2 The work was carried out in accordance with the *Technical Update to the Written Scheme of Investigation for Archaeological Trial Trenching and Excavation: investigation of ring ditch site* (fields L8/L12/L16) (Horizon Nuclear Power (HNP) 2017a), the updated Community Dig scope (HNP 2017b) and the original Written Scheme of Investigation (WSI) produced for all trial trench evaluation and excavation (HNP 2015). These documents were produced in line with the overarching National Policy Statement for Energy (EN-1) (Department for Energy and Climate Change, 2011) and detailed the rationale, aims, methodologies, and standards to be employed during the work. All documents were agreed with Gwynedd Archaeology Planning Services (archaeological planning advisor to Isle of Anglesey Council) prior to work starting. This document has been produced in accordance with briefing and guidance from Wardell Armstrong LLP.

1.1.3 This excavation was one element in a large scheme of works associated with the proposed construction of a nuclear power station at Wylfa. This Site Summary Report (SSR) has been commissioned by Horizon Nuclear Power (HNP) as a supporting document for the application for Development Consent Order (DCO) and represents the first phase of post excavation assessment regarding the archaeological investigations at the Wylfa Newydd site.

1.1.4 Historic Environment Record event numbers ('PRNs') were assigned following discussion with Nina Steel, Senior Historic Environment Record Archaeologist at Gwynedd Archaeological Trust. PRN45392 has been assigned to the Wylfa Newydd project as a whole and further event numbers have also been assigned to 'noteworthy components' of the project. Within Area 2, PRN76003 has been assigned to prehistoric pits, PRN76004 to roundhouses, PRN76005 to the large ring-ditch, PRN76006 to probable furnaces and PRN76007 to metaled surfaces.

2 BACKGROUND

2.1.1 The works were centred on NGR 236350, 393450 (**Fig. 1**). Boundaries were removed enabling archaeological excavation within Fields L8, L9, L12 and L13 to form one open area with a total of 15,004 sq.m. The excavation within Field L11 measured 349 sq.m, and Field L16 was 2,735 sq.m. The total excavation footprint of Area 2 was 18,088 sq.m.

2.1.2 Area 2 was situated at the top of a hill at a maximum height of 27 m above Ordnance Datum (aOD). It was the site of the former Park Lodge Farm and Campsite. The coast was located 310 m to the north-west and Tre'r Gof Site of Special Scientific Interest (SSSI) 220 m to the west.

2.1.3 The overlying soil is freely draining slightly acidic loam (Soilscapes 2018). The superficial geology comprises Devensian till with an underlying bedrock of New Harbour Group mica schist and psammite (BGS 2018).

2.1.4 Archaeological work carried out in association with the project prior to the excavation of Area 2 included:

- *desk based assessment (Cooke et al. 2012)*
- *geophysical surveys (Hopewell 2011a, 2011b, and 2012); and,*
- *trial trenching (Wessex Archaeology 2016).*

2.1.5 The results of the preceding phases of work are summarised below. No other significant archaeological investigation has taken place within the area prior to the excavation of Area 2.

3 AIMS AND OBJECTIVES

3.1 Specific aims

3.1.1 The specific aims of the work within this site, as described in the technical update to the WSI (HNP 2017a), were:

- *to establish the nature and function of the various archaeological remains present, specifically to identify the presence of any agricultural, domestic, industrial or ritual activity and the character of such;*
- *to establish the condition, age and stratigraphic sequence of any archaeological/historical remain identified;*
- *to gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills; and,*
- *to understand how the remains seen within the investigation area relate to other known features across the landscape, with particular reference to the prehistoric activity in fields K1, K4, C15 and C16 to the south west and L3 to the north, as well as the medieval activity seen in field L1 on the other side of the SSSI, to the north west.*

3.2 Research objectives

3.2.1 In addition, a series of research objectives for the excavation of Area 2 were defined in the technical update (HNP 2017a) based on a review of relevant archaeological research framework documents.

4 METHODOLOGY

4.1.1 All work was undertaken in accordance with the detailed methodology set out in the WSI (HNP 2015) and technical update (HNP 2017a), and in compliance with current standards and guidance, e.g. CIfA guidance (CIfA 2014a-c) and Historic England guidance (Historic England 2015).

4.1.2 All archaeological features were investigated and recorded as per standard procedure set out in the Wessex Archaeology fieldwork manual (Wessex Archaeology 2015).

4.1.3 Environmental sampling was undertaken in accordance with Wessex Archaeology's Guidelines for Environmental Sampling (Wessex Archaeology nd) along and current guidance provided by Historic England (English Heritage 2011).

5 ARCHAEOLOGICAL RESULTS

5.1 Historic map evidence and documentary data

5.1.1 There are few prehistoric sites in the vicinity recorded in the HER. The closest is the site of a Bronze Age urned cremation burial at Plas Penrhyn approximately 2 km to the east (HER3050). The remains of post medieval field boundary systems are recorded less than 1 km away at both Nant Orman (HER 61111) and Nant-y-Gof (HER 61127).

5.1.2 An examination of historic maps in the Desk Based Assessment (Cooke et al. 2012) concluded that the existing field pattern in the area may have ancient origins.

5.2 Geophysical survey results

5.2.1 The geophysical survey (Hopewell 2011a-b; Hopewell 2012) indicated a large ring ditch straddling Fields L8 and L12. A large, amorphous signal was also detected to the south-east of the large ring ditch, in the northern part of Field L12.

5.3 Evaluation results

5.3.1 Evaluation trial trenching took place in spring 2016 (Wessex Archaeology 2016). Eleven trenches were excavated in Field L8, five trenches in Field L9, nine trenches in Field L11, 15 trenches in Field L12, nine trenches in Field L13 and nine trenches in Field L16. The trenches were 1.8m wide and between 30m and 50m long.

5.3.2 The large ring ditch indicated by the geophysical survey was identified within trenches in Fields L8 and L12, and another smaller ring ditch was identified 25m to the south-east in trenches located in Field L12. The smaller ring ditch corresponded to the amorphous signal observed in the geophysical survey results (ASWYAS 2015; Hopewell 2011a, 2011b and 2012).

5.3.3 The remains of a *clawdd* type boundary (stone clad earth bank) was recorded in Field L16 which consisted of a double ditch with a remnant stone clad bank. Further small ditch features, interpreted as early field systems, were recorded in Fields L12 and L16.

5.3.4 No archaeological features were present within trenches excavated in Fields L9 and L11. A single undated linear ditch, probably representing a former field boundary or drainage ditch, was recorded in three trenches in Field L13.

5.4 Excavation results

General stratigraphy

5.4.1 The topsoil was 0.25–0.3 m deep and generally comprised dark brown silt sand in the east of the site, becoming yellow brown clay loam with stones to the west. The underlying geology comprised yellow orange brown clay with stones, suggestive of a glacial drift substrate

Prehistoric pits (PRN76003)

5.4.2 In the south-eastern part of Field L16 a series of five postholes (2533, 2541, 2549, 2595 and 2600) contained prehistoric pottery (**Fig. 1**). The postholes were 0.4–0.72 m in diameter and 0.15–0.31 m deep with grey silt sand fills. It is possible that these posts represent a six-post granary or similar structure.

Roundhouses (PRN76004)

5.4.3 Five possible roundhouse eaves drip gullies were identified in Area 2 (**Fig. 1**). The diameters of the drip gullies were between 6.5 m and 12 m.

5.4.4 Up to 12 postholes and an intermittent shallow drip gully (2077), suggestive of the remains of a small roundhouse around 6.7 m in diameter were recorded in field L8, located 3.5 m north-west of large ring ditch 2308 (**Fig. 1**). These were surrounded by small, undated pits and postholes potentially the remains of further structures, however the features had been heavily truncated by ploughing and exhibited no obvious pattern. It is possible that these features were non-anthropogenic, perhaps representing bioturbation or geology.

5.4.5 Possible eaves drip gully 2226/28150 had previous been recorded during the evaluation (Wessex Archaeology 2016) and was located 18 m south-east of ring ditch 2308 (**Fig. 1**). The eaves drip gully was small with a diameter of only 6.5 m maximum, a maximum width of 0.6 m and a depth of 0.15 m and an entrance facing north-east. The general area was rich in undated small pits including two within the drip gully, although these might be root disturbance or animal burrows and may not have been anthropogenic.

5.4.6 A short arc of a curvilinear gully immediately south of penannular ditch 2308 may represent part of a roundhouse eaves drip gully (2827/2829) (**Fig. 1**). No further features were present in the immediate area.

5.4.7 Near the centre of Field L12, gully (2773) may have represented the eaves drip gully of a large roundhouse (diameter uncertain), and was 0.65 m wide and 0.28 m deep. Gully 2773 was accompanied by a pit (2648) which may represent a partial continuation of gully 2773 (**Fig. 1**).

5.4.8 In the south of field L12, a curvilinear feature possibly forming part of a small ring ditch (2772) was about 12 m long and a maximum of 0.6 m wide and 0.12 m deep (**Fig. 1**). The possible partial small ring ditch intersected with a contemporary short linear feature (2639/2645) approximately following the radius of the ring.

Large ring ditch (PRN76005)

5.4.9 A large ring ditch (2308; **Plate 1**) was identified in the north-western half of the site and was observed to have a diameter of 49.6 m, a maximum width of 5.1 m and maximum depth of 2.1 m. Although the full extent of the ring ditch was not exposed (**Fig. 1**), the 12.5 m wide causewayed entrance was located during the excavation and observed to be south-east facing (**Fig. 1**). The inner face of the ditch along the eastern terminal was faced with large stones, some of which had collapsed to the base of the ditch. The facing extended for 16 m from the east terminal although it appeared to have once extended further, perhaps having been robbed away. The provenance of the stone has been assessed by the National Museum Wales (2018) and is thought to have been sourced locally. Features inside the enclosure comprised modern ditches and a low density scatter of postholes and pits. These features cannot be used to interpret the function of the enclosure.

5.4.10 Ring ditch 2308 had a complex sequence of fills consistent with the large size of the ditch. Intervention 2055 in the north-west of ring ditch 2308 recorded two separate remnants of a basal deposit (2122 and 2127) comprising mid-orange brown sand clay. The basal deposit (2122 and 2127) was truncated by a scouring re-cut (2123) indicating maintenance of the ring ditch over time. Re-cut 2123 contained a primary fill of slumped material (2128). Redeposited natural had then been used to shape or line the inside face of the ditch (2126). The next fill comprised a thick layer of grey sand clay deposited gradually under wet conditions (2124). A layer of colluvium (2103) followed, then a localised bank slump (2125). A thin tip of burnt material including charcoal (2102) came next, followed by a further layer of redeposited natural possibly indicating bank slump (2101). Another deposit of bank slump (2058) included sorted stones indicating the direction of slump. A Romano-British deposit (2057) contained pottery and a bronze nail cleaner (small find 2803) and comprised very dark grey clay sand (2057). Finally, the top of the ditch was likely infilled by subsequent ploughing (2056, yellow brown sand clay).

5.4.11 Finds comprised animal bone and the mentioned Romano-British pottery and bronze object. A Romano-British radiocarbon date has also been obtained during the evaluation (Wessex Archaeology 2016). The Romano-British material was all recovered from late in the sequence of deposits and should not be taken as indicative of the date of the feature. The form of ring ditch 2308 is consistent with a number of prehistoric feature types, including hillforts, causewayed enclosures and henges. At this stage, the chronology and function of ring ditch 2308 are uncertain. Formal assessment is required to interpret the feature further.

Metalled surfaces and associated features (PRN76007)

5.4.12 Immediately south and south-west of the main penannular ditch (2308) was a metalled surface (2931/2280) comprising rounded to sub-angular stones in a matrix of dark to mid-brown sand silt (**Fig. 1**; **Plate 2**). The relative chronology of the metalled surface and ring ditch (2308) is unknown; if contemporary the metalled surface might form a forecourt associated with the ring ditch. Surface 2931/2280 contained a quern stone, iron nail and burnt bone. A spread of soil-like material (2916) may represent an occupation layer. A further stone layer 0.2 m deep (2910) overlay soil 2916, probably representing a repair or reinstatement of the surface.

5.4.13 Metalled surface 2931/2280 was truncated by an east-north-east to west-south-west aligned linear feature (2770). Ditch 2770 appeared to be a construction cut for a stone wall although this interpretation is not conclusive; the stone wall may have been a coarse repair to the metalled surface. The central part of linear feature 2770 had a 'V'-shaped profile and was 0.85–1.2 m wide and 0.43–0.5 m deep.

5.4.14 Further patches of stone surface was recorded across the centre of Field L12 (eg 2750). Surface 2695 was kidney-shaped, 7.8 m long (roughly north to south) and 4.8 m wide (**Fig. 1**). The surface sealed three postholes (2711, 2713 and 2719) with no obvious arrangement. Two pits (2693 and 2700) containing burnt material were associated with the surface. Pit 2693 showed signs of *in situ* burning; however pit (2700) merely contained burnt material.

Furnaces (PRN76006)

5.4.15 Probable furnace 2230 was set in a shallow cut 0.58 m by 0.46 m in plan and 0.11 m deep. The fills of furnace 2230 comprised a primary fill of grey brown clay sand with sandstone and charcoal (2231 and 2232) overlain by a light pink grey clay lining transformed by heat (2233). The main fill of furnace 2230 comprised dark brown silt clay

with slag and charcoal (2234). Probable furnace 2678 was similar in form to 2230 but had only a single fill of dark grey brown silt loam with stones, slag and charcoal (2679). The furnaces were simple bowl furnaces with no provision for tapping. Furnace 2678 may have been placed to take advantage of an adjacent heat-affected natural stone as a heat sink. The form of the furnaces may suggest an early medieval date. No evidence was identified to indicate whether the furnaces are contemporary with nearby features. Occasional fragments of slag were found across the site, including the late upper fills of ring ditch 2308.

Medieval

5.4.16 Immediately east of these features was a large double-ditched boundary (2774), up to 1.30 m wide, 0.53 m deep and 28.60 m long. The feature exhibited moderate stratigraphic complexity. The apparent double-ditched appearance probably relates to re-cutting or redefinition of the boundary. Ceramic building material was recovered from fills within the ditch and may suggest a medieval date.

Post-medieval

5.4.17 Post-medieval field boundaries were dated by the presence of artefacts within the fills and include (299901/299903) in field L11 and 2309 running across the centre of field L12 and impacting earlier features including a minor truncation of ring ditch 2308. A sub-rectangular ditched enclosure (2691/2698, 2847 and 2849) located near the centre of Field L12 appeared to have been truncated by ploughing. Further features may be evidence of an associated enclosure system but were heavily truncated.

5.4.18 Ditches 2768 and 2769 were aligned north-west to south-east in the south west of field L12. These ditches did not contain dateable artefacts but were probably associated with post-medieval ditch 299901/299903 although the relationship between these ditches was outside the area of excavation. A large pit 2661 truncated ditch 2768 and is therefore likely late in date.

5.4.19 Fields L9 and L13 contained the concrete and masonry remains of Park Lodge Farm, which had been demolished immediately prior to these works. Any earlier archaeological remains in this area had likely been truncated during construction of the farm. The large ring ditch (2308) was not identified in this area. It is most likely that the continuation of ring ditch 2308 lay beneath the extant boundary between Fields L9 and L12.

5.4.20 In the north-west corner of Field L12, within the boundary of the enclosure defined by ring ditch 2308, were four similar parallel gullies associated with the modern *clawdd* field boundary.

Undated

5.4.21 Postholes and small pits were locally common across Fields L12 and L8. Other features such as gullies were also seen across these areas. Fragments of boundary ditches subjected to plough truncation were also recorded and may represent multiple phases of enclosure although their fragmentary preservation does not allow for their spatial arrangement to be easily understood.

5.4.22 An irregular fire pit with evidence of *in situ* burning was recorded in Field 11 (299906).

5.5 Finds and dating evidence

5.5.1 A total of 6.24 kg of bulk finds were recovered from the excavation of archaeological deposits at Area 2. Stone from the inner face of the ring ditch was also recovered for

further analysis and this weighed 21.10 kg. Two objects (a nail and a copper alloy nail scraper) were assigned small finds numbers (small finds 2802 and 2803).

5.5.2 A bronze Romano-British toilet implement, interpreted as a nail cleaner (small find 2308) was found in an upper fill of ring ditch 2308; this suggests the ditch was still visible, during the Roman period.

5.5.3 Possible whetstones requiring identification by an expert were recovered from six contexts (2101, 2222, 2314, 2327, 2331 and 2363).

5.5.4 Very little pottery was recovered from the site. A significant assemblage of prehistoric sherds was recovered from the fills of the postholes 2533, 2541, 2549, 2595 and 2600 in the south-east of Field L16. The remaining pottery comprised post-medieval material and Romano-British sherds from the upper fills of ring ditch 2308.

5.5.5 A quern fragment had been re-used in stone surface 2931=2280. A probable spindle whorl was recovered from deposit 2088. Other finds include animal bone (including a high proportion of teeth), potentially worked stone (flint tools etc.), iron nails (from surface 2931=2280 and deposit 2843 and including small find 2802), a lead counter (deposit 2100) and slag (from furnaces 2230 and 2678 and scattered across the area).

5.6 Environmental

5.6.1 A total of 50 environmental samples comprising 141 10 litre buckets were collected from archaeological deposits at Area 2 for processing using a flotation method in order to identify potential botanical and faunal remains that may be present in the samples.

5.6.2 Overall, the rate of recovery of datable artefacts during excavation is notably poor in the region. As such, environmental samples are of high importance to provide data helping to establish a chronology and narrative. Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing. This is particularly important with regard to the chronology and function of ring ditch 2308.

5.7 Quantification of excavation data

Table 1 Quantification of excavation data

Data Category	Number
Contexts	803
Small finds	2
Bulk finds	6.241kg 21.10kg of stone from ditch revetting
Environmental samples	50 samples (1410 litres)
Monochrome film	None
Digital photographs	2,152
Rectified photographs	0
GPS surveyed digital pre-excavation plans	✓
GPS surveyed digital excavation plans	✓
TST surveyed digital excavation plans	✓
Hand drawn plans	76

Hand drawn sections	321

5.8 Recommendations for further work

5.8.1 All data categories should go to assessment and an assessment report should be produced for this site.

Table 2 Recommendations for further work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	All categories likely to warrant further analysis as part of overall project analysis
Publication of key data categories	All categories likely to warrant publication as part of overall project publication
Deposit archive	✓

6 DISCUSSION

6.1.1 Area 2 was targeted for excavation because of the archaeological potential revealed by the geophysical survey and the results of the trial trenching programme. The geophysical survey (ASWYAS 2015; Hopewell 2011a-b and 2012) revealed the potential existence of a ring ditch feature, and an amorphous signal. The presence of a ditch was substantiated during the evaluation, and the amorphous signal appeared to comprise a further smaller ring ditch (Wessex Archaeology 2016).

6.1.2 The investigation in Area 2 exposed a greater extent of the large ring ditch (2803) identified during both the geophysical survey and archaeological evaluation. The smaller ring ditch (2226/2815) was further investigated and interpreted as a possible roundhouse eaves drip gully. Up to three further eaves drip gullies were identified, suggesting a focus for prehistoric settlement activity.

6.1.3 The large ring ditch (2803) was at least partially revetted with stones. The chronology of the origin of the feature is at this stage uncertain, as is interpretation of its function. Later fills contained Romano-British material including pottery, a bronze nail scraper and charcoal from which a radiocarbon date was obtained during the evaluation (Wessex Archaeology 2016). Ring ditch 2803 was therefore in decline as a prominent landscape feature during the Romano-British period. No features of clear Romano-British origin were identified.

6.1.4 A series of stone surfaces may be related to the ring ditch or may be associated with (early) medieval activity. This medieval activity probably included two furnaces (2230 and 2678) although the chronology of the furnaces is tentative. A double-ditched boundary had previously been dated to the medieval period by radiocarbon. Further radiocarbon dating would likely elucidate the chronology of the site. The composition of the early medieval landscape in this region should be considered when this activity is considered during any

further assessment, as this industry will likely be related to nearby settlement not immediately obvious within the vicinity of Area 2.

6.1.5 Dating evidence was recovered from deposits relating the archaeological activity investigated at Area 2. Although prehistoric, Romano-British and modern pottery was recovered during excavation, a number of features remain undated and difficult to attribute a function. This is notably apparent with regards to the pits and postholes which form the majority of the archaeological evidence in Field L8. Furthermore, the relationship between the remains attributed to the prehistoric, Romano-British and medieval periods remains uncertain, particularly in the centre of the site in Field L12.

6.1.6 As such, although all data categories should go forward to assessment level and form part of the overall analysis and publication of the Wylfa Newydd site, special regard should be considered in the potential for environmental samples. This would potentially enhance the interpretation and clarify the relationships of the features identified at Area 2. This assessment as part of the examination of the whole archaeological assemblage would enable the review of whether the research aims and objectives described within the WSI (HNP 2015/2017a) have been met.

6.1.7 A programme of assessment of the archaeological remains revealed during the excavation of Area 2 will therefore be critical to forming an understanding of the wider archaeological landscape.

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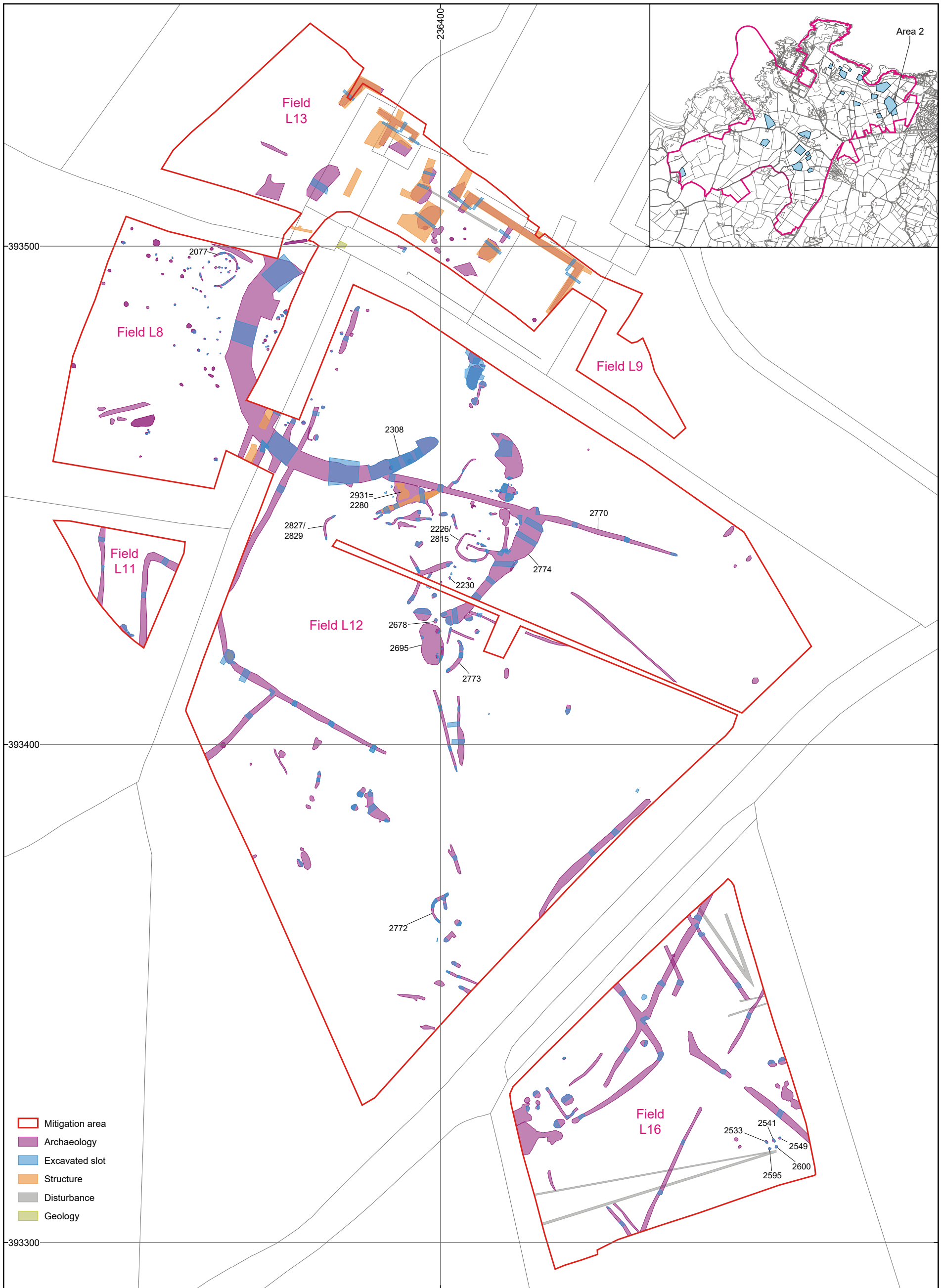
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Wylfa mitigation Area 2 plan

Figure 1



Plate 1: Section of ring ditch 2308 from east



Plate 2: Metaled surface 2931/2280 from south-east

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1-29 Area 3-fields K11

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Document Information

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Document subtitle	Site Summary Report
Wessex Doc ref	209731.003
Horizon Doc ref	WYN-WES-CON-REP-00007
Client name	Horizon Nuclear Power
Address	5210 Valiant Court Gloucester Business Park Delta Way Gloucester Gloucestershire GL3 4FE
Site location	Cemaes, Anglesey
County	Gwynedd
National grid reference	236250 393300
Statutory designations	None
Planning authority	Isle of Anglesey
Planning Inspectorate reference (DCO application)	EN010007
Museum name	Anglesey Archives (paper and digital), Oriel Ynys Môn (artefacts)
Museum accession code	35/2016
HER event number	PRN45392; PRN76008
WA project name	Wylfa remaining works 2018
WA project code	209731
Date of fieldwork	07/09/2017 – 03/11/2017
Fieldwork directed by	Pete Noble
Project management by	Matthew Williams
Document compiled by	Matthew Williams, Ashley Tuck
Contributions from	Liz Chambers, Lorraine Mepham
Graphics by	Joanna Debska

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Summary

Wessex Archaeology was commissioned to carry out archaeological excavation and recording in Area 3 in Field K11 at the Wylfa Newydd site. All works were carried out in accordance with the Written Scheme of Investigation (Horizon Nuclear Power (HNP) 2015), and Technical Update (HNP 2017), as agreed with Gwynedd Archaeology Planning Service.

The Site was contained within one field centred on NGR 236250 393300 and covering 1,462 sq.m. In the south of the Site was a large burnt mound. Other features containing burnt material and prehistoric pottery were also recorded. A post-medieval drainage ditch or boundary ran across the north of the Site.

Assessment is recommended for all data categories. The data from this Site should be considered in the analysis and publication of the whole Wylfa Newydd site.

Wylfa Area 3, Field K11

Site Summary Report

1 INTRODUCTION

1.1.1 Wessex Archaeology undertook archaeological excavation in Area 3 in a field known as K11 (**Fig. 1**, 'the Site').

1.1.2 The work was carried out in accordance with the Technical update to the Written Scheme of Investigation for archaeological trial trenching and excavation: Investigation area in Field K11 (Horizon Nuclear Power (HNP) 2016), and the original Written Scheme of Investigation produced for all trial trench evaluation and excavation (HNP 2015). These documents were produced in line with the overarching National Policy Statement for Energy (EN-1) (Department for Energy and Climate Change, 2011) and detailed the rationale, aims, methodologies, and standards to be employed during the work. Both documents were agreed with Gwynedd Archaeology Planning Services (archaeological planning advisor to Isle of Anglesey Council) prior to work starting. This document has been produced in accordance with briefing and guidance from Wardell Armstrong LLP.

1.1.3 This excavation was one element in a large scheme of works associated with the proposed construction of a nuclear power station at Wylfa. This Site Summary Report (SSR) has been commissioned by HNP as a supporting document for the application for Development Consent Order (DCO) and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site.

1.1.4 Historic Environment Record event numbers ('PRNs') were assigned following discussion with Nina Steel, Senior Historic Environment Record Archaeologist at Gwynedd Archaeological Trust. PRN45392 has been assigned to the Wylfa Newydd project as a whole and further event numbers have also been assigned to 'noteworthy components' of the project. Within Area 3, PRN76008 has been assigned to a burnt mound and possibly associated structure.

2 BACKGROUND

2.1.1 The works were centred on NGR 236250 393300 (**Fig. 1**). The Site area was 1,462 sq.m.

2.1.2 Area 3 was within a pasture field which rose from 19.60 m aOD in the north-west to 24.30 m aOD in the south-east. Tre'r Gof Farm (Tre'r Gof Uchaf) is immediately to the south and the Tre'r Gof Site of Special Scientific Interest is 240 m to the north. The coast is 450 m to the north.

2.1.3 The overlying soil is freely draining slightly acidic loam (Cranfield Soil and Agrifood Institute 2019). The superficial geology comprises Devensian till with an underlying bedrock of mica schist and psammite (BGS 2019).

2.1.4 Archaeological work carried out in association with the project prior to the excavation of Area 3 included:

- *desk based assessment (Cooke et al. 2012)*

- *geophysical surveys (Hopewell 2011a-b; Hopewell 2012) and*
- *trial trenching (Wessex Archaeology 2016).*

2.1.5 The results of the preceding phases of work are summarised below. No other significant archaeological investigation has taken place within the area prior to the excavation of Area 3.

3 AIMS AND OBJECTIVES

3.1 Specific aims

3.1.1 The specific aims of the work within this site, as described in the WSI (HNP 2015; 2016), were:

- *to establish the nature and function of the various archaeological remains present, specifically to identify the presence of any agricultural, domestic, industrial or ritual activity and the character of such;*
- *to establish the condition, age and stratigraphic sequence of any archaeological/historical remain identified;*
- *to more definitively establish the date of the archaeological remains present (in particular the burnt mound and associated features)*
- *to gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills; and,*
- *to understand how the remains seen within the investigation area relate to other known features across the landscape (chronologically, stratigraphically as well as spatially), with particular reference to the prehistoric activity in Fields K1, K4, C15 to the south and C16 to the west as well as the medieval activity seen in Field L3 on the other side of the SSSI, to the north.*

3.2 Research objectives

3.2.1 In addition, a series of research objectives for the excavation of Area 3 were defined in the technical update (HNP 2016) based on a review of relevant archaeological research framework documents.

4 METHODOLOGY

4.1.1 All work was undertaken in accordance with the detailed methodology set out in the WSI (HNP 2015) and technical update (HNP 2016) and in compliance with current standards and guidance, e.g. CIfA guidance (CIfA 2014a-c) and Historic England guidance (Historic England 2015).

4.1.2 All archaeological features were investigated and recorded as per standard procedure set out in the Wessex Archaeology fieldwork manual (Wessex Archaeology 2015).

4.1.3 Environmental sampling was undertaken in accordance with Wessex Archaeology's Guidelines for Environmental Sampling (Wessex Archaeology nd) along and current guidance provided by Historic England (English Heritage 2011).

5 ARCHAEOLOGICAL RESULTS

5.1 Historic map evidence and documentary data

5.1.1 The HER records few prehistoric sites in the vicinity. The closest is the site of an urned Bronze Age cremation burial at Plas Penryhyn located almost 3 km to the east (HER3050).

5.1.2 The remains of post-medieval field boundary systems have been recorded nearby (within 1 km) at both Nant Orman (HER 61111) and Nant-y-Gof (HER 61127).

5.1.3 The Desk-Based Assessment (Cooke et al. 2012) suggested that some field boundaries may have ancient origins. It concluded that the area may contain 'background agricultural features' such as boundary ditches.

5.2 Geophysical survey results

5.2.1 Geophysical survey was conducted in Area 3 (Hopewell 2011a-b, 2012). Hopewell 2011b correctly identified a 19th century ditch appearing on historic maps, although Hopewell 2012 interpreted this feature erroneously as modern ploughing.

5.2.2 The geophysical reports did not identify the burnt mound although retrospectively it can be clearly seen on the greyscale figures.

5.3 Evaluation results

5.3.1 Evaluation trial trenching took place in spring 2016 (Wessex Archaeology 2016). A total of 22 trenches were excavated in Field K11. A large burnt mound was identified in one of the trenches (TR1434; **Fig. 1**).

5.4 Excavation results

5.4.1 The burnt mound recorded during the evaluation was excavated in the south of the Site (3015; PRN76008; **Fig. 1**; **Plate 2**). It was relatively large compared to other burnt mounds excavated across the project, measuring 16.8 m long and 14.7 m wide and up to 0.35 m thick. Below the mound were two clay lined troughs (3092) and (3089; **Fig. 1**), one of which had evidence for a superstructure. There was also a fire pit (3097) containing heat affected stones. The troughs are generally interpreted as water containers that are heated using stones from the fire pit. Burnt mounds are the waste from this process. Below the mound were a series of five stakeholes (eg 3105) possibly representing a structure either associated with, or pre-dating the burnt mound (**Fig. 1**).

5.4.2 A wide, shallow palaeochannel (3018), over 5 m wide, ran east to west across the north side of the burnt mound (**Fig. 1**). This was probably the source of water and stones for the water heating process.

5.4.3 In the south-east corner of the Site was a group of postholes, stakeholes and pits and short linear features (possibly beam slots, eg 3049) which are interpreted as a small group of wooden structures (PRN76008; **Fig. 1**). Several fragments of pottery and worked chert were found within some of these features (3019, 3064 and 3099), which suggest a

prehistoric, possibly Bronze Age, date. These features might be contemporary with the burnt mound. Pit 3019 is shown in **Plate 1**.

5.4.4 A second possible incipient burnt mound was present in the north of the site. Two burnt pits (3060 and 3071) had evidence of *in situ* burning in the form of surrounding heat-effected natural and may represent hearths. A small spread of burnt-mound like material (3073/3074) overlay pit 3071 (**Fig 1**).

5.4.5 A large undated east-west drainage ditch (3023) in the north of the site may speculatively have been post-medieval. Other features in the north including short linear features (3051 and 3055/3076) and a pit 3053 (**Fig. 1**).

5.4.6 The 19th-century boundary detected by geophysical survey was removed prior to investigation of the burnt mound and was not recorded.

5.5 Finds and dating evidence

5.5.1 Prehistoric pottery was found associated with the burnt mound (in pit 3019). Five fragments of struck chert and two fragments of flint were found across the Site, including several pieces in the structural features in the south-west of the Site.

5.5.2 The pottery can support the dating of the burnt mound; comparison of the types and form of the stone from the burnt mound and structural features may indicate whether they are contemporary.

5.6 Environmental

5.6.1 A total of 28 environmental samples comprising 56 10 litre buckets were collected from archaeological deposits at Area 3 for processing using a flotation method in order to identify potential botanical and faunal remains that may be present in the samples.

5.6.2 There potential for the recovery of environmental information from the drainage ditch and structural features. C14 dates may be obtained from the burnt mound, and also the structural features if any suitable material is recovered from the sample processing.

5.6.3 Overall, the rate of recovery of datable artefacts during excavation is notably poor in the region. As such, environmental samples are of high importance to provide data helping to establish a chronology and narrative. Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

5.7 Quantification of excavation data

Table 1 Quantification of excavation data

Data Category	Number
Contexts	112
Small finds	10
Bulk finds	0.673kg
Environmental samples	28 (560 litres)
Monochrome film	0
Digital photographs	231

Rectified photographs	0
GPS surveyed digital pre-excavation plans	✓
GPS surveyed digital excavation plans	✓
TST surveyed digital excavation plans	X
Hand drawn plans	0
Hand drawn sections	52

5.8 Recommendations for further work

5.8.1 All data categories should go to assessment and an assessment report should be produced for this site.

Table 2 Recommendations for further work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	All categories likely to warrant further analysis as part of overall project analysis
Publication of key data categories	All categories likely to warrant publication as part of overall project publication
Deposit archive	✓

6 DISCUSSION

6.1.1 The excavation demonstrated that results of the geophysical survey were reliable, although their interpretation was lacking in this case. The burnt mounds were successfully detected and can be seen in retrospect on the figures in the geophysics reports, however their presence was not identified in the text. The results from this excavation are considered to be reliable.

6.1.2 The dating, characterisation and distribution of burnt mounds, and particularly the potential for associated structures, contributes to research aims on the wider setting of prehistoric sites and exploitation of the natural environment. The close association of potential settlement (in the form of structures in the south-east of Area 3) with a burnt mound is significant. Pottery recovered from pit 3019 suggests that the potential settlement and burnt mound are contemporary. To fulfil the research aims of the project, all data categories should go forward to assessment level and form part of the overall analysis and publication of the Wylfa Newydd site.

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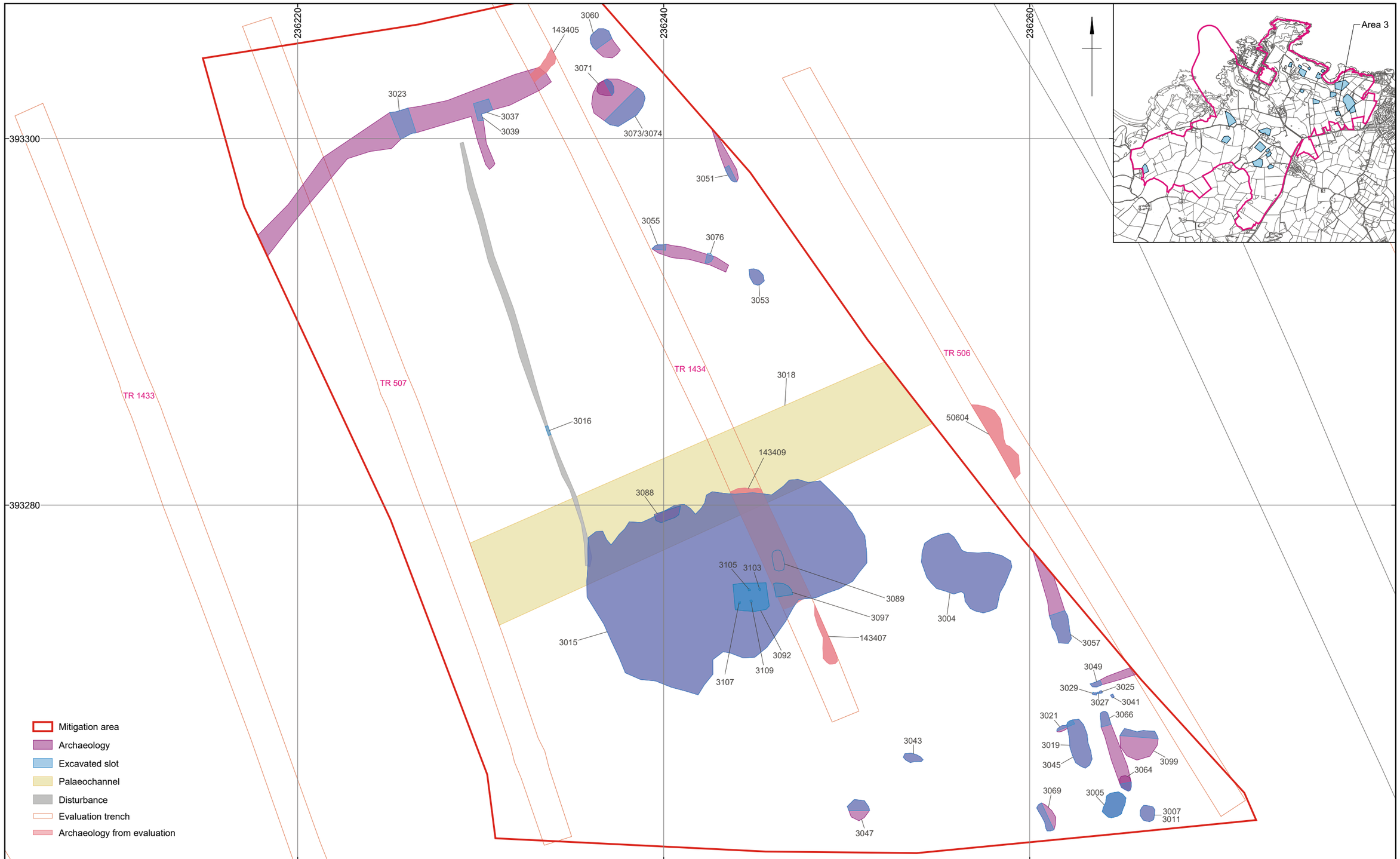
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Wylfa mitigation Area 3 plan

Figure 1



Plate 1: Pit 3019 from west



Plate 2: Burnt mound 3015 from south

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1-30 Area 4-field E3

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Site location	Cemaes, Anglesey
County	Gwynedd
National grid reference	235260 393050
Statutory designations	None
Planning authority	Isle of Anglesey
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Museum name	Anglesey Archives (paper and digital), Oriel Ynys Môn (artefacts)
Museum accession code	35/2016
HER event number	PRN45392; PRN76009-12
WA project name	Wylfa remaining works 2018
WA project code	209730
Date of fieldwork	01/11/2017 to 18/04/2018
Fieldwork directed by	Pete Noble and Phil Weston
Project management by	Matthew Williams
Document compiled by	Matthew Williams
Contributions from	Liz Chambers, Lorraine Mepham
Graphics by	Joanna Debska

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Summary

Wessex Archaeology was commissioned to carry out archaeological excavation and recording in Area 4 in Field E3 at the Wylfa Newydd site. All works were carried out in accordance with the Written Scheme of Investigation (Horizon Nuclear Power (HNP) 2015), and Technical Update (HNP 2017), as agreed with Gwynedd Archaeology Planning Service.

The Site was centred on NGR 235260 393050, the total excavation area was 6,448 sq.m. It was located on the north east facing slope off the brow of a low hill. The excavation revealed a large Romano-British fortified enclosure at the top of the hill. There was some evidence for internal structures, and further buildings to the immediate west. Numerous pits and ditches were recorded in the land surrounding the enclosure; the majority of these did not have an obvious function although several were clearly ovens or kilns.

The Site is considered nationally important. Assessment is recommended for all data categories. The data from this Site should be considered in the analysis and publication of the whole Wylfa Newydd site.

Wylfa Area 4, Field E3

Site Summary Report

1 INTRODUCTION

1.1.1 Wessex Archaeology undertook archaeological excavation in Area 4 in the field known as E3 (**Fig. 1**, 'the Site').

1.1.2 The work was carried out in accordance with the 'Technical update to the Written Scheme of Investigation for archaeological trial trenching and excavation: Investigation in Field E3. (Horizon Nuclear Power (HNP) 2016) and the original Written Scheme of Investigation produced for all trial trench evaluation and excavation (HNP 2015). These documents were produced in line with the overarching National Policy Statement for Energy (EN-1) (Department for Energy and Climate Change, 2011) and detailed the rationale, aims, methodologies, and standards to be employed during the work. All documents were agreed with Gwynedd Archaeology Planning Services (archaeological planning advisor to Isle of Anglesey Council) prior to work starting. This document has been produced in accordance with briefing and guidance from Wardell Armstrong LLP.

1.1.3 This excavation was one element in a large scheme of works associated with the proposed construction of a nuclear power station at Wylfa. This Site Summary Report (SSR) has been commissioned by HNP as a supporting document for the application for the Development Consent Order (DCO) and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site.

1.1.4 Historic Environment Record event numbers ('PRNs') were assigned following discussion with Nina Steel, Senior Historic Environment Record Archaeologist at Gwynedd Archaeological Trust. PRN45392 has been assigned to the Wylfa Newydd project as a whole and further event numbers have also been assigned to 'noteworthy components' of the project. Within Area 4, PRN76009 has been assigned to features pre-dating the main Romano-British enclosure, PRN76010 to the main Romano-British enclosure, PRN76011 to features post-dating the Romano-British enclosure and PRN76012 to the mainly discrete features outside the Romano-British enclosure.

2 BACKGROUND

2.1.1 The works were centred on NGR 235260 393050 (**Fig. 1**). The total area of excavation was 6,448 sq.m.

2.1.2 Area 4 is situated at the top of a hill, it sloped down from 33.70 m aOD in the south west to 25 m aOD in the north east. A farmhouse had recenltly been demolished on the south side of the Site, and trees, hard standing and a concrete wall remained. Cemaes is 1.2 km to the east and the coast is 800 m to the north west.

2.1.3 The overlying soil is freely draining slightly acidic loam (Cranfield Soil and Agrifood Institute 2019). The superficial geology comprises Devensian till with an underlying bedrock of New Harbour Group mica schist and psammite (BGS 2019).

2.1.4 Archaeological work carried out in association with the project prior to the excavation of Area 4 included:

- *desk based assessment (Cooke et al. 2012)*
- *geophysical surveys (ASWYAS 2015; Hopewell 2011a-b; Hopewell 2012) and*
- *trial trenching (Wessex Archaeology 2016, Headland 2017).*

2.1.5 The results of the preceding phases of work are summarised below. No other significant archaeological investigation has taken place within the area prior to the excavation of Area 4.

3 AIMS AND OBJECTIVES

3.1 Specific aims

3.1.1 The specific aims of the work within this site, as described in the WSI (HNP 2015; 2016) were:

- *To establish the true nature and function of the various archaeological remains present, specifically to identify the presence of any agricultural, domestic, industrial or ritual activity and the character of such.*
- *To establish the condition, age and stratigraphic sequence, of any archaeological / historical remain identified.*
- *Gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills.*
- *To understand how the remains seen within the investigation area relate to other known features across the landscape (chronologically, stratigraphically as well as spatially), with particular reference to the prehistoric activity in fields A1, A3 and A9.*

3.2 Research objectives

3.2.1 In addition, a series of research objectives for the excavation of Area 4 were defined in the technical update (HNP 2016) based on a review of relevant archaeological research framework documents.

4 METHODOLOGY

4.1.1 All work was undertaken in accordance with the detailed methodology set out in the WSI (HNP 2015) and technical update (HNP 2016) and in compliance with current standards and guidance, e.g. CIfA guidance (CIfA 2014a-c) and Historic England guidance (Historic England 2015).

4.1.1 All archaeological features were investigated and recorded as per standard procedure set out in the Wessex Archaeology fieldwork manual (Wessex Archaeology 2015).

4.1.2 Environmental sampling was undertaken in accordance with Wessex Archaeology's Guidelines for Environmental Sampling (Wessex Archaeology nd) along and current guidance provided by Historic England (English Heritage 2011).

5 ARCHAEOLOGICAL RESULTS

5.1 Historic map evidence and documentary data

5.1.1 An examination of historic maps in the Desk Assessment (Cooke et al. 2012) concluded that the existing field pattern in the area may have ancient origins.

5.2 Geophysical survey results

5.2.1 The geophysical survey (Hopewell 2011a-b) identified a series of ditches that correlate with the Romano-British enclosure described below.

5.3 Evaluation results

5.3.1 Evaluation trial trenching took place in spring 2016 (Wessex Archaeology 2016). Twenty-six trenches were dug in Field E3. The trenches were 1.8 m wide and between 30 m and 50 m long.

5.3.2 The trial trenching revealed a large enclosure ditch, which was not excavated to the base. A C14 sample taken from 1 m depth within the ditch returned a date of AD 253-396 (UBA-32268). Pits, postholes and gullies were recorded within the enclosure and a surface with metalworking slag and 2nd century AD Roman pottery were recorded immediately west outside the enclosure.

5.3.3 Beyond the enclosure several undated field boundary ditches were recorded.

5.4 Excavation results

General stratigraphy

5.4.1 The topsoil was 0.15–0.25 m thick and generally comprised mid brown grey silt, it overlay mid brown grey silt clay subsoil around 0.15 m thick. The underlying geology comprised orange brown clay with frequent pebbles and cobbles.

Features pre-dating the main enclosure (PRN76009)

5.4.2 A large, straight ditch (41275), 16 m long, 3.15 m across and 1.75 m deep, was located to the west of the main enclosure described below. The ditch fills contained several large stones which may indicate revetting, but no datable finds. This feature may represent an early Roman defensive ditch created prior to the construction of the large enclosure (41271), which truncated the east end of ditch 41275 (**Fig. 1**).

Romano-British enclosure ditch 41271 and associated features (PRN76010)

5.4.3 The north and east sides of a large enclosure ditch (41271) were discovered in the south of the Site (**Fig. 1**; **Plate 1**). The total length exposed in plan (including an entrance gap) was 90.6 m. The north side, which measured 38 m, was fully exposed; 5.6 m of the west side was exposed and 47 m of the east side was exposed. The entrance gap was 5.60 m wide and located in the east side about 30 m from the north-east corner. Assuming the entrance was positioned in the centre of the east side, the total dimensions of the enclosure would be 38 m wide and 65.60 m long.

5.4.4 Six sections were dug through the ditch (**Fig. 1**) including one at the entrance terminal. The ditch had a maximum width of 5.20 m and a maximum depth of 2.50 m. The sides were steep and straight, suggesting military construction.

5.4.5 The basal fills of ditch (41271) had some organic remains which were particularly well preserved in the base of section 4905 where the deposits were waterlogged. A dandelion flower and a small bundle of hay or straw were retrieved from the base of this section. A bulk sample was also taken from the same deposit, it contained evidence for natural vegetation rather than domestic plant processing, and there were no charred remains. A C14 sample from the deposit returned a most probable date of 1958 +/-27 BP (AD 17-74). Frequent large boulders (<0.50m across) were discovered tumbled into the base of the ditch in section 4474 which may be the remnants of revetting. The upper fills of the ditch were sterile silt clay hill wash.

5.4.6 A narrow gulley and several postholes were recorded along the inside of the ditch (4472) and several large postholes were recorded outside the entrance (4270, 4189 and 4240, see below) (**Fig. 1**). These are interpreted as evidence for an internal palisade and gateway.

Features within the enclosure ditch (PRN76010)

5.4.7 A trackway (4880) consisting of a single layer of compact pebbles, up to 5 m wide, ran from the entrance directly west within the enclosure (**Fig. 1**). There was no evidence for the trackway outside the enclosure.

5.4.8 Various postholes (4211, 4773, 4692, 4735, 4690, 4681 and 4674) and gullies indicated structures within the enclosure, although these were ephemeral and did not suggest substantial structures. Additionally, two drip gullies (4634 and 4605) and a charcoal filled pit (4211) in the north of the enclosure were identified. Apparent features and depressions were recorded in the vicinity, but appeared to be natural (**Fig. 1**). Overall, with the exception of the trackway, evidence for activity within the enclosure was insubstantial.

Features outside the enclosure (PRN76012)

5.4.9 Several groups of features were recorded outside the enclosure. To the north-west of the enclosure were 32 sub-circular or oval pits, up to 2 m across and all less than 0.40 m deep (**Fig. 1**). Four of the pits had scorched sides and contained burnt clay or charcoal (4517, 4254, 4111 and 4251; **Plate 2**), these were interpreted as ovens or kilns. One of these features (4111) was a figure-of-eight shape and contained several fragments of Samian pottery. A small pit adjacent to the ovens contained charcoal and another contained burnt bone, these were interpreted as refuse pits. At the south of the group were two stone surfaces (4478), one of which was associated with Roman pottery, a quern fragment, animal bone and stone tool fragments. Of the remaining pits, none contained visible environmental evidence and no finds were recovered. A row of four circular pits was notable (4332, 4042, 4035 and 4375) although there was no evidence for their use. It is likely that the pits in this area were not contemporary and represent a variety of agricultural features, truncated rubbish pits and natural features (eg tree throws). Several shallow gullies of unclear function were also recorded.

5.4.10 To the north east of the enclosure was another group of 30 pits (**Fig. 1**). None of the pits contained visible environmental evidence or finds other than very occasional animal bone fragments. In the west of the group was a row of three pits, up to 0.70 m deep and 1.70 m across (4536, 4807 and 4493) (**Fig. 1**). In the east were three pairs of sub-circular pits (4219, 4212 and 4452), each around 2 m across and 0.30 m deep.

5.4.11 To the west of the enclosure was a group of 20 pits (**Fig. 1**). In the north of the group was a cluster of intercutting pits (4529) containing traces of animal bone, which are interpreted as rubbish pits (**Fig. 1**). Five large pits parallel with the enclosure contained stones (4270, 4189, 4371, 4385 and 4240), these are interpreted as postholes for an entrance structure close to the enclosure entrance. In the south east was a kiln or oven (4320) with a flue (4322; **Fig. 1**). The remaining pits were generally sub circular, less than 0.30 m deep with no notable fills or finds. As with the pits on the west side of the enclosure, these pits are probably not all contemporary and many are probably natural features such as root disturbance.

Features post-dating the enclosure (PRN76011)

5.4.12 Evidence for a field system, consisting of two pairs of parallel ditches joined by a long ditch to the south (4140 and 4170), were cut into the top of the northern enclosure ditch (**Fig. 1**).

5.4.13 Overlying the north-east corner of the enclosure ditch was evidence for a stone structure consisting of two roughly built walls of two courses and a stone spread. The structure had clearly been heavily disturbed and the stone spread probably represented dispersed rubble from the walls. No datable material was recovered from the structure, but the enclosure ditch was filled by the time the structure was built. A late medieval or post-medieval date is possible. The building was interpreted as a shepherd's hut or outbuilding associated with the later farmhouse at the top of the hill.

5.5 Finds and dating evidence

5.5.1 The finds assemblage is of moderate size, in which animal bone is by far the most commonly occurring find type. Ceramics (pottery and fired clay) and stone (including worked flint) occurred in small quantities, with few other finds (clay tobacco pipe, glass, metal, slag, marine shell).

5.5.2 The pottery provides the primary dating evidence and includes both Romano-British and post-medieval material, with two possible prehistoric sherds. There is also a Romano-British copper alloy penannular brooch (small find 4031). Fragments of Samian pottery were found within one of the ovens to the north east of the enclosure, suggesting a Roman date for the group of features. Samian pottery was also recovered from the roundhouse gully and the stone trackway within the enclosure. Romano-British pottery was recovered from the fills of the enclosure ditch (eg fill 4475).

5.5.3 The stone includes two struck flints and one possible struck piece of chert. None of the other stone shows definitive signs of working. The fired clay includes a few heavily burnt/vitrified fragments which could be interpreted as hearth lining (although there is no indication that this was associated with metalworking, for example).

5.5.4 Many of the pits outside the enclosure contained low quantities of degraded animal bone, suggesting refuse pits. The animal bone is not in particularly good condition; the assemblage is fragmentary and there is a high proportion of teeth (which survive better under aggressive burial conditions). The assemblage is likely to include the major domesticates, but of interest is the occurrence of a whale bone (species at this stage unknown) which was recovered from the enclosure ditch.

5.5.5 Other finds comprise two iron objects, possibly nails (undated); a fragment of modern vessel glass, four fragments of ironworking slag (undated), a limpet shell and a fragment of clay pipe stem.

5.5.6 The lower deposits in the southern ditch terminus (4905) were well preserved due to waterlogging. Part of a bundle of hay or straw, a dandelion flower and the fragments of whale bone were recovered from the basal fills.

5.6 Environmental

5.6.1 A total of 170 environmental samples comprising 428 ten litre buckets were collected from archaeological deposits at Area 4 for processing using a flotation method in order to identify potential botanical and faunal remains that may be present in the samples.

5.6.2 A 30l bulk sample of the basal fill from the south terminus (4905) was quickly assessed. It contained natural vegetation and no evidence for domesticated plant processing. There were no charred remains in the sample.

5.6.3 A C14 sample from the same sample returned a probable date of 1958 +/-27 BP (AD 17-74). A C14 sample taken during the evaluation from a 1 m depth within the enclosure ditch (i.e. approximately half way through the fills) returned a date of AD 253-396.

5.6.4 There is a high potential for recovery of environmental information and C14 dating from the ditch. Bulk samples were taken from all ditch fills including the waterlogged basal fills in the southern terminus, which will be subject to subsampling. Six monolith columns were also taken from two sections of the ditch. This will inform on the infilling process, including whether the ditch was deliberately backfilled.

5.6.5 Bulk samples and C14 samples from the pits and ovens surrounding the enclosure will inform on the date and function.

5.6.1 Overall, the rate of recovery of datable artefacts during excavation is notably poor in the region. As such, environmental samples are of high importance to provide data helping to establish a chronology and narrative. Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

5.7 Quantification of excavation data

Table 1 Quantification of excavation data

Data Category	Number
Contexts	1271
Small finds	9
Bulk finds	5.322kg
Environmental samples	170 (4280 litres)
Monochrome film	0
Digital photographs	3,267
Rectified photographs	115
GPS surveyed digital pre-excavation plans	✓
GPS surveyed digital excavation plans	✓
TST surveyed digital excavation plans	x
Hand drawn plans	56
Hand drawn sections	392

5.8 Recommendations for further work

5.8.1 All data categories should go to assessment and an assessment report should be produced for this site.

Table 2 Recommendations for further work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	Finds likely to warrant further analysis
Publication of key data categories	Finds likely to warrant publication
Deposit archive	✓

6 DISCUSSION

6.1.1 The majority of the remains within Area 4 are related to the period of Roman occupation, although occasional prehistoric finds attest to prehistoric activity in the vicinity. The key feature is the large sub-rectangular Roman enclosure ditch which is interpreted having a military purpose such as a temporary camp.

6.1.2 The only feature stratigraphically earlier than the enclosure ditch (41271) is a short section of straight ditch (41275), which is cut by the eastern length of the enclosure (**Fig. 1**). The straight ditch has a similar profile (although smaller) than the enclosure and is interpreted as a Roman defensive feature. It may represent the initial defensive works constructed by the Roman army prior to the construction of the enclosure ditch.

6.1.3 The large 'V'-shaped enclosure ditch with possible internal palisade is of clear Roman construction; this interpretation is further supported by the fragments of Samian pottery discovered within the internal structure and trackway. Considerable effort went into the construction of the ditch and track, whereas the internal features are not substantial, perhaps consisting of temporary military accommodation.

6.1.4 The location of the enclosure ditch (41271) allows clear views across much of the surrounding landscape; the south side (which remains preserved *in situ* below extant hardstanding) would have looked out directly over the settlement in Areas 19 and 20 (Field O5) excavated as part of this phase of works.

6.1.5 The environmental evidence from the base of the enclosure ditch suggests there was no settlement or agriculture near Area 4 prior to the construction of the enclosure.

6.1.6 The numerous rubbish pits outside the enclosure suggest a significant population. The ovens indicate industrial activity, which may have taken place once the military camp was established. During the evaluation, 2nd-century pottery was found associated with the surfaces and pits to the west of the Roman boundary ditch. This also suggests that this activity occurred after the enclosure was established.

6.1.7 The edge of a late medieval or post-medieval structure overlies the north-west corner of the enclosure ditch. The Roman boundary ditch was clearly out of use and may not have been visible as a depression when the structure was built. It may be a shepherd's hut or outbuilding related to the later occupation at the top of the hill.

6.1.8 The Romano-British evidence from this site is of national significance; it relates directly to the Roman invasion and occupation of Anglesey and provides context for known Roman sites such as Segontium in Caernarfon. The intimidating size of the ditch suggests a hostile population, which aligns with Tacitus's famous description of the Roman invasion of Anglesey (*Annals* XIV).

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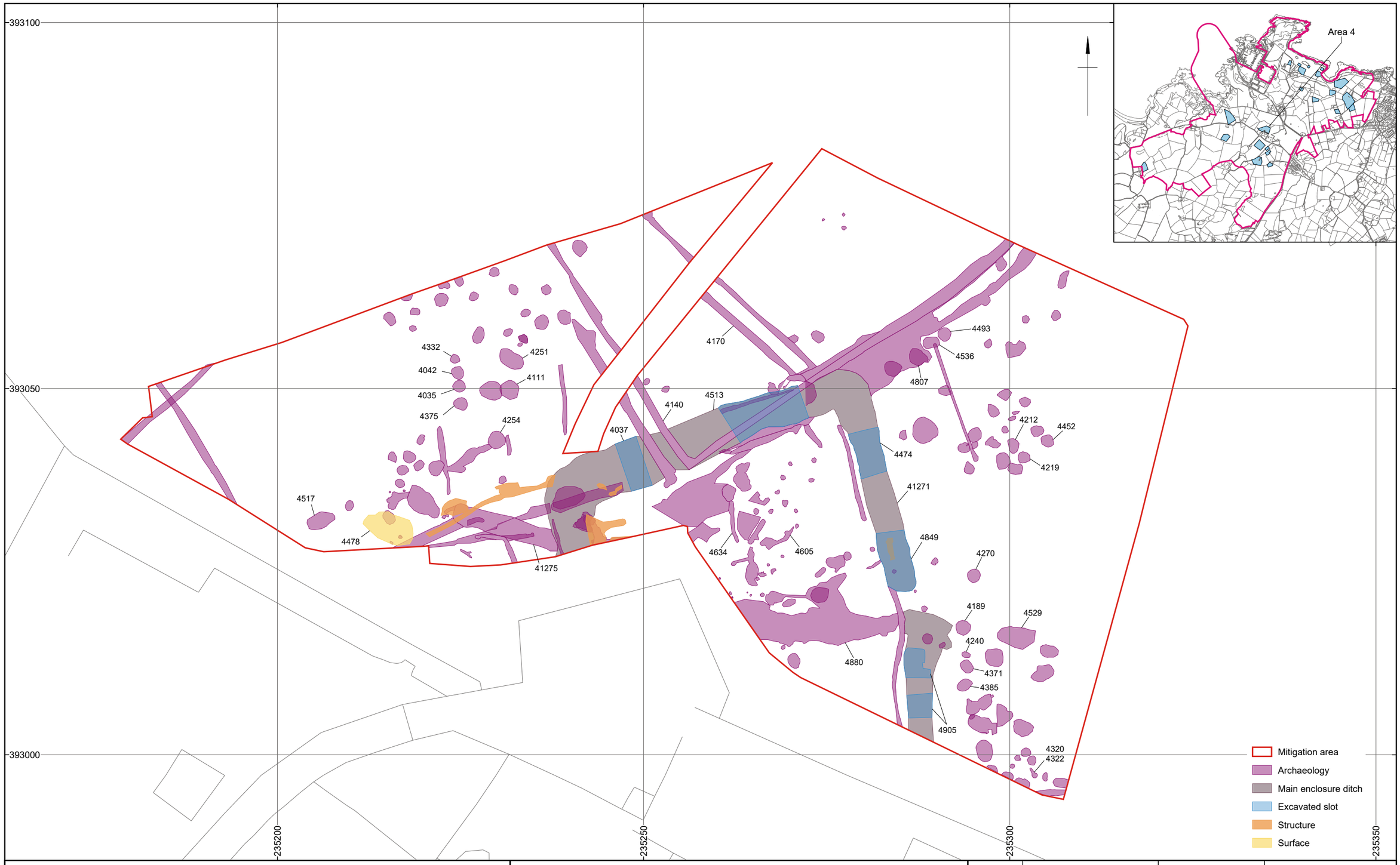
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Wylfa mitigation Area 4 plan

Figure 1



Plate 1: Section of enclosure ditch 41271 from north-east



Plate 2: Kiln 4254 from south

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1-31 Area 5-field A1

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Summary

Wessex Archaeology was commissioned to carry out archaeological excavation and recording in Area 5 in Field A1 at the Wylfa Newydd site. All works were carried out in accordance with the Written Scheme of Investigation and Technical Update, as agreed with Gwynedd Archaeology Planning Service.

The Site was centred on NGR 234750 393200 and covered an area of 10,086 sq.m. The Site contained a burnt mound with two troughs as well as field boundaries.

Assessment is recommended for all data categories. The data from this Site should be considered in the analysis and publication of the whole Wylfa Newydd site.

Wylfa Area 5, Field A1

Site Summary Report

1 INTRODUCTION

1.1.1 Wessex Archaeology undertook archaeological excavation in Area 5 in the field known as A1 (**Fig. 1**, 'the Site').

1.1.2 The work was carried out in accordance with the technical update for Field A1 (Horizon Nuclear Power (HNP) 2016), and the original Written Scheme of Investigation produced for all trial trench evaluation and excavation (HNP 2015).These documents were produced in line with the overarching National Policy Statement for Energy (EN-1) (Department for Energy and Climate Change, 2011) and detailed the rationale, aims, methodologies, and standards to be employed during the work. Both documents were agreed with Gwynedd Archaeology Planning Services (archaeological planning advisor to Isle of Anglesey Council) prior to work starting. This document has been produced in accordance with briefing and guidance from Wardell Armstrong LLP.

1.1.3 This excavation was one element in a large scheme of works associated with the proposed construction of a nuclear power station at Wylfa. This Site Summary Report (SSR) has been commissioned by HNP as a supporting document for the application for Development Consent Order (DCO) and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site.

1.1.4 Historic Environment Record event numbers ('PRNs') were assigned following discussion with Nina Steel, Senior Historic Environment Record Archaeologist at Gwynedd Archaeological Trust. PRN45392 has been assigned to the Wylfa Newydd project as a whole and further event numbers have also been assigned to 'noteworthy components' of the project. Within Area 5, PRN76013 has been assigned to burnt mounds and PRN76014 to later ancient field boundaries.

2 BACKGROUND

2.1.1 The works were centred on NGR 234750 393200 (**Fig. 1**). The site area was 10,086 sq. m.

2.1.2 The Site lies at the base of a small hill between 10 m and 25 m aOD. The ground slopes down from south-south-east to north-north-west. The road from Cemlyn to Tregele forms the southern site boundary. The coast is 320 m to the north.

2.1.3 The overlying soil is freely draining slightly acidic loam (Cranfield Soil and Agrifood Institute). The superficial geology comprises Devensian till with an underlying bedrock of mica schist and psammite (BGS 2019).There was no significant archaeological work within the area prior to this project.

2.1.4 Archaeological work carried out in association with the project prior to the excavation of Area 5 included:

- *desk based assessment (Cooke et al. 2012)*

- *geophysical surveys (Hopewell 2011a-b; Hopewell 2012) and*
- *trial trenching (Wessex Archaeology 2016).*

2.1.5 The results of the preceding phases of work are summarised below. No other significant archaeological investigation has taken place within the area prior to the excavation of Area 5.

3 AIMS AND OBJECTIVES

3.1 Specific aims

3.1.1 The specific aims of the work within this site, as described in the WSI (HNP 2015, 2016), were:

- *to establish the nature and function of the various archaeological remains present, specifically to identify the presence of any agricultural, domestic, industrial or ritual activity and the character of such;*
- *to establish the condition, age and stratigraphic sequence of any archaeological/historical remain identified;*
- *to more definitively establish the date of the archaeological remains present (in particular the burnt mound and associated features) by the recovery of datable artefacts or material (such as pottery, bone and charcoal) which can be dated either typographically and/or are suitable to be subjected to scientific dating techniques.*
- *to gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills; and,*
- *to identify and establish links with the wider archaeological/historical setting of the Site: to understand how the remains relate to other local/regional archaeological sites*.

3.2 Research objectives

3.2.1 In addition, a series of research objectives for the excavation of Area 5 were defined in the technical update (HNP 2016) based on a review of relevant archaeological research framework documents.

4 METHODOLOGY

4.1.1 All work was undertaken in accordance with the detailed methodology set out in the WSI (HNP 2015) and technical update (HNP 2016) and in compliance with current standards and guidance, eg CIfA guidance (CIfA 2014a-c) and Historic England guidance (Historic England 2015).

4.1.1 All archaeological features were investigated and recorded as per standard procedure set out in the Wessex Archaeology fieldwork manual (Wessex Archaeology 2015).

4.1.2 Environmental sampling was undertaken in accordance with Wessex Archaeology's Guidelines for Environmental Sampling along and current guidance provided by Historic England (English Heritage 2011).

5 ARCHAEOLOGICAL RESULTS

5.1 Historic map evidence and documentary data

5.1.1 The HER records few prehistoric sites in the vicinity. The closest is the site of an urned Bronze Age cremation burial at Plas Penryhyn located almost 3 km to the east (HER3050).

5.1.2 The Desk-Based Assessment (Cooke et al. 2012) suggested that the extant field boundaries may have ancient origins.

5.2 Geophysical survey results

5.2.1 Geophysical survey (Hopewell 2011a-b; 2012) revealed sub-rectangular ditch feature interpreted as a possible prehistoric enclosure, as well as discreet pit like anomalies.

5.3 Evaluation results

5.3.1 Evaluation trial trenching took place in spring 2016 (Wessex Archaeology 2016). A total of 42 trenches were dug in Field A1. The trenches were 1.8 m wide and between 30 m and 50 m long.

5.3.2 The trenching proved that the suggested enclosure was several field boundary features. In addition, a deposit of burnt stone material indicative of at least one burnt mound was found. A trough associated with the burnt mound was exposed but not excavated.

5.4 Excavation results

5.4.1 The overlying topsoil comprised a layer of mid-brown sandy clay, occasionally loam, becoming darker and containing more silt on higher ground towards the south. The topsoil was between 0.1 m and 0.45 m thick. This sealed a further 0.08 m to 0.58 m thick layer of relict ploughsoil subsoil which varied from mid-orange brown sandy silt to dark brown silty clay. The natural geology was mid-orange brown sand clay.

5.4.2 The burnt mound recorded during the evaluation, was exposed and excavated (5009; PRN76013; **Fig. 1**). It was relatively small, measuring 5 m by 4.35 m and 0.1 m thick. An area of bioturbation had disturbed the south-east side of the mound. Two troughs (5043 and 5045) were located below the burnt mound material; they were filled with heat affected stones and charcoal from their final uses (**Fig. 1**). Another pit (5049; PRN76013), immediately south of the mound may be a cleaned out trough or fire pit. Four postholes (5047, 5041 5037 and 5039), to the east of the burnt mound may have formed a windbreak (**Fig. 1**).

5.4.3 There was no evidence for a water source for the heating process within the Site; the closest known water source is on the far side of the hill immediately south of the Site.

5.4.4 A shallow ditch (5057; PRN76014; **Plate 2**), ran south-east to north-west north of the burnt mound (**Fig. 1**). It does not correlate to a boundary on historic maps, and the shallow ephemeral nature suggests it has been heavily truncated by ploughing. Fragments of chert were recovered from the fill. Areas of bioturbation and discrete features (including 5004, 5006, 5010, 5014, 5016, 5012/5024 and features 1905, 71604,

72304 and 72306 recorded during the evaluation) may indicate a former hedgerow associated with ditch 5057. Some of the features listed in the previous sentence may be unrelated to the boundary defined by ditch 5057, and some may not be genuine features. Ditch 5057 may represent an ancient field boundary.

5.4.5 In the north of the Site was a mound of rocks interpreted as field clearance (5008; **Fig. 1**). The field clearance cairn does not correlate to a boundary on historic maps. It contained modern plastic and other debris.

5.5 Finds and dating evidence

5.5.1 A range of recent material types (eg CBM, pottery, animal bone) were recovered from field clearance cairn 5008. Other recovered artefacts comprise essentially unstratified material from the subsoil, and may include worked stone (flint/chert).

5.6 Environmental

5.6.1 A total five environmental samples comprising 14 ten litre buckets were collected from archaeological deposits at Area 5 for processing using a flotation method in order to identify potential botanical and faunal remains that may be present in the samples.

5.6.2 All features were sampled and there is potential for the recovery of environmental information from the ditch (5057). C14 dates may be obtained from the burnt mound features and ditch.

5.6.3 Overall, the rate of recovery of datable artefacts during excavation is notably poor in the region. As such, environmental samples are of high importance to provide data helping to establish a chronology and narrative. Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

5.7 Quantification of excavation data

Table 1 Quantification of excavation data

Data Category	Number
Contexts	52
Small finds	0
Bulk finds	1.795kg
Environmental samples	5 (140 litres)
Monochrome film	0
Digital photographs	254
Rectified photographs	0
GPS surveyed digital pre-excavation plans	✓
GPS surveyed digital excavation plans	✓
TST surveyed digital excavation plans	X
Hand drawn plans	3
Hand drawn sections	29

5.8 Recommendations for further work

5.8.1 All data categories should go to assessment and an assessment report should be produced for this site.

Table 2 Recommendations for further work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	All categories likely to warrant further analysis as part of overall project analysis
Publication of key data categories	All categories likely to warrant publication as part of overall project publication
Deposit archive	✓

6 DISCUSSION

6.1.1 The dating, characterisation and distribution of burnt mounds contributes to research aims on the wider setting of prehistoric sites and exploitation of the natural environment. Assessment should seek to determine if the burnt mound identified in Area 5 resembles other nearby examples and the significance of the apparent lack of a water source in Area 5. A C14 date from this mound would clarify whether this is the same age as other burnt mounds within the area.

6.1.2 The dating, characterisation and pattern of historic field systems is identified as a specific research aim in the WSI. A C14 date may be obtained from the ditch.

6.1.3 All data categories should go forward to assessment level and potentially form part of the overall analysis and publication of the Wylfa Newydd site.

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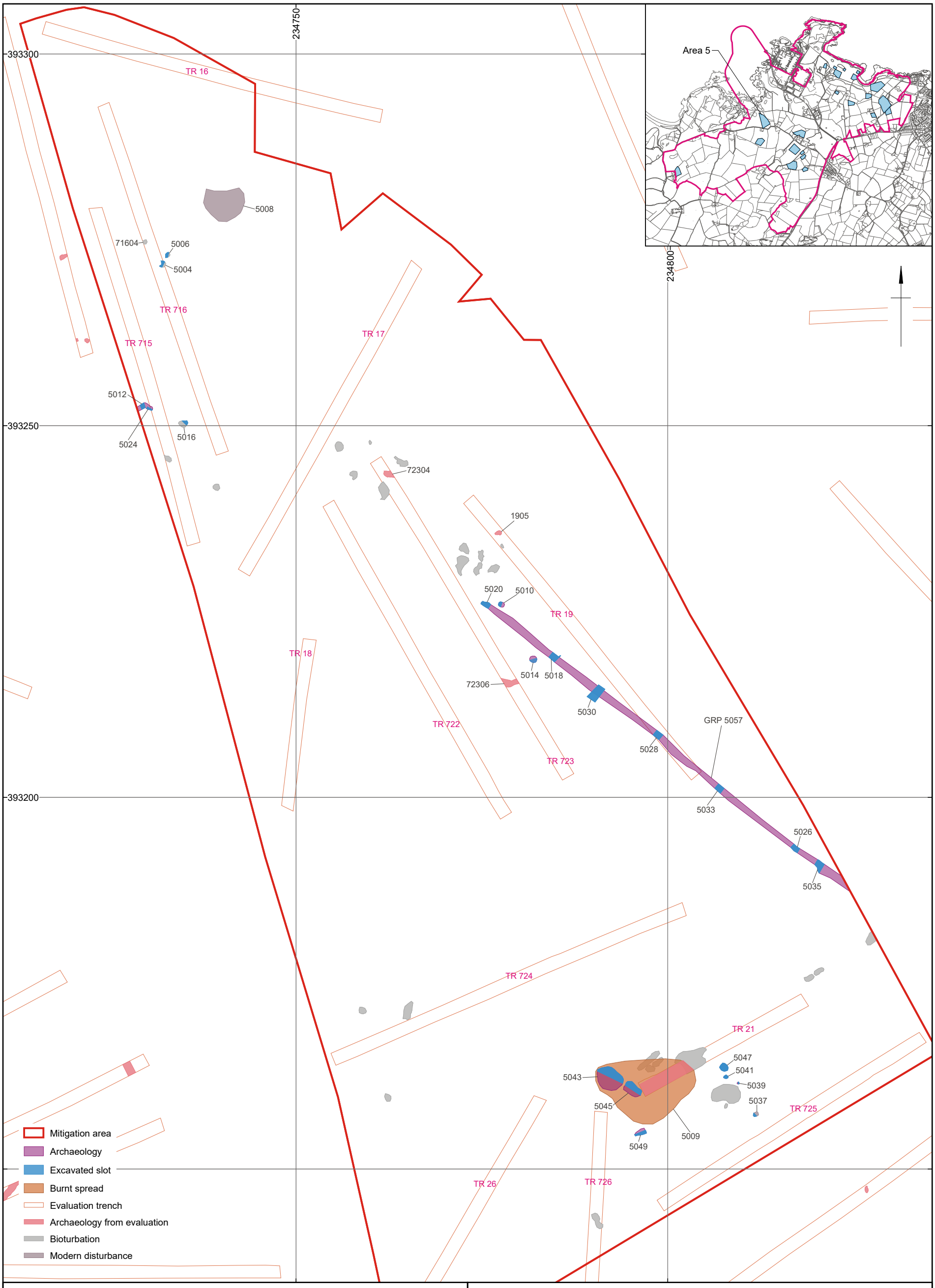
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Wylfa mitigation Area 5 plan

Figure 1



Plate 1: Burnt mound 5009 from the south-east



Plate 2: Section of shallow ditch 5057 from south-east

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1-32 Area 9-field F1

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Document Information

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Horizon Doc ref	WYN-WES-CON-REP-00010
Client name	Horizon Nuclear Power
Address	5210 Valiant Court Gloucester Business Park Delta Way Gloucester Gloucestershire GL3 4FE
Site location	Cemaes, Anglesey
County	Gwynedd
National grid reference	235594 393948
Statutory designations	None
Planning authority	Isle of Anglesey
Planning Inspectorate reference (DCO application)	EN010007
Museum name	Anglesey Archives (paper and digital), Oriel Ynys Môn (artefacts)
Museum accession code	35/2016
HER event number	PRN45392; PRN76015
WA project name	Wylfa remaining works 2018
WA project code	209730
Date of fieldwork	08/08/2017 to 25/08/2017 and 18/04/2018 to 24/04/2018
Fieldwork directed by	Pete Noble and Phil Weston
Project management by	Matthew Williams
Document compiled by	Phil Weston, Matthew Williams
Contributions from	Liz Chambers, Lorraine Mepham
Graphics by	Joanna Debska

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Summary

Wessex Archaeology was commissioned to carry out archaeological excavation and recording in Area 9 in Field F1 at the Wylfa Newydd site. All works were carried out in accordance with the Written Scheme of Investigation, Technical Update and Community Dig scope (Horizon Nuclear Power (HPN) 2017), as agreed with Gwynedd Archaeology Planning Service.

The Site was centred on NGR 235594 393948 with a total excavation area of 876 sq.m. The Site was generally flat although the area sloped down gently towards the Tre'Gof SSSI site to the south east. Excavation revealed evidence for structures, working areas and refuse pits. The remains have been interpreted as a Romano-British shellfish processing site.

Assessment is recommended for all data categories. The data from this Site should be considered in the analysis and publication of the whole Wylfa Newydd site.

Wylfa Area 9, Field F1

Site Summary Report

1 INTRODUCTION

1.1.1 Wessex Archaeology undertook archaeological excavation in Area 9 in the field known as F1 (**Fig. 1**, 'the Site').

1.1.2 The work was carried out in accordance with the 'Technical update to the Written Scheme of Investigation for archaeological trial trenching and excavation: Investigation areas near Wylfa Head. (Horizon Nuclear Power (HNP) 2016) and the original Written Scheme of Investigation produced for all trial trench evaluation and excavation (HNP 2015). These documents were produced in line with the overarching National Policy Statement for Energy (EN-1) (Department for Energy and Climate Change, 2011) and detailed the rationale, aims, methodologies, and standards to be employed during the work. All documents were agreed with Gwynedd Archaeology Planning Services (archaeological planning advisor to Isle of Anglesey Council) prior to work starting. This document has been produced in accordance with briefing and guidance from Wardell Armstrong LLP.

1.1.3 This excavation was one element in a large scheme of works associated with the proposed construction of a nuclear power station at Wylfa. This Site Summary Report (SSR) has been commissioned by HNP as a supporting document for the application for Development Consent Order (DCO) and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site.

1.1.4 Historic Environment Record event numbers ('PRNs') were assigned following discussion with Nina Steel, Senior Historic Environment Record Archaeologist at Gwynedd Archaeological Trust. PRN45392 has been assigned to the Wylfa Newydd project as a whole and further event numbers have also been assigned to 'noteworthy components' of the project. Within Area 9, PRN76015 has been assigned to Romano-British industrial activity.

2 BACKGROUND

2.1.1 The works were centred on 235594 393948 (**Fig 1**). The total area of excavation was 876 sq.m.

2.1.2 Area 9 is situated in a fairly level field at 24 m aOD. The local landscape landscape generally slopes down to the south and east towards the Tre'r Gof SSSI. The extant Wylfa Power Station lies immediately to the west and south-west.

2.1.3 The overlying soil is freely draining slightly acidic loam (Cranfield Soil and Agrifood Institute 2019). The superficial geology comprises Devensian till with an underlying bedrock of mica schist and psammite (BGS 2019).

2.1.4 Archaeological work carried out in association with the project prior to the excavation of Area 9 included:

- *desk based assessment (Cooke et al. 2012)*
- *geophysical surveys (ASWYAS 2015; Hopewell 2011a-b; Hopewell 2012) and*
- *trial trenching (Wessex Archaeology 2016).*

2.1.5 The results of the preceding phases of work are summarised below. No other significant archaeological investigation has taken place within the area prior to the excavation of Area 9.

3 AIMS AND OBJECTIVES

3.1 Specific aims

3.1.1 The specific aims of the work within this site, as described in the WSI (HNP 2015; 2016), were:

- *To establish the true nature and function of the various archaeological remains present, specifically to identify the presence of any domestic or industrial activity and the character of such.*
- *To establish the condition, age and stratigraphic sequence, of any archaeological /historical remain identified.*
- *Gain information on the past environment of the landscape surrounding Area 9 via the recovery, and study, of micro and macro fossils from the burial fills.*
- *To understand how the remains seen within Area 9 relate to remains identified across the landscape (chronologically, stratigraphically as well as spatially) and how they may relate to the known cemetery site.*

3.2 Research objectives

3.2.1 In addition, a series of research objectives for the excavation of Area 9 were defined in the technical update (HNP 2016) based on a review of relevant archaeological research framework documents.

4 METHODOLOGY

4.1.1 All work was undertaken in accordance with the detailed methodology set out in the WSI (HNP 2015) and technical update (HNP 2016) and in compliance with current standards and guidance, eg CIfA guidance (CIfA 2014a-c) and Historic England guidance (Historic England 2015).

4.1.2 All archaeological features were investigated and recorded as per standard procedure set out in the Wessex Archaeology fieldwork manual (Wessex Archaeology 2015).

4.1.3 Environmental sampling was undertaken in accordance with Wessex Archaeology's Guidelines for Environmental Sampling (Wessex Archaeology nd) along and current guidance provided by Historic England (English Heritage 2011).

5 ARCHAEOLOGICAL RESULTS

5.1 Historic map evidence and documentary data

5.1.1 The Desk Assessment and historic map regression (Cooke et al. 2012) did not suggest any specific archaeological potential other than background' agricultural remains (field boundary ditches etc). However, the area was known as Tre'r Gof ("township of the smith") and is documented from the 12th Century; it's thought to have been an early medieval township or hamlet although the precise location is now lost. It is also possible that the church of Llanbadrig (2 km to the east-north-east) is associated with this location.

5.2 Geophysical survey results

5.2.1 The geophysical survey did not indicate any archaeological potential.

5.3 Evaluation results

5.3.1 Evaluation trial trenching took place in spring 2016 (Wessex Archaeology 2016). 23 trenches were excavated in Field F1. The trenches were 1.8 m wide and between 30 m and 50 m long.

5.3.2 Little was found across the majority of the field, other than the remains of past field boundary ditches However, towards the south-east corner of the field a large number of significant features were noted including pits, postholes and a ditch containing shellfish processing waste including limpet and whelk shells. C14 dating from this deposit gave a date of 262 AD, placing the Site in the mid- to late Roman period. There was also evidence for a collapsed wattle and daub structure and various large boundary ditch, one of which was filled with industrial waste. The features were interpreted as the western edge of a settlement.

5.4 Excavation results

5.4.1 The natural geology comprised weathered, friable bedrock. This was overlain by mid-orange brown sandy silt subsoil with gravel and pebbles to a depth of 0.1 m. The topsoil was 0.30 m deep and comprised a mid-greyish brown, sandy clay loam with gravel and pebbles.

5.4.2 In the north of the Site, a structure (9199; PRN76015) comprised twelve irregularly-arranged postholes, two hearths and five pits, one of which contained a large stone (**Fig. 1**). The structure measured about 6.50 m across although it had no clear form. The hearths were not central to the structure.

5.4.3 To the west was evidence for another structure (9200; PRN76015; **Plate 1**), comprising a roughly circular sunken floor, 5.90 m across, with internal postholes, pits and a hearth (**Fig. 1**). The hearth had been re-cut at least once and a nearby pit appeared to be a rake-out pit for clearing the hearth. The hearth was slightly off-centre, and in the centre of the floor was a posthole. The other postholes may represent internal divisions. Several postholes lay west of the floor layer but were interpreted as part of the same structure or phase of activity.

5.4.4 To the south of the sunken structure was another sunken floor or surface (9286; PRN76015; **Fig. 1**). It was sub-rectangular measuring 8.60 m by 4.50 m. There were five postholes cut into the edge which suggest some kind of structure. In the centre of the floor were two intercutting pits; one with a degraded clay lining and another containing large

stones. Adjacent was a small deposit of burnt material. These features were crude compared to the sunken roundhouse and may represent an external working area.

5.4.5 In the southeast of the Site were a series of pits (group 9201; PRN76015) containing charcoal, animal bone and shellfish waste, predominantly limpets and whelks (**Fig. 1**). These are interpreted as refuse pits from the food processing activities taking place in the adjacent structures.

5.4.6 Remains of a modern (19th century) stone path were found across the north of the Site. This was associated with the now demolished house immediately north of the Site.

5.5 Finds and dating evidence

5.5.1 In summary the finds assemblage is of small size, in a restricted range of material types (pottery, animal bone, stone, metal). The pottery appears to be exclusively of Romano-British date and includes one sherd of decorated samian (probably 2nd century AD). The condition of the pottery is poor; sherds are small and heavily abraded. The animal bone too is poor and in fragmentary condition; it includes some identifiable cattle bone. The stone appears to be unworked. One of the metal objects (from the subsoil) is a modern screw-threaded fitting; other fragments are unidentifiable and are of unknown date and function.

5.5.2 C14 dating from the refuse pits during the evaluation returned a mid- to late Roman date (AD 262). This was supported by several sherds of Roman pottery, including some very abraded decorated Samian ware from the roundhouse (9200). A fragmented quern was also found within the sunken roundhouse (9200).

5.5.3 The roundhouse hearth was examined and not considered suitable for archaeomagnetic dating.

5.6 Environmental

5.6.1 A total of 46 environmental samples comprising 107 10 litre buckets were collected from archaeological deposits at Area 9 for processing using a flotation method in order to identify potential botanical and faunal remains that may be present in the samples.

5.6.2 All suitable deposits were bulk sampled. The burnt deposits from within the structures and the fills from the waste pits will provide valuable information on the type of industry taking place, diet, and environment.

5.6.3 Overall, the rate of recovery of datable artefacts during excavation is notably poor in the region. As such, environmental samples are of high importance to provide data helping to establish a chronology and narrative. Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

5.7 Quantification of excavation data

Table 1 Quantification of excavation data

Data Category	Number
Contexts	286
Small finds	0

Bulk finds	0.406kg Quern frags – 3.096kg
Environmental samples	46 (1070 litres)
Monochrome film	0
Digital photographs	672
Rectified photographs	0
GPS surveyed digital pre-excavation plans	✓
GPS surveyed digital excavation plans	✓
TST surveyed digital excavation plans	X
Hand drawn plans	40
Hand drawn sections	98

5.8 Recommendations for further work

5.8.1 All data categories should go to assessment and an assessment report should be produced for this site.

5.8.2 The Site is of high regional importance and may warrant individual publication. It will also probably form part of the overall Wylfa site publication.

Table 2 Recommendations for further work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	All categories likely to warrant further analysis as part of overall project analysis
Publication of key data categories	All categories likely to warrant publication as part of overall project publication
Deposit archive	✓

6 DISCUSSION

6.1.1 The excavation confirmed and expanded on the results of the trial trenching. The features recorded are interpreted as a single phase of mid- to late Romano British activity comprising two post-built roundhouses, a working area and a refuse area. The exact process taking place is unclear although it clearly involved preparing shellfish, presumably as a foodstuff. All data categories should go forward to assessment level and form part of the overall analysis and publication of the Wylfa Newydd site.

6.1.2 The results will contribute to our understanding of industry, technology and exploitation of the natural environment during the Romano-British period.

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235580

235600

393980

393960

393940

393920

Area 9

9199

9140

9200

9286

9201

Mitigation area

Archaeology

Excavated slot

Structure

0 5 m

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Wylfa mitigation Area 9 plan

Figure 1



Plate 1: Plan of structure 9200 from south-east



Plate 2: General overview from south-west

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1-33 Area 11-fields L1W

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Document Information

Document title	Wylfa Area 11, Field L1 west
Document subtitle	Site Summary Report
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Address	5210 Valiant Court Gloucester Business Park Delta Way Gloucester Gloucestershire GL3 4FE
Site location	Cemaes, Anglesey
County	Gwynedd
National grid reference	235720 393930
Statutory designations	None
Planning authority	Isle of Anglesey
Planning Inspectorate reference (DCO application)	EN010007
Museum name	Anglesey Archives (paper and digital), Oriel Ynys Môn (artefacts)
Museum accession code	35/2016
HER event number	PRN45392; PRN76016
WA project name	Wylfa remaining works 2018
WA project code	209730
Date of fieldwork	10/08/2017 – 16/08/2017
Fieldwork directed by	Pete Noble
Project management by	Matthew Williams
Document compiled by	Matthew Williams, Ashley Tuck
Contributions from	Liz Chambers, Lorraine Mepham
Graphics by	Joanna Debska

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Summary

Wessex Archaeology was commissioned to carry out archaeological excavation and recording in Area 11 in the west part of Field L1 at the Wylfa Newydd site. All works were carried out in accordance with the Written Scheme of Investigation and Technical Update, as agreed with Gwynedd Archaeology Planning Service.

The Site was centred on NGR 235720 393930 and covering 551 sq.m. The Site contained several irregular features containing burnt material, as well as two small stone surfaces and up to three postholes. These are interpreted as the remains of some temporary local activity.

Assessment is recommended for all data categories. The data from this site should be considered in the analysis and publication of the whole Wylfa Newydd site.

Wylfa Area 11, Field L1 west

Site Summary Report

1 INTRODUCTION

1.1.1 Wessex Archaeology undertook archaeological excavation in Area 11 in the field known as L1 or L1w (**Fig. 1**, 'the Site').

1.1.2 The work was carried out in accordance with the technical update for Field 1 (Horizon Nuclear Power (HNP) 2016), and the original Written Scheme of Investigation produced for all trial trench evaluation and excavation (HNP 2015). These documents were produced in line with the overarching National Policy Statement for Energy (EN-1) (Department for Energy and Climate Change, 2011) and detailed the rationale, aims, methodologies, and standards to be employed during the work. Both documents were agreed with Gwynedd Archaeology Planning Services (archaeological planning advisor to Isle of Anglesey Council) prior to work starting. This document has been produced in accordance with briefing and guidance from Wardell Armstrong LLP.

1.1.3 This excavation was one element in a large scheme of works associated with the proposed construction of a nuclear power station at Wylfa. This Site Summary Report (SSR) has been commissioned by HNP as a supporting document for the application for Development Consent Order (DCO) and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site.

1.1.4 Historic Environment Record event numbers ('PRNs') were assigned following discussion with Nina Steel, Senior Historic Environment Record Archaeologist at Gwynedd Archaeological Trust. PRN45392 has been assigned to the Wylfa Newydd project as a whole and further event numbers have also been assigned to 'noteworthy components' of the project. Within Area 1, PRN76016 has been assigned.

2 BACKGROUND

2.1.1 The works were centred on NGR 235720 393930 (**Fig. 1**). The area of the Site is 551 sq.m.

2.1.2 Area 11 lies on undulating ground at 20 m aOD. It is situated on the coast and small cliffs drop away to the immediate north into Cemaes Bay. The Tre'r Gof wetland, a Site of Special Scientific Interest (SSSI) lies immediately to the south of, and within the southern limit of, Field L1. The centre of the village of Cemaes is approximately 1 km to the south-east.

2.1.3 The overlying soil is freely draining slightly acidic loam (Cranfield Soil and Agrifood Institute 2019). The superficial geology comprises Devensian till with an underlying bedrock of mica schist and psammite (BGS 2019).

2.1.4 Archaeological work carried out in association with the project prior to the excavation of Area 11 included:

- *desk based assessment (Cooke et al. 2012)*

- *geophysical surveys (ASWYAS 2015; Hopewell 2011a-b; Hopewell 2012) and,*
- *trial trenching (Headland 2017).*

2.1.5 The results of the preceding phases of work are summarised below. No other significant archaeological investigation has taken place within the area prior to the excavation of Area 11.

3 AIMS AND OBJECTIVES

3.1 Specific aims

3.1.1 The specific aims of the work within this site, as described in the WSI (HNP 2015; 2016), were:

- *to establish the nature and function of the various archaeological remains present, specifically to identify the presence of any agricultural, domestic, industrial or ritual activity and the character of such;*
- *to establish the condition, age and stratigraphic sequence of any archaeological/historical remain identified;*
- *to gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills; and,*
- *to understand how the remains seen within each investigation area relate to each other across the landscape (chronologically, stratigraphically as well as spatially) and how they may relate to the known cemetery site.*

3.2 Research objectives

3.2.1 In addition, a series of research objectives for the excavation of Area 11 were defined in the technical update (HNP 2016) based on a review of relevant archaeological research framework documents.

4 METHODOLOGY

4.1.1 All work was undertaken in accordance with the detailed methodology set out in the WSI (HNP 2015) and technical update (HNP 2016) and in compliance with current standards and guidance, e.g. CIfA guidance (CIfA 2014a-c) and Historic England guidance (Historic England 2015).

4.1.2 All archaeological features were investigated and recorded as per standard procedure set out in the Wessex Archaeology fieldwork manual (Wessex Archaeology 2015).

4.1.3 Environmental sampling was undertaken in accordance with Wessex Archaeology's Guidelines for Environmental Sampling (Wessex Archaeology nd) along and current guidance provided by Historic England (English Heritage 2011).

5 ARCHAEOLOGICAL RESULTS

5.1 Historic map evidence and documentary data

5.1.1 The Desk Assessment and historic map regression (Cooke et al. 2012) did not suggest any specific archaeological potential other than background agricultural remains (field boundary ditches etc) and ancient field systems. However, the area was known as Tre'r Gof ('township of the smith') and is documented from the 12th Century; it is thought to have been an early medieval township or hamlet although the precise location is now lost. It is also possible that the church of Llanbadrig (2 km to the east-north-east) is associated with this location.

5.2 Geophysical survey results

5.2.1 Geophysical survey (ASWYAS 2015; Hopewell 2011a-b; 2012) did not identify any potential archaeological remains other than field boundaries.

5.3 Evaluation results

5.3.1 Evaluation trial trenching took place in 2016 (Headland 2017). A total of 84 trenches were excavated in Field L1, the trenches were 1.8 m wide and between 30 m and 50 m long.

5.3.2 Area 11 was targeted on a trench that contained two ditches and four pits. The fills contained charcoal, charred grain and crushed shells. A C14 date from a charred grain returned a date of AD 60, the very end of the Iron Age in this area.

5.4 Excavation results

5.4.1 The natural geology comprised mid-orange brown clay sand with frequent gravel and pebble inclusions. This was overlain by relict ploughsoil subsoil comprising mid-orange brown loam with frequent gravel and pebble inclusions 0.56 m thick. The topsoil was mid-grey brown silt clay with frequent gravel and pebbles 0.36 m thick.

5.4.2 The features identified during the evaluation are likely to have been elements of a series of three intercutting tree throws (11030, 11032 and 11034; **Fig. 1**). These tree throws appear to have been opportunistically exploited for some purpose (during the 1st century AD on the basis of the results of the evaluation). A further smaller tree throw (11026) was present west of the others but showed no signs of anthropogenic activity. Some of the fills of the main group of tree throws (11030, 11032 and 11034) contained charcoal, perhaps due to the burning of tree roots *in situ*.

5.4.3 An irregular feature (11006; **Fig. 1**; **Plate 1**) close to the main group of tree throws (11034 etc) had likely been formed by uprooting or some other similar non-anthropogenic process. However, the fill of 11006 (11007) was anthropogenic and comprised heat affected red-brown sand clay and stones with charcoal suggestive of *in situ* burning. Close to feature 11006 was a patch of heat affected clay (11028) partially overlying tree throw 11034. It is possible that feature 11006 had been used opportunistically as a hearth.

5.4.4 Two sub-circular pits (11024 and 11036; **Fig. 1**) were also situated close to feature 11006. The pits may represent large postholes and did not show evidence of burning.

5.4.5 To the south-east, a spread of black and grey sand silt with stones and charcoal (11017) was 3 m by 1 m in plan and 0.2 m deep. Spread 11017 is likely related to the burning of tree throws 11030, 11032 and 11034 and sealed an isolated small posthole (11018).

5.4.6 Stoney spread 11008 in the south-west and 11020 in the north-west (**Fig. 1**; **Plate 2**) may have been variations in the natural geology or may have been anthropogenic surfaces.

5.4.7 Variations in the natural geology were investigated (including 11004 and 11010). Natural features were also noted during the evaluation. A modern pipeline (11022) was located in the north-east of Area 11.

5.4.8 The features of Area 11 likely represent a single phase of short-term, opportunistic activity such as a temporary campsite or short-term industrial activity.

5.5 Finds and dating evidence

5.5.1 No finds were recovered from Area 11.

5.6 Environmental

5.6.1 A total of four environmental samples comprising four 10 litre buckets were collected from archaeological deposits at Area 11 for processing using a flotation method in order to identify potential botanical and faunal remains that may be present in the samples.

5.6.2 There is potential to shed light on the industrial activity taking place, and also environmental information. C14 may confirm the late Iron Age date acquired during the evaluation.

5.6.1 Overall, the rate of recovery of datable artefacts during excavation is notably poor in the region. As such, environmental samples are of high importance to provide data helping to establish a chronology and narrative. Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

5.7 Quantification of excavation data

Table 1 Quantification of excavation data

Data Category	Number
Contexts	33
Small finds	0
Bulk finds	0
Environmental samples	4 (40 litres)
Monochrome film	0
Digital photographs	43
Rectified photographs	0
GPS surveyed digital pre-excavation plans	✓
GPS surveyed digital excavation plans	✓
TST surveyed digital excavation plans	X
Hand drawn plans	0
Hand drawn sections	12

5.8 Recommendations for further work

5.8.1 All data categories should go to assessment and an assessment report should be produced for this site.

Table 2 Recommendations for further work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	All categories likely to warrant further analysis as part of overall project analysis
Publication of key data categories	All categories likely to warrant publication as part of overall project publication
Deposit archive	✓

6 DISCUSSION

6.1.1 All data categories should go forward to assessment level and form part of the overall analysis and publication of the Wylfa Newydd site. Environmental sampling and C14 dating from the deposits may inform on local industry and exploitation of the natural environment during the late Iron Age.

6.1.2 The information from the Site does not appear to relate to the nearby early medieval cemetery in Field F1.

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235680
235700
235720
235740
393940
393920
TR 2192
TR 2195
TR 2196
TR 2197
TR 2198
Area 11
11004
11020
11022
11026
11010
Inset
11036
11034
11028
11006
11024
11032
2196-007
2196-021
2196-009
2196-008
2196-005
11018
11030
2196-004
11008
11017
0
1 m
0
5 m
Mitigation area
Archaeology
Excavated slot
Disturbance
Evaluation trench
Archaeology from evaluation

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Wylfa mitigation Area 11 plan

Figure 1



Plate 1: Non-anthropogenic feature 11006 with anthropogenic burnt fills from south-south-west



Plate 2: Section of stoney spread 11020 from south-east

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1-34 Area 12-fields L1C

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Document Information

Document title	Wylfa Area 12, Field L1 central
Document subtitle	Site Summary Report
Wessex Doc reference	209730.012
HNP Doc reference	WYN-WES-CON-REP-00014
Client name	Horizon Nuclear Power
Address	5210 Valiant Court Gloucester Business Park Delta Way Gloucester Gloucestershire GL3 4FE
Site location	Cemaes, Anglesey
County	Gwynedd
National grid reference	235850 393900
Statutory designations	None
Planning authority	Isle of Anglesey
Planning Inspectorate reference (DCO application	EN010007
Museum name	Anglesey Archives (paper and digital), Oriel Ynys Môn (artefacts)
Museum accession code	35/2016
HER event number	PRN45392; PRN76017-18
WA project name	Wylfa remaining works 2018
WA project code	209730
Date of fieldwork	09/08/2017 – 31/08/2017
Fieldwork directed by	Pete Noble
Project management by	Matthew Williams
Document compiled by	Matthew Williams, Ashley Tuck
Contributions from	Liz Chambers, Lorraine Mepham
Graphics by	Joanna Debska

Quality Assurance

Issue and date	Status	Author	Approved by
1		MW	
2		VH	
3		AWT	
4		AWT	

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Summary

Wessex Archaeology was commissioned to carry out archaeological excavation and recording in Area 12 in the central part of Field L1 at the Wylfa Newydd site. All works were carried out in accordance with the Written Scheme of Investigation (Horizon Nuclear Power (HNP) 2015), and Technical Update (HNP 2017), as agreed with Gwynedd Archaeology Planning Service.

The Site was centred on NGR 235850 393900 and covering 335 sq.m. The Site contained a large stone lined pit containing cobbles and burnt material. A channel ran south-east from the pit beyond the limit of excavation. A circular ring ditch cut the pit and channel.

Assessment is recommended for all data categories. The data from this Site should be considered in the analysis and publication of the whole Wylfa Newydd site.

Wylfa Area 12, Field L1 central

Site Summary Report

1 INTRODUCTION

1.1.1 Wessex Archaeology undertook archaeological excavation in Area 12 in the field known as L1 or L1c (**Fig. 1**; 'the Site').

1.1.2 The work was carried out in accordance with the technical update for Field L1 (Horizon Nuclear Power (HNP) 2016), and the original Written Scheme of Investigation produced for all trial trench evaluation and excavation (HNP 2015). These documents were produced in line with the overarching National Policy Statement for Energy (EN-1) (Department for Energy and Climate Change, 2011) and detailed the rationale, aims, methodologies, and standards to be employed during the work. Both documents were agreed with Gwynedd Archaeology Planning Services (archaeological planning advisor to Isle of Anglesey Council) prior to work starting. This document has been produced in accordance with briefing and guidance from Wardell Armstrong LLP.

1.1.3 This excavation was one element in a large scheme of works associated with the proposed construction of a nuclear power station at Wylfa. This Site Summary Report (SSR) has been commissioned by HNP as a supporting document for the application for Development Consent Order (DCO) and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site.

1.1.4 Historic Environment Record event numbers ('PRNs') were assigned following discussion with Nina Steel, Senior Historic Environment Record Archaeologist at Gwynedd Archaeological Trust. PRN45392 has been assigned to the Wylfa Newydd project as a whole and further event numbers have also been assigned to 'noteworthy components' of the project. Within Area 12, PRN76017 has been assigned to the first phase of activity (pit and gully) and PRN76018 has been assigned to the second phase (penannular ditch).

2 BACKGROUND

2.1.1 The works were centred on NGR 235850 393900 (Figure 1). The areas of the Site is 335 sq.m.

2.1.2 Area 12 lies on undulating ground at 18 m aOD. It is situated on the coast and small cliffs drop away to the immediate north into Cemaes Bay. The Tre'r Gof wetland, a Site of Special Scientific Interest (SSSI) lies immediately to the south of, and within the southern limit of, Field L1. The centre of the village of Cemaes is approximately 1 km to the south-east.

2.1.3 The overlying soil is freely draining slightly acidic loam (Cranfield Soil and Agrifood Institute 2019). The superficial geology comprises Devensian till with an underlying bedrock of mica schist and psammite (BGS 2019).

2.1.4 Archaeological work carried out in association with the project prior to the excavation of Area 12 included:

- *desk based assessment (Cooke et al. 2012)*
- *geophysical surveys (Hopewell 2011a-b; Hopewell 2012) and,*
- *trial trenching (Headland 2017).*

2.1.5 The results of the preceding phases of work are summarised below. No other significant archaeological investigation has taken place within the area prior to the excavation of Area 12.

3 AIMS AND OBJECTIVES

3.1 Specific aims

3.1.1 The specific aims of the work within this site, as described in the WSI (Wessex Archaeology nd) were:

- *to establish the nature and function of the various archaeological remains present, specifically to identify the presence of any agricultural, domestic, industrial or ritual activity and the character of such;*
- *to establish the condition, age and stratigraphic sequence of any archaeological/historical remain identified;*
- *to gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills; and,*
- *to understand how the remains seen within each investigation area relate to each other across the landscape (chronologically, stratigraphically as well as spatially) and how they may relate to the known cemetery site.*

3.2 Research objectives

3.2.1 In addition, a series of research objectives for the excavation of Area 12 were defined in the technical update (HNP 2016) based on a review of relevant archaeological research framework documents.

4 METHODOLOGY

4.1.1 All work was undertaken in accordance with the detailed methodology set out in the WSI (HNP 2015) and technical update (HNP 2016) and in compliance with current standards and guidance, e.g. CIfA guidance (CIfA 2014a-c) and Historic England guidance (Historic England 2015).

4.1.2 All archaeological features were investigated and recorded as per standard procedure set out in the Wessex Archaeology fieldwork manual (Wessex Archaeology 2015).

4.1.3 Environmental sampling was undertaken in accordance with Wessex Archaeology's Guidelines for Environmental Sampling (Wessex Archaeology nd) along and current guidance provided by Historic England (English Heritage 2011).

5 ARCHAEOLOGICAL RESULTS

5.1 Historic map evidence and documentary data

5.1.1 The desk-based assessment and historic map regression (Cooke et al. 2012) did not suggest any specific archaeological potential other than background agricultural remains (field boundary ditches etc) and ancient field systems. However, the area was known as Tre'r Gof ("township of the smith") and is documented from the 12th Century; it is thought to have been an early medieval township or hamlet although the precise location is now lost. It is also possible that the church of Llanbadrig (2 km to the east-north-east) is associated with this location.

5.2 Geophysical survey results

5.2.1 Geophysical survey (Hopewell 2011a-b; 2012) did not identify any potential archaeological features.

5.3 Evaluation results

5.3.1 Evaluation trial trenching took place in 2016 (Headland 2017). A total of 84 trenches were excavated in Field L1, the trenches were 1.8 m wide and between 30 m and 50 m long.

5.3.2 Area 12 was targeted on two trenches (2236 and 2237) each containing a pit, one of which had a heat-transformed sand fill, although there was no indication of in-situ heating (Headland 2017).

5.4 Excavation results

5.4.1 The natural geology comprised mid-orange brown clay sand with frequent gravel and pebble inclusions. This was overlain by relict ploughsoil subsoil comprising mid-orange brown loam with frequent gravel and pebble inclusions 0.50 m thick. The topsoil was mid-grey brown silt clay with frequent gravel and pebbles 0.40 m thick.

5.4.2 A large pit (12038; PRN76017; **Fig. 1**; **Plates 1–2**) cut through a patch of heat affected clay indicating *in situ* burning within the pit. Pit 12038 was 1.13 m deep with a 0.2 m thick stone lining. The pit was filled with collapsed rubble and charcoal silt. The stone rubble may have been indicative of a former stone lining, or may have been disposed of into the pit.

5.4.3 Running south-east from pit 12038 was a 0.6 m deep gully (12027; PRN76017). Pit 12038 and gully 12027 are thought to be contemporary, although the relationship between the two features was removed by later penannular ditch 12004. Gully 12027 was filled with large stones that may once have formed a lining. No charcoal was noted in the fill of the gully, suggesting the flow in the gully was into the pit rather than out.

5.4.4 A small penannular ditch (12004; PRN76018), 5.50 m across with a break in the north (possibly a small entrance) cut the fills of both pit 12038 and gully 12027. No other features associated with the penannular ditch were observed. No finds or other dating evidence were recovered from the fills of penannular ditch 12004.

5.4.5 A modern ditch (12033) was also present to the south-west.

5.5 Finds and dating evidence

5.5.1 A tiny fragment of bone and two flint flakes were recovered, one from the subsoil and one from 12009, a fill of gully 12027. The finds are probably residual and overall the assemblage is not considered significant.

5.6 Environmental

5.6.1 A total of six environmental samples comprising 14 10 litre buckets were collected from archaeological deposits at Area 12 for processing using a flotation method in order to identify potential botanical and faunal remains that may be present in the samples.

5.6.2 The deposits were appropriately sampled and there is the potential for information on industrial activity and environmental information. C14 may establish the date of the pit and gully features.

5.6.3 Overall, the rate of recovery of datable artefacts during excavation is notably poor in the region. As such, environmental samples are of high importance to provide data helping to establish a chronology and narrative. Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing

5.7 Quantification of excavation data

Table 1 Quantification of excavation data

Data Category	Number
Contexts	50
Small finds	0
Bulk finds	0.520kg
Environmental samples	6 (140 litres)
Monochrome film	0
Digital photographs	67
Rectified photographs	0
GPS surveyed digital pre-excavation plans	✓
GPS surveyed digital excavation plans	✓
TST surveyed digital excavation plans	X
Hand drawn plans	1
Hand drawn sections	13

5.8 Recommendations for further work

5.8.1 All data categories should go to assessment and an assessment report should be produced for this site.

Table 2 Recommendations for further work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	All categories likely to warrant further analysis as

	part of overall project analysis
Publication of key data categories	All categories likely to warrant publication as part of overall project publication
Deposit archive	✓

6 DISCUSSION

6.1.1 The pit and gully are interesting features. Assessment and analysis of all data categories may lead to an enhanced interpretation of their function, which could potentially be industrial. The presence of the cemetery site a short distance to the south-west should be taken into account when interpreting these features.

6.1.2 Assessment and analysis should seek to establish the function and date of the second phase of activity (the penannular ditch). It is likely that the two phases of activity are associated in some way, perhaps with a related function but different form.

6.1.3 All data categories should go forward to assessment level and form part of the overall analysis and publication of the Wylfa Newydd site. Environmental sampling and C14 dating from the feature fills may inform on local industry and environmental conditions.

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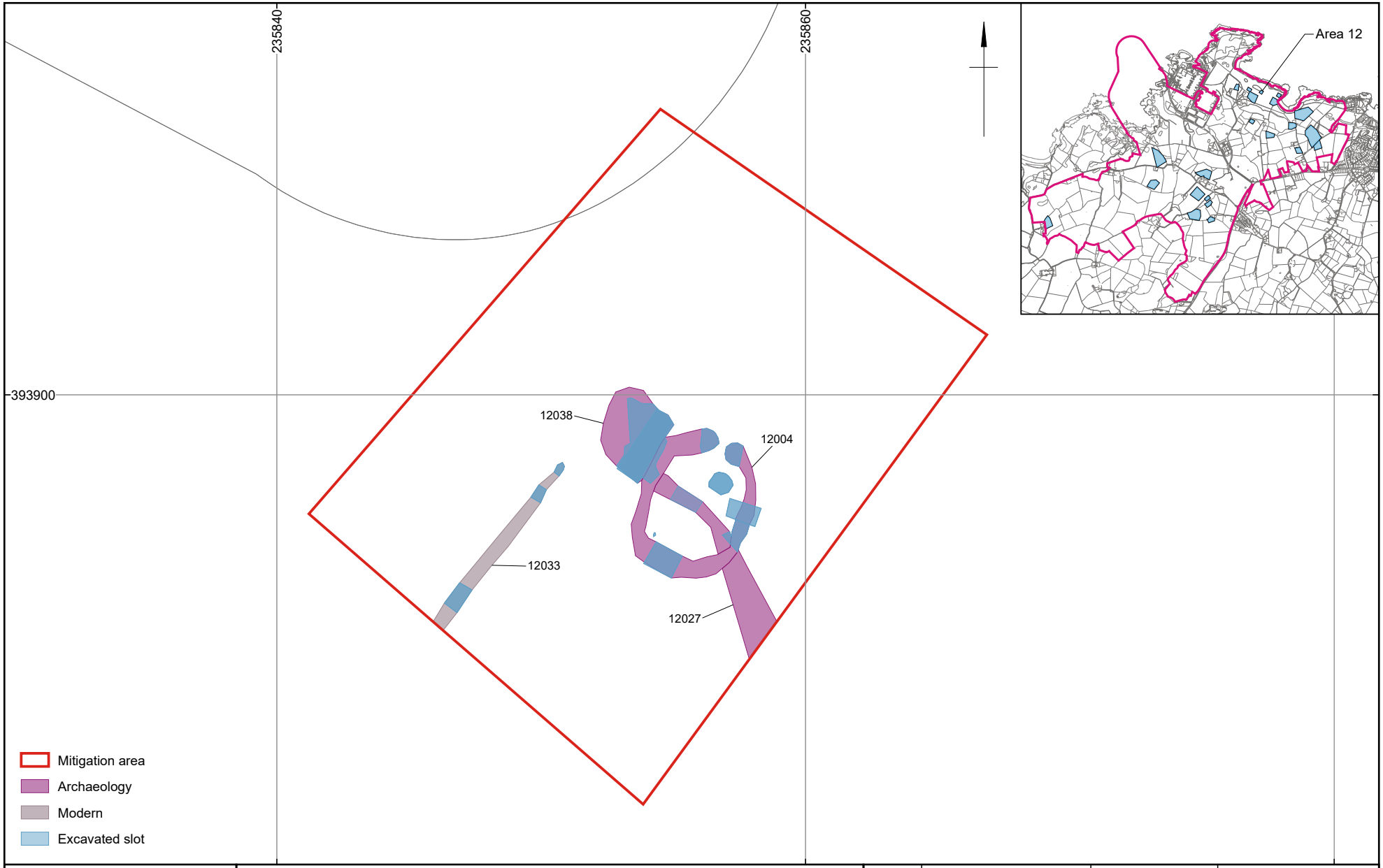
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Wylfa Mitigation, Area 12

Figure 1

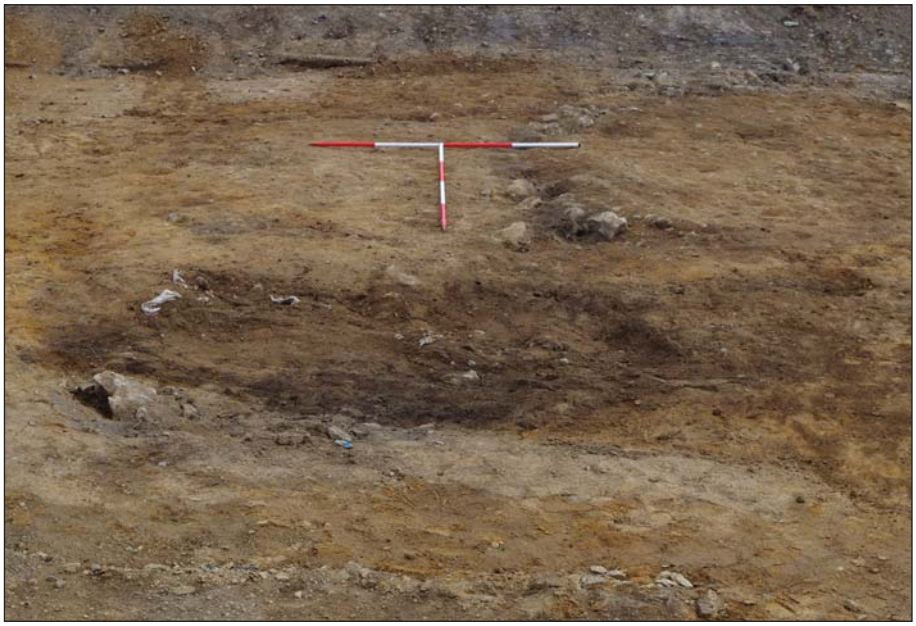


Plate 1: Pre-excavation shot of pit 12038 from north-west



Plate 2: Pit 12038 from north-west

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1-35 Area 13-fields L1E

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Document Information

Document title	Wylfa Area 13, Field L1 east
Document subtitle	Site Summary Report
Wessex Doc reference	209730.013
HNP Doc reference	WYN-WES-CON-REP-00011
Client name	Horizon Nuclear Power
Address	5210 Valiant Court Gloucester Business Park Delta Way Gloucester Gloucestershire GL3 4FE
Site location	Cemaes, Anglesey
County	Gwynedd
National grid reference	236040 393870
Statutory designations	None
Planning authority	Isle of Anglesey
Planning Inspectorate reference (DCO application	EN010007
Museum name	Anglesey Archives (paper and digital), Oriel Ynys Môn (artefacts)
Museum accession code	35/2016
HER event number	PRN45392; PRN76019
WA project name	Wylfa remaining works 2018
WA project code	209730
Date of fieldwork	10/08/2017
Fieldwork directed by	Pete Noble
Project management by	Matthew Williams
Document compiled by	Matthew Williams, Ashley Tuck
Contributions from	Liz Chambers, Lorraine Mepham
Graphics by	Joanna Debska

Quality Assurance

Issue and date	Status	Author	Approved by
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Summary

Wessex Archaeology was commissioned to carry out archaeological excavation and recording in Area 13 in the east part of Field L1 at the Wylfa Newydd site. All works were carried out in accordance with the Written Scheme of Investigation and Technical Update, as agreed with Gwynedd Archaeology Planning Service.

The Site was centred on NGR 236040 393870 and covering 369 sq.m. The Site contained a small deposit of burnt mound material within a crevice in a natural rock outcrop.

Assessment is recommended for all data categories. The data from this Site should be considered in the analysis and publication of the whole Wylfa Newydd site.

Wylfa Area 13, Field L1 east

Site Summary Report

1 INTRODUCTION

1.1.1 Wessex Archaeology undertook archaeological excavation in Area 13 in the east of the field known as L1 or L1e (**Fig. 1**; 'the Site').

1.1.2 The work was carried out in accordance with the technical update for Field L1 (Horizon Nuclear Power (HNP) 2016), and the original Written Scheme of Investigation produced for all trial trench evaluation and excavation (HNP 2015). These documents were produced in line with the overarching National Policy Statement for Energy (EN-1) (Department for Energy and Climate Change, 2011) and detailed the rationale, aims, methodologies, and standards to be employed during the work. Both documents were agreed with Gwynedd Archaeology Planning Services (archaeological planning advisor to Isle of Anglesey Council) prior to work starting. This document has been produced in accordance with briefing and guidance from Wardell Armstrong LLP.

1.1.3 This excavation was one element in a large scheme of works associated with the proposed construction of a nuclear power station at Wylfa. This Site Summary Report (SSR) has been commissioned by HNP as a supporting document for the application for Development Consent Order (DCO) and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site.

1.1.4 Historic Environment Record event numbers ('PRNs') were assigned following discussion with Nina Steel, Senior Historic Environment Record Archaeologist at Gwynedd Archaeological Trust. PRN45392 has been assigned to the Wylfa Newydd project as a whole and further event numbers have also been assigned to 'noteworthy components' of the project. Within Area 13, PRN76019 has been assigned to the crevice containing burnt-mound style material.

2 BACKGROUND

2.1.1 The works were centred on NGR 236040 393870 (**Fig. 1**). The area of the Site is 369 sq.m.

2.1.2 Area 13 lies in a rocky outcrop at 15 m aOD. It is situated on the coast and small cliffs drop away to the immediate north into Cemaes Bay. The Tre'r Gof wetland, a Site of Special Scientific Interest (SSSI) lies immediately to the south of, and within the southern limit of, Field L1. The centre of the village of Cemaes is approximately 1 km to the south-east.

2.1.3 The overlying soil is freely draining slightly acidic loam (Cranfield Soil and Agrifood Institute 2019). The superficial geology comprises Devensian till with an underlying bedrock of mica schist and psammite (BGS 2019).

2.1.4 Archaeological work carried out in association with the project prior to the excavation of Area 13 included:

- *desk based assessment (Cooke et al. 2012)*
- *geophysical surveys (Hopewell 2011a-b; Hopewell 2012) and*
- *trial trenching (Headland 2017).*

2.1.5 The results of the preceding phases of work are summarised below. No other significant archaeological investigation has taken place within the area prior to the excavation of Area 13.

3 AIMS AND OBJECTIVES

3.1 Specific aims

3.1.1 The specific aims of the work within this site, as described in the WSI (HNP 2015; 2016), were:

- *to establish the nature and function of the various archaeological remains present, specifically to identify the presence of any agricultural, domestic, industrial or ritual activity and the character of such;*
- *to establish the condition, age and stratigraphic sequence of any archaeological/historical remain identified;*
- *to gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills; and,*
- *to understand how the remains seen within each investigation area relate to each other across the landscape (chronologically, stratigraphically as well as spatially) and how they may relate to the known cemetery site.*

3.2 Research objectives

3.3 In addition, a series of research objectives for the excavation of Area 13 were defined in the technical update (HNP 2016) based on a review of relevant archaeological research framework documents.

4 METHODOLOGY

4.1.1 All work was undertaken in accordance with the detailed methodology set out in the WSI (HNP 2015) and technical update (HNP 2016) and in compliance with current standards and guidance, e.g. CIfA guidance (CIfA 2014a-c) and Historic England guidance (Historic England 2015).

4.1.2 All archaeological features were investigated and recorded as per standard procedure set out in the Wessex Archaeology fieldwork manual (Wessex Archaeology 2015).

4.1.3 Environmental sampling was undertaken in accordance with Wessex Archaeology's Guidelines for Environmental Sampling (Wessex Archaeology nd) along and current guidance provided by Historic England (English Heritage 2011).

5 ARCHAEOLOGICAL RESULTS

5.1 Historic map evidence and documentary data

5.1.1 The Desk Assessment and historic map regression (Cooke et al. 2012) did not suggest any specific archaeological potential other than background agricultural remains (field boundary ditches etc) and ancient field systems. However, the area was known as Tre'r Gof ("township of the smith") and is documented from the 12th Century; it's thought to have been an early medieval township or hamlet although the precise location is now lost. It is also possible that the church of Llanbadrig (2 km to the east-north-east) is associated with this location.

5.2 Geophysical survey results

5.2.1 Geophysical survey (Hopewell 2011a-b; 2012) did not identify any potential archaeological features other than field boundaries.

5.3 Evaluation results

5.3.1 Evaluation trial trenching took place in 2016 (Headland 2017). A total of 84 trenches were excavated in Field L1, the trenches were 1.8 m wide and between 30 m and 50 m long.

5.3.2 Area 13 was targeted on a trench (TR2282) that contained burnt mound material (Headland 2017). A C14 date from the evaluation work returned a date of 1700 BC.

5.4 Excavation results

5.4.1 The natural geology comprised yellow-grey sand clay with gravel and pebble inclusions, and bedrock outcropped in several places. This was overlain by relict ploughsoil subsoil comprising mid-orange brown loam with frequent gravel and pebble inclusions up to 0.42 m thick. The topsoil was mid-grey brown silt clay with frequent gravel and pebbles 0.24 m thick.

5.4.2 Within a rock outcrop was a natural crevice measuring 3.50 m long by 1.45 m wide (13006/13008; PRN76019; **Fig. 1**; **Plate 1**). It was filled with dark brown or black loamy sand with charcoal and sub-angular stones, of which some showed signs of having been heated. A second crevice to the north-east (13004; **Plate 2**) also contained stony material, although it did not appear to be heat affected. These deposits are interpreted as heated ('used') stones and a reserve of stones to be used for the water heating process.

5.5 Finds and dating evidence

5.5.1 A whetstone and fragmented grinding stone was recovered from the burnt material.

5.6 Environmental

5.6.1 A total of three environmental samples comprising 12 ten litre buckets were collected from archaeological deposits at Area 13 for processing using a flotation method in order to identify potential botanical and faunal remains that may be present in the samples.

5.6.2 A bulk sample of the burnt mound material was taken. This could provide a C14 date to confirm the age of the deposit.

5.6.3 Overall, the rate of recovery of datable artefacts during excavation is notably poor in the region. As such, environmental samples are of high importance to provide data helping to establish a chronology and narrative. Because of this, as it is possible that charred plant

remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

5.7 Quantification of excavation data

Table 1 Quantification of excavation data

Data Category	Number
Contexts	13
Small finds	0
Bulk finds	5.190kg
Environmental samples	3 (120 litres)
Monochrome film	0
Digital photographs	36
Rectified photographs	0
GPS surveyed digital pre-excavation plans	✓
GPS surveyed digital excavation plans	✓
TST surveyed digital excavation plans	X
Hand drawn plans	0
Hand drawn sections	3

5.8 Recommendations for further work

5.8.1 All data categories should go to assessment and an assessment report should be produced for this site.

Table 2 Recommendations for further work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	All categories likely to warrant further analysis as part of overall project analysis
Publication of key data categories	All categories likely to warrant publication as part of overall project publication
Deposit archive	✓

6 DISCUSSION

6.1.1 The results indicate a typical prehistoric water heating process taking place in the vicinity although there was no evidence for a water source or trough; it may be that the crevice was used instead of a trough.

6.1.2 All data categories should go forward to assessment level and form part of the overall analysis and publication of the Wylfa Newydd site. These use of a natural crevice for a heating process analogous to a burnt mount or some other function provides valuable information on prehistoric technologies and exploitation of the environment.

6.1.3 The information from the Site does not appear to relate to the early medieval cemetery in Field L1.

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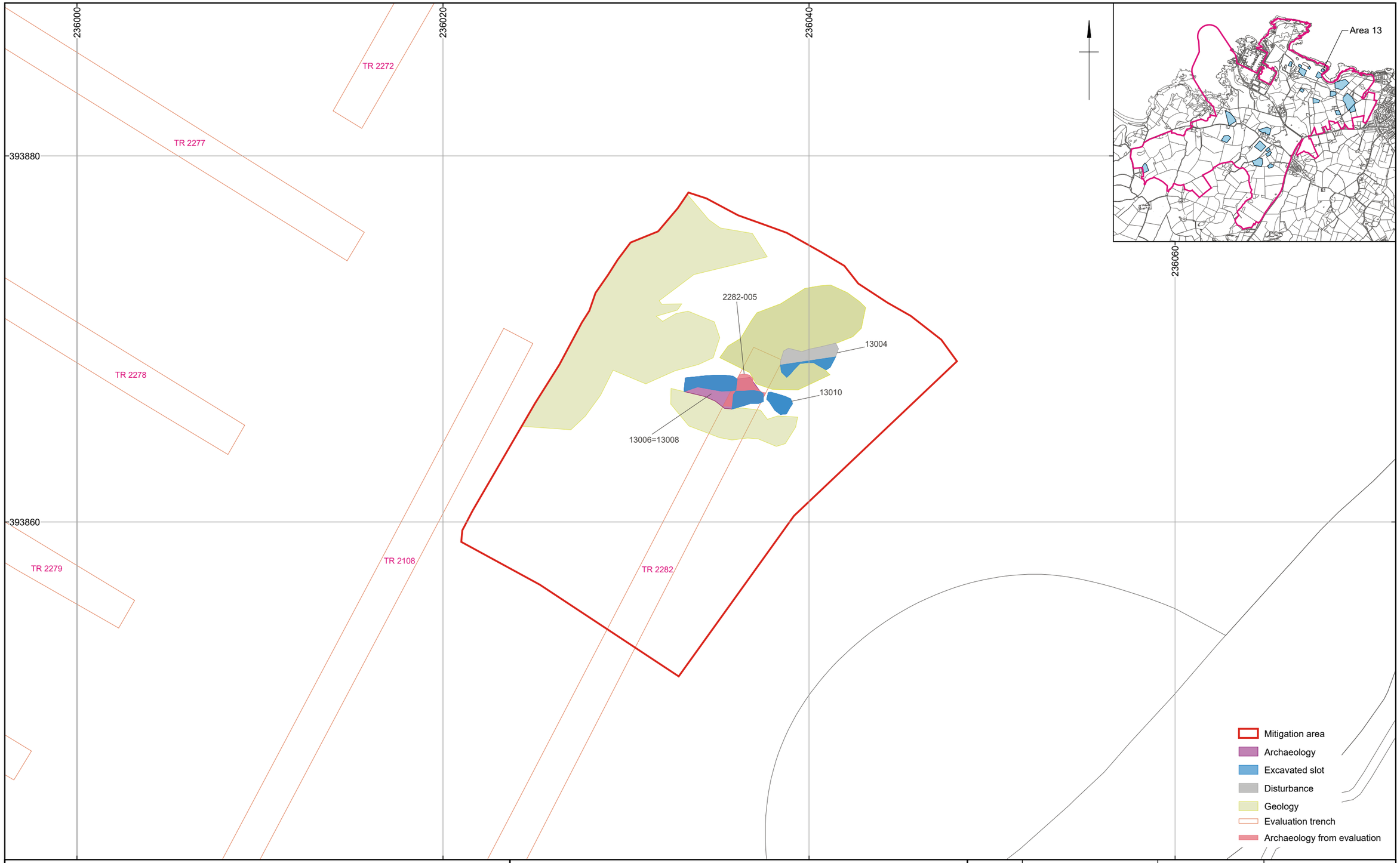
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Wylfa mitigation Area 13 plan

Figure 1



Plate 1: Natural crevice 13006 containing burnt mound material from south



Plate 2: Natural crevice 13004 containing stoney material from north

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1-36 Area 14-fields L1L20

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Document Information

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HNP Doc reference	WYN-WES-CON-REP-00015
Client name	Horizon Nuclear Power
Address	5210 Valiant Court Gloucester Business Park Delta Way Gloucester Gloucestershire GL3 4FE
Site location	Cemaes, Anglesey
County	Gwynedd
National grid reference	236000 393800
Statutory designations	None
Planning authority	Isle of Anglesey
Planning Inspectorate reference (DCO application)	EN010007
Museum name	Anglesey Archives (paper and digital), Oriel Ynys Môn (artefacts)
Museum accession code	35/2016
HER event number	PRN45392; PRN76020
WA project name	Wylfa remaining works 2018
WA project code	209730
Date of fieldwork	26/06/2017 to 01/09/2017
Fieldwork directed by	Pete Noble
Project management by	Matthew Williams
Document compiled by	Matthew Williams, Ashley Tuck
Contributions from	Liz Chambers
Graphics by	Joanna Debska

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Summary

Wessex Archaeology was commissioned to carry out archaeological excavation and recording in Area 14 in fields L1 and L20 in advance of an application to construct a nuclear power station at the Wylfa Newydd site. All works were carried out in accordance with the Written Scheme of Investigation (Horizon Nuclear Power 2015) and Technical Update (Horizon Nuclear Power 2016) and monitored by Gwynedd Archaeology Planning Service (GAPS).

The site was centred on NGR 236000 393800 and comprised three areas, excavated across two fields; two areas in Field L1 and one area in Field L20, with a total combined excavation area of 1,793 sq.m. The site contained a well-constructed floor surface into which a structure was set, evidenced by the remains of stake-holes and postholes. The structure may have comprised a light structure or windbreak. Prehistoric flint working debitage was scattered on the surface of the constructed floor. Results from a previously excavated evaluation trench (Headland 2017) include an Early Bronze Age radiocarbon date of 3851 BP ±30.

In addition, three undated pits associated with burning were identified in eastern part of area L1, the pits were dissimilar and may represent up to three different activities. Two further burnt pits were identified in the east of area L20. Area L20 pits were undated (**Fig. 1**).

A post-medieval trackway was identified within area L1. The trackway was likely associated with an enclosure system evidenced by boundary ditches which were present across the entire excavation area.

Assessment is recommended for all data categories. The data from this site should be considered in the analysis and publication of the whole Wylfa Newydd site.

Wylfa Area 14, Fields L1/L20

Site Summary Report

1 INTRODUCTION

1.1.1 Wessex Archaeology undertook archaeological excavation in Area 14 in the east of the field known as L1 and the west of field L20 (**Fig. 1**; 'the Site').

1.1.2 The work was carried out in accordance with the Technical Update for Wylfa Head (Horizon Nuclear Power 2016), and the original Written Scheme of Investigation produced for all trial trench evaluation and excavation (Horizon Nuclear Power 2015). These documents were produced in line with the overarching National Policy Statement for Energy (EN-1) (Department for Energy and Climate Change, 2011) and detailed the rationale, aims, methodologies, and standards to be employed during the work. Both documents were agreed with Gwynedd Archaeology Planning Services (archaeological planning advisor to Isle of Anglesey Council) prior to work starting. This document has been produced in accordance with briefing and guidance from Wardell Armstrong LLP.

1.1.3 This excavation was one element in a large scheme of works associated with the proposed construction of a nuclear power station at Wylfa. This Site Summary Report (SSR) has been commissioned by Horizon Nuclear Power (HNP) as a supporting document for the application for Development Consent Order (DCO) and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site.

1.1.4 Historic Environment Record event numbers ('PRNs') were assigned following discussion with Nina Steel, Senior Historic Environment Record Archaeologist at Gwynedd Archaeological Trust. PRN45392 has been assigned to the Wylfa Newydd project as a whole and further event numbers have also been assigned to 'noteworthy components' of the project. Within Area 14, PRN76020 has been assigned to the prehistoric surface, flint scatter and associated features.

2 BACKGROUND

2.1.1 The works were centred on NGR 236000 393800 (**Fig. 1**). The Site comprised three areas, the northern area in L1 measured 1220 sq.m, the southern area in L1 measured 140 sq.m. and the area in L20 was 433 sq.m. The total area subject to archaeological investigation was 1793 sq.m.

2.1.2 Area 14 was located on the coast at a height of roughly 10 m above Ordnance Datum (aOD). Low rocky cliffs drop away to the immediate north into Cemaes Bay. The Tre'r Gof wetland, a Site of Special Scientific Interest (SSSI) lay immediately to the south, and within the southern limit, of field L1. The centre of the village of Cemaes is approximately 1 km to the south-east.

2.1.3 The overlying soil is freely draining slightly acidic loam (Cranfield Soil and Agrifood Institute 2019). The superficial geology comprises Devensian till with an underlying bedrock of mica schist and psammite (BGS 2019).

2.1.4 Archaeological work carried out in association with the project prior to the excavation of Area 14 included:

- *desk based assessment (Cooke et al. 2012)*
- *geophysical surveys (Hopewell 2011a-b; Hopewell 2012); and,*
- *trial trenching (Headland 2017).*

2.1.5 The results of the preceding phases of work are summarised below. No other significant archaeological investigation has taken place within the area prior to the excavation of Area 14.

3 AIMS AND OBJECTIVES

3.1 Specific aims

3.1.1 The specific aims of the work within this site, as described in the WSI (HNP 2015, 2016), were:

- *to establish the nature and function of the various archaeological remains present, specifically to identify the presence of any agricultural, domestic, industrial or ritual activity and the character of such;*
- *to establish the condition, age and stratigraphic sequence of any archaeological/historical remain identified;*
- *to gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills; and,*
- *to understand how the remains seen within each investigation area relate to each other across the landscape (chronologically, stratigraphically as well as spatially) and how they may relate to the known cemetery site.*

3.2 Research objectives

3.2.1 In addition, a series of research objectives for the excavation of Area 2 were defined in the technical update (HNP 2016) based on a review of relevant archaeological research framework documents.

4 METHODOLOGY

4.1.1 All work was undertaken in accordance with the detailed methodology set out in the WSI (HNP 2015) and technical update (HNP 2016) and in compliance with current standards and guidance, e.g. CIfA guidance (CIfA 2014a-c) and Historic England guidance (Historic England 2015).

4.1.2 All archaeological features were investigated and recorded as per standard procedure set out in the Wessex Archaeology fieldwork manual (Wessex Archaeology 2015).

4.1.3 Environmental sampling was undertaken in accordance with Wessex Archaeology's Guidelines for Environmental Sampling (Wessex Archaeology nd) along and current guidance provided by Historic England (English Heritage 2011).

5 ARCHAEOLOGICAL RESULTS

5.1 Historic map evidence and documentary data

5.1.1 The Desk Based Assessment and historic map regression (Cooke et al. 2012) did not suggest any specific archaeological potential other than background agricultural remains (field boundary ditches etc) and ancient field systems. However, the area was known as Tre'r Gof ('township of the smith') and is documented from the 12th Century. Tre'r Gof is thought to have been an early medieval township or hamlet although the precise location is now lost. It is also possible that the church of Llanbadrig (2 km to the east-north-east) is associated with this location (ibid.).

5.2 Geophysical Survey Results

5.2.1 Geophysical survey (Hopewell 2011a-b and 2012) did not identify any potential archaeological features other than the buried remains of former field boundaries.

5.3 Evaluation Results

5.3.1 Evaluation trial trenching took place in 2016 (Headland 2017). A total of 84 trenches were excavated in Field L1 and each measured 1.8 m wide and between 30 m and 50 m long.

5.3.2 Area 14 was targeted on an area of ditches and pits revealed by the evaluation. A group of stakeholes and two postholes were identified beneath a charcoal-rich silt clay layer in Trench 2287. A fragment of charcoal from this deposit was radiocarbon dated to 3851+/-30 BP, indicating that the material was deposited in the Early Bronze Age. Lithic artefacts were recovered from the postholes (Headland 2017).

5.4 Excavation Results

General stratigraphy

5.4.1 The natural geology comprised yellow-grey sand clay with gravel, this was overlain by relict ploughsoil subsoil comprising mid-orangish brown loam with frequent gravel and pebble inclusions up to 0.50 m thick. The topsoil was mid-greyish brown silt clay with frequent gravel and pebbles 0.30 m thick.

Early Bronze Age surface (PRN76020)

5.4.2 The surface previously identified during the evaluation (Headland 2017) was examined over a wider area. The surface (group 14188) was made up of five distinct compact deposits (14141, 14168, 14169, 14170 and 14175) forming a large irregular oval 11.5 m long and 2.8 m wide in the north-east of Area 14 (**Fig. 1**; **Plate 2**). It is possible that the five layers indicate multi-phase development of the surface. However, it is thought that the five layers instead represent a variety of different sources for the material used during a single phase of construction. The upper layer over the greater part of the surface (14141) was a maximum of 0.09 m deep and comprised brown clay with stones, charcoal (10% of the deposit) and a significant scatter of flint debitage. The debitage and charcoal were likely deposited during use of the surface. In this respect deposit 14141 resembles an occupation layer, however it is thought that the deposit was initially laid down as an intentionally constructed surface.

5.4.3 Prior to construction of surface 14188, the ground had been prepared by excavation of an irregular broad shallow cut up to 0.3 m deep (14178). Below the deposits making up the surface, cut 14178 contained a primary fill of light grey orange silt sand (14179). Flint debitage pre-dating surface 14188 was recovered from fill 14179.

Structural remains associated with surface 14188 (PRN76020)

5.4.4 The compact surface (14188) was likely lain in advance of construction of a light structure evidenced by thirteen stake holes (14153–14159, 14160, 14164 and two that were recorded during the evaluation but were not identified during this work) and ten postholes (14104, 14142, 14148, 14150, 14152, 14161, 14162, 14171, 14176 and 14184) (PRN76020) (**Fig. 1**), of which three were securely observed to cut the underlying surface material. Three of the postholes and all of the stakeholes had previously been recorded during the evaluation (Headland 2017). As only a small number of stakeholes and postholes survive, the function and form of the structure is uncertain, but may be indicative of a windbreak which encircled part of surface 14188.

Pits associated with burning (PRN 76020)

5.4.5 Three separate pits (14166, 14181 and 14137 re-cut as 14126; **Fig. 1**; **Plate 1**) were situated close to surface 14188. The three pits each had morphological differences but were similar in that they contained burnt stone. Two of the pits (14166 and 14137/14126) exhibited evidence of *in situ* burning. The three features may indicate up to three separate activities, perhaps campfires, cooking hearths or incipient burnt mound activity.

5.4.6 Two further pits (14001 and 14012; **Fig. 1**) associated with burning were identified in field L20 at some distance from the prehistoric remains. These pits were situated immediately adjacent to a small bay and may be associated with martime resource exploitation or leisure activity. Pits 14001 and 14012 may be of any date. Pit 14001 was likely used for the disposal of burnt waste. Pit 14012 was not situated close to pit 14001; the fills of pit 14012 probably represents *in situ* burning.

Post-medieval enclosure system and trackway

5.4.7 Imposed on the earlier remains and extending across all parts of Area 14 was an enclosure system (ditches 14014, 14006/14016 14108, 14114/14124 and 14120/14139) (**Fig. 1**). The enclosure system was accompanied by a trackway comprising two parallel ditches (14186 and 14187; **Fig. 1**; **Plate 2**). No surface was identified associated with the trackway. The ditches forming the enclosure system and trackway were morphologically uniform and had similar fills (eg mid- to dark grey brown loam). Some of the ditches were parallel (**Fig. 1**). It is thought that these features belong to a single phase of activity, and are probably post-medieval. Identification of the enclosure system and trackway with a post-medieval date relies on two sherds of pottery (outlined below) and an iron horseshoe recovered during the evaluation (Headland 2017).

5.5 Finds and dating evidence

5.5.1 A total of 5.60 kg of bulk finds and 0.28 kg of small finds were recovered from the excavation of archaeological deposits at Area 14.

5.5.2 A significant assemblage of flint debitage (waste flakes from making flint tools) was recovered from surface 14188. Where appropriate, each fragment was assigned a small find number and recorded on a hand plan tied in to the OS grid by Leica RTK GNSS with an accuracy of ±0.1 m. Worked chert, flint debitage, tools and a core were also recovered from other deposits and features associated with the floor. Stone was recovered as artefacts from the following features, but at this preliminary stage it is not clear which contexts contain worked stone: root disturbance 14005, burnt pit 14126, post-medieval ditches 14128 and 14131, surface layers 14141 and 14169, posthole 14171 and the primary fill of construction cut 14178 pre-dating surface 14188.

5.5.3 Post-medieval pottery was recovered from fill 14146 of ditch 14147. Pottery including possible prehistoric sherds was recovered from root disturbance 14005.

5.6 Environmental

5.6.1 A total of 16 environmental samples comprising 45 10 litre buckets were collected from archaeological deposits at Area 1 for processing using a flotation method in order to identify potential botanical and faunal remains that may be present in the samples.

5.6.2 The deposits were appropriately sampled and there is the potential for information on industrial activity and environmental information. Radiocarbon dating on recovered environmental material may confirm the chronology of the features and deposits. .

5.6.3 Datable artefacts were recovered during the excavation of archaeological remains in Area 14, These artefacts indicate the archaeological activity on this site dated to the Neolithic/Early Bronze Age period. Despite this recovery at the Wylfa Newydd site, the rate of recovery of datable artefacts during excavation is notably poor in the region. As such, environmental samples are of high importance to provide data helping to establish a chronology and narrative. Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

5.7 Quantification of excavation data

Table 1 Quantification of excavation data

Data Category	Number
Contexts	101
Small finds	0.275kg
Bulk finds	5.597kg
Environmental samples	16 (450 litres)
Monochrome film	None
Digital photographs	131
Rectified photographs	0
GPS surveyed digital pre-excavation plans	✓
GPS surveyed digital excavation plans	✓
TST surveyed digital excavation plans	X
Hand drawn plans	5
Hand drawn sections	40

5.8 Recommendations for further work

5.8.1 All data categories should go to assessment and an assessment report should be produced for this site.

Table 2 Recommendations for further work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	All categories likely to

	warrant further analysis as part of overall project analysis
Publication of key data categories	All categories likely to warrant publication as part of overall project publication
Deposit archive	✓

6 DISCUSSION

6.1.1 Area 14 was targeted for excavation because of archaeological potential revealed by evaluation trial trenching (Headland 2017). This evaluation identified the existence of the remains of a potential surface in Trench 2287 which was radiocarbon dated to the Early Bronze Age. Features including postholes were identified underlying this surface, suggestive of structural remains.

6.1.2 During the excavation of Area 14, this surface was further investigated and seen to comprise a series of partially overlapping deposits suggesting a phased development of the surface. Further to this, the postholes and other features were identified to be cut through the later surface instead of being sealed by it. These structural remains appeared to represent a light structure or structures, potentially windbreak(s). Scattered flint debitage of prehistoric appearance overlay the floor surface including in the area within the potential footprint of the structure.

6.1.3 The potential floor surface and associated flint scatter are considered of high regional importance. Remains of this date are rare and this site will produce valuable information on prehistoric industry and environment. The chronology of the remains should become more secure during the assessment stage.

6.1.4 The location of the site in proximity to the coast, may be significant and will require examination in relation to not only previously known archaeological sites, but also the recently uncovered archaeological remains within the wider Wylfa landscape.

6.1.5 Special regard should be considered in the potential of the environmental samples. These may potentially enhance interpretation and clarify the relationships of the features identified in Area 14. This assessment as part of the examination of the whole archaeological assemblage would enable the review of whether the research aims and objectives described within the WSI (HNP 2015, 2016) have been met. A formal programme of assessment of the archaeological remains revealed during the excavation of Area 14 will therefore be critical to forming an understanding of the wider archaeological landscape.

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235960
235980
236000
393840
393820
393800
393780
393760
Area 14
14181
14188
14188
14120
14166
14187
14126/
14137
14186
Field L1 North
14108
14001
14014
14012
14114/
14124
Field L1
South
Field L20
14006/
14016
Mitigation area
Archaeology
Floor surface
Excavated slot
0
10 m
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Wylfa mitigation Area 14 plan

Figure 1



Plate 1: Pits 14137 and 14126 from south-west

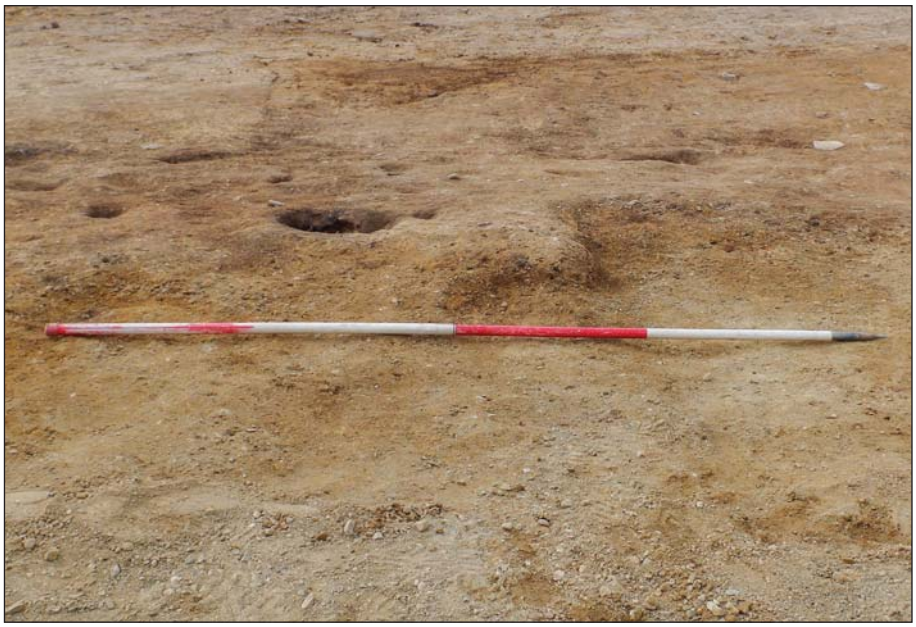


Plate 2: Part of surface 14141 from south-east

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1-37 Area 16-field K2

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Document Information

Document title	Wylfa Area 16, Field K2
Document subtitle	Site Summary Report
Wessex Doc reference	209730.016
HNP Doc reference	WYN-WES-CON-REP-00016
Client name	Horizon Nuclear Power
Address	5210 Valiant Court Gloucester Business Park Delta Way Gloucester Gloucestershire GL3 4FE
Site location	Cemaes, Anglesey
County	Gwynedd
National grid reference	235950 393450
Statutory designations	None
Planning authority	Isle of Anglesey
Planning Inspectorate reference (DCO application)	EN010007
Museum name	Anglesey Archives (paper and digital), Oriel Ynys Môn (artefacts)
Museum accession code	35/2016
HER event number	PRN45292
WA project name	Wylfa remaining works 2018
WA project code	209730
Date of fieldwork	04/09/2017 to 07/09/2017
Fieldwork directed by	Pete Noble
Project management by	Matthew Williams
Document compiled by	Matthew Williams, Ashley Tuck
Contributions from	Liz Chambers
Graphics by	Joanna Debska

Quality Assurance

Issue and date	Status	Author	Approved by
1		MW	
2		VH	
3		AWT	
4		AWT	

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Summary

Wessex Archaeology was commissioned to carry out archaeological excavation and recording in Area 16 in field K2 at the Wylfa Newydd site. All works were carried out in accordance with the Written Scheme of Investigation and Technical Update, as agreed with Gwynedd Archaeology Planning Service.

The Site was centred on NGR 235950 393450 and covered 1,312 sq.m. The Site contained numerous undated ditches which are interpreted as field boundaries and/or drainage ditches. An early palaeochannel was also recorded.

Assessment is recommended for all data categories. Assessment may help clarify the chronology of the ditches and would help fulfil the project aims, which include investigating the dating, characterisation and pattern of historic field systems. The data from this Site should be considered in the analysis and publication of the whole Wylfa Newydd site.

Wylfa Area 16, Field K2

Site Summary Report

1 INTRODUCTION

1.1.1 Wessex Archaeology undertook archaeological excavation in Area 16 in the field known as K2 (**Fig. 1**; 'the Site').

1.1.2 The work was carried out in accordance with the technical update for Field K2 (Horizon Nuclear Power (HNP) 2016), and the original Written Scheme of Investigation produced for all trial trench evaluation and excavation (HNP 2015). These documents were produced in line with the overarching National Policy Statement for Energy (EN-1) (Department for Energy and Climate Change, 2011) and detailed the rationale, aims, methodologies, and standards to be employed during the work. Both documents were agreed with Gwynedd Archaeology Planning Services (archaeological planning advisor to Isle of Anglesey Council) prior to work starting. This document has been produced in accordance with briefing and guidance from Wardell Armstrong LLP.

1.1.3 This excavation was one element in a large scheme of works associated with the proposed construction of a nuclear power station at Wylfa. This Site Summary Report (SSR) has been commissioned by HNP as a supporting document for the application for Development Consent Order (DCO) and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site.

1.1.4 Historic Environment Record event numbers ('PRNs') were assigned following discussion with Nina Steel, Senior Historic Environment Record Archaeologist at Gwynedd Archaeological Trust. PRN45392 has been assigned to the Wylfa Newydd project as a whole and further event numbers have also been assigned to 'noteworthy components' of the project. No PRN numbers were assigned specifically to activity in Area 16.

2 BACKGROUND

2.1.1 The works were centred on NGR 235950 393450 (**Fig. 1**). The area of the Site is 1,1312 sq.m.

2.1.2 Area 16 lies within pasture in the Tre'r Gof wetland basin, at 12 m aOD. The Tre'r Gof wetland, a Site of Special Scientific Interest (SSSI) lies immediately to the north. The centre of the village of Cemaes is approximately 1.3 km to the east.

2.1.3 The overlying soil is freely draining slightly acidic loam (Cranfield Soil and Agrifood Institute 2019). The superficial geology comprises Devensian till with an underlying bedrock of mica schist and psammite (BGS 2019).

2.1.4 Archaeological work carried out in association with the project prior to the excavation of Area 16 included:

- *desk based assessment (Cooke et al. 2012)*
- *geophysical surveys (Hopewell 2011a-b; Hopewell 2012) and,*

- *trial trenching (Wessex Archaeology 2016).*

2.1.5 The results of the preceding phases of work are summarised below. No other significant archaeological investigation has taken place within the area prior to the excavation of Area 16.

3 AIMS AND OBJECTIVES

3.1 Specific aims

3.1.1 The specific aims of the work within this site, as described in the WSI (HNP 2015; 2016), were:

- *To establish the true nature and function of the various archaeological remains present, specifically to identify the presence of any agricultural, domestic, industrial or ritual activity and the character of such.*
- *To establish the condition, age and stratigraphic sequence, of any archaeological / historical remain identified.*
- *Gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills.*
- *To understand how the remains seen within the investigation area relate to other known features across the landscape (chronologically, stratigraphically as well as spatially), with particular reference to the prehistoric activity in Fields K1 and K4 to the west and the medieval activity in Field L3 on the other side of the SSSI, to the north.*

3.2 Research objectives

3.2.1 In addition, a series of research objectives for the excavation of Area 16 were defined in the technical update (HNP 2016) based on a review of relevant archaeological research framework documents.

4 METHODOLOGY

4.1.1 All work was undertaken in accordance with the detailed methodology set out in the WSI (HNP 2015) and technical update (HNP 2016) and in compliance with current standards and guidance, e.g. CIfA guidance (CIfA 2014a-c) and Historic England guidance (Historic England 2015).

4.1.2 All archaeological features were investigated and recorded as per standard procedure set out in the Wessex Archaeology fieldwork manual (Wessex Archaeology 2015).

4.1.3 Environmental sampling was undertaken in accordance with Wessex Archaeology's Guidelines for Environmental Sampling (Wessex Archaeology nd) along and current guidance provided by Historic England (English Heritage 2011).

5 ARCHAEOLOGICAL RESULTS

5.1 Historic map evidence and documentary data

5.1.1 The Desk Assessment and historic map regression (Cooke et al. 2012) did not suggest any specific archaeological potential other than background agricultural remains (field boundary ditches etc).

5.2 Geophysical survey results

5.2.1 Geophysical survey (Hopewell 2011a-b; 2012) identified linear and sub circular anomalies which were provisionally interpreted as prehistoric enclosures.

5.3 Evaluation results

5.3.1 Evaluation trial trenching took place in 2016 (Wessex Archaeology 2016). A total of 15 trenches were excavated in Field K2, the trenches were 1.8 m wide and between 30 m and 50 m long.

5.3.2 The evaluation revealed boundary ditches thought to represent a field system of unknown date.

5.4 Excavation results

5.4.1 The natural geology comprised light grey blue sand clay with yellow mottles and gravel and pebbles. This was overlain by 0.3 m thick, comprising mid-light-grey brown silt loam with gravel and pebbles. The topsoil was mid-grey brown sand silt with gravel and pebbles, it was only 0.08 m thick suggesting the pasture had been unimproved for some time.

5.4.2 The earliest feature was an irregular meandering channel (16064), which crossed Area 16 from south to north, likely representing a former waterway feeding north into what is now the Tre'r Gof wetland.

5.4.3 The main feature type recorded in Area 16 were a series of field boundaries and/or drainage ditches (16018, 16020, 16042, 16047, 16055, 16066, 16067 and 16065; **Fig. 1, Plate 1**). These boundaries appear to form an enclosure system as identified by Desk Assessment (Cooke et al. 2012), geophysical survey (Hopewell 2011a-b; 2012) and trial trench evaluation (Wessex Archaeology 2016). The enclosure system did not contain significant dateable artefacts (although a single flint was recovered, this may have been residual) and does not correlate with any consulted historic map.

5.4.4 The southern part of the area contained five undated features. These comprised a pit with evidence of burning (16008), a further pit (16036) (**Plate 2**), two unrelated postholes (16024 and 16045), and a 3 m long gully (16053).

5.5 Finds and dating evidence

5.5.1 A worked flint was recovered from the northern parallel ditch in the north of the Site. Given the nature of the feature, the flint could be residual and cannot provide a reliable date for the ditch.

5.6 Environmental

5.6.1 A single environmental sample comprising four 10 litre buckets was collected from archaeological deposits at Area 16 for processing using a flotation method in order to identify potential botanical and faunal remains that may be present in the samples.

5.6.2 Overall, the rate of recovery of datable artefacts during excavation is notably poor in the region. As such, environmental samples are of high importance to provide data helping to establish a chronology and narrative. Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

5.7 Quantification of excavation data

Table 1 Quantification of excavation data

Data Category	Number
Contexts	67
Small finds	0
Bulk finds	3g
Environmental samples	1 (40 litres)
Monochrome film	0
Digital photographs	107
Rectified photographs	0
GPS surveyed digital pre-excavation plans	✓
GPS surveyed digital excavation plans	✓
TST surveyed digital excavation plans	X
Hand drawn plans	0
Hand drawn sections	25

5.8 Recommendations for further work

5.8.1 All data categories should go to assessment and an assessment report should be produced for this site.

Table 2 Recommendations for further work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	All categories likely to warrant further analysis as part of overall project analysis
Publication of key data categories	All categories likely to warrant publication as part of overall project publication
Deposit archive	✓

6 DISCUSSION

6.1.1 An enclosure system was accompanied by a small number of other features. The enclosure system is undated and its function is not yet understood. Assessment of environmental data may refine interpretation of the enclosure system. It is possible, though unlikely, that material suitable for radiocarbon analysis may be identified to inform the chronology of the enclosure system. The enclosure system may be of recent date, although it does not appear on historic maps, or may be ancient. It is likely that assessment of the enclosure system could contribute to all four project aims given in the WSI (HNP 2015, 2016). Assessment could help to establish the nature and function of the enclosure system (first aim), to establish the age of the enclosure system (second aim), to provide information on the past environment and landscape (third aim) and to understand how the remains relate to other features in the landscape chronologically, stratigraphically and spatially (fourth aim).

6.1.2 Although the results of Area 16 were of relatively low significance within the context of the project as a whole, the undated enclosure system has the potential to fulfil project aims and inform the landscape setting of other nearby more significant remains. The results may contribute to the overall understanding of the ancient environment and to characterisation of historic field systems. All data categories should be considered during formal assessment.

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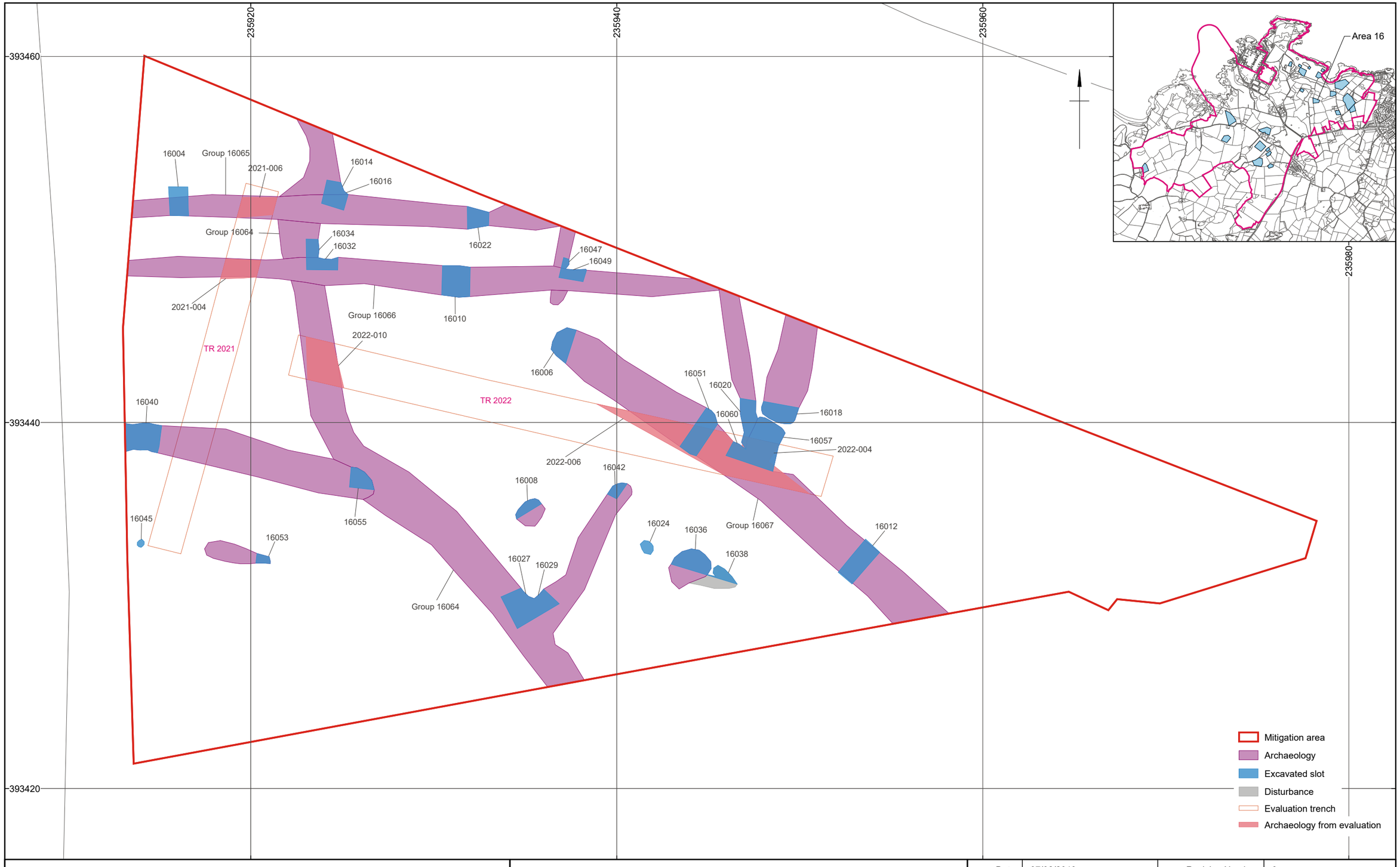
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Wylfa mitigation Area 16 plan

Figure 1



Plate 1: Section of field boundary 16051 from north-east

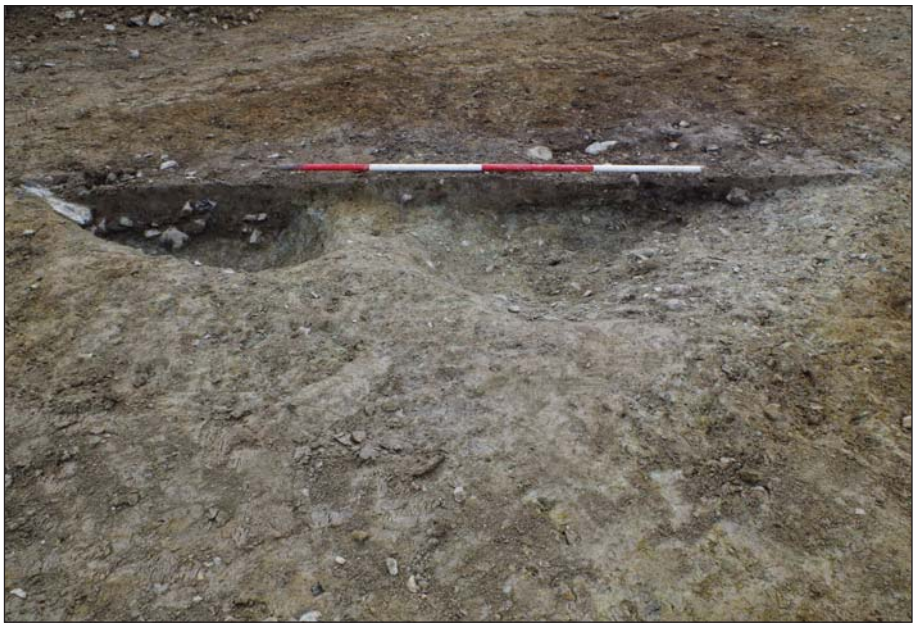


Plate 2: Pit 16036 (right) and disturbance 16038 (left) from north

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1-38 Area 17-field L2

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Document Information

Document title	Wylfa Area 17, Field L2
Document subtitle	Site Summary Report
Wessex Doc ref	209730.017
Horizon Doc ref	WYN-WES-CON-REP-00009
Client name	Horizon Nuclear Power
Address	5210 Valiant Court Gloucester Business Park Delta Way Gloucester Gloucestershire GL3 4FE
Site location	Cemaes, Anglesey
County	Gwynedd
National grid reference	236180 393550
Statutory designations	None
Planning authority	Isle of Anglesey
Planning Inspectorate reference (DCO application)	EN010007
Museum name	Anglesey Archives (paper and digital), Oriel Ynys Môn (artefacts)
Museum accession code	35/2016
HER event number	PRN45392; PRN76021
WA project name	Wylfa remaining works 2018
WA project code	209730
Date of fieldwork	31/07/2017 – 02/08/2017
Fieldwork directed by	Pete Noble
Project management by	Matthew Williams
Document compiled by	Matthew Williams, Ashley Tuck
Contributions from	Liz Chambers, Lorraine Mepham
Graphics by	Joanna Debska

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2		VH	
3		VH	
4		AWT	

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Summary

Wessex Archaeology was commissioned to carry out archaeological excavation and recording in Area 17 in Field L2 at the Wylfa Newydd site. All works were carried out in accordance with the Written Scheme of Investigation and Technical Update, as agreed with Gwynedd Archaeology Planning Service.

The Site covered consisted of three fields centred on NGR 236180 393550 and covering 1,626 sq.m. The field contained evidence for a field system which correlates with historic mapping, and several undated pits and ditches.

Assessment is recommended for all data categories. The data from this Site should be considered in the analysis and publication of the whole Wylfa Newydd site.

Wylfa Area 17, Fields L1, L2

Site Summary Report

1 INTRODUCTION

1.1.1 Wessex Archaeology undertook archaeological excavation in Area 17 in fields known as L1 and L2 (**Fig. 1**; 'the Site').

1.1.2 The work was carried out in accordance with the technical update for Field L2 (Horizon Nuclear Power (HNP) 2016), and the original Written Scheme of Investigation produced for all trial trench evaluation and excavation (HNP 2015). These documents were produced in line with the overarching National Policy Statement for Energy (EN-1) (Department for Energy and Climate Change, 2011) and detailed the rationale, aims, methodologies, and standards to be employed during the work. Both documents were agreed with Gwynedd Archaeology Planning Services (archaeological planning advisor to Isle of Anglesey Council) prior to work starting. This document has been produced in accordance with briefing and guidance from Wardell Armstrong LLP.

1.1.3 This excavation was one element in a large scheme of works associated with the proposed construction of a nuclear power station at Wylfa. This Site Summary Report (SSR) has been commissioned by HNP as a supporting document for the application for Development Consent Order (DCO) and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site.

1.1.4 Historic Environment Record event numbers ('PRNs') were assigned following discussion with Nina Steel, Senior Historic Environment Record Archaeologist at Gwynedd Archaeological Trust. PRN45392 has been assigned to the Wylfa Newydd project as a whole and further event numbers have also been assigned to 'noteworthy components' of the project. Within Area 17, PRN76021 has been assigned.

2 BACKGROUND

2.1.1 The works were centred on NGR 236180 393550 (Figure 1). The area was 1,626 sq.m.

2.1.2 Area 17 lies in a local low point at a height of around 10 m aOD. The ground slopes down to the west towardds the Tre'r Gof SSSI which is 55 m away. The coast is 200 m to the north.

2.1.3 The overlying soil is freely draining slightly acidic loam (Cranfield Soil and Agrifood Institute 2019). The superficial geology comprises Devensian till with an underlying bedrock of mica schist and psammite (BGS 2019).

2.1.4 Archaeological work carried out in association with the project prior to the excavation of Area 17 included:

- *desk based assessment (Cooke et al. 2012)*
- *geophysical surveys (WYAS 2015; Hopewell 2011a-b, 2012); and,*
- *trial trenching (Wessex Archaeology 2016).*

2.1.5 The results of the preceding phases of work are summarised below. No other significant archaeological investigation has taken place within the area prior to the excavation of Area 17.

3 AIMS AND OBJECTIVES

3.1 Specific aims

3.1.1 The specific aims of the work within this site, as described in the WSI (HNP 2015; 2016), were:

- *to establish the true nature and function of the various archaeological remains present, specifically to identify the presence of any domestic, industrial or ritual activity and the character of such.*
- *to establish the condition, age and stratigraphic sequence, of any archaeological / historical remain identified.*
- *to gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills.*
- *to understand how the remains seen within the investigation area relate to other known features across the landscape (chronologically, stratigraphically as well as spatially), with particular reference to the ring ditch sites identified in field L3 and L8/L12 and the adjacent, extant, clawdd type field boundary on the other side of the SSSI, to the north.*

3.2 Research objectives

3.2.1 In addition, a series of research objectives for the excavation of Area 17 were defined in the technical update (HNP 2016) based on a review of relevant archaeological research framework documents.

4 METHODOLOGY

4.1.1 All work was undertaken in accordance with the detailed methodology set out in the WSI (HNP 2015) and technical update (HNP 2016) and in compliance with current standards and guidance, e.g. CIfA guidance (CIfA 2014a-c) and Historic England guidance (Historic England 2015).

4.1.1 All archaeological features were investigated and recorded as per standard procedure set out in the Wessex Archaeology fieldwork manual (Wessex Archaeology 2015).

4.1.2 Environmental sampling was undertaken in accordance with Wessex Archaeology's Guidelines for Environmental Sampling (Wessex Archaeology nd) along and current guidance provided by Historic England (English Heritage 2011).

5 ARCHAEOLOGICAL RESULTS

5.1 Historic map evidence and documentary data

5.1.1 The HER records few prehistoric sites in the vicinity. The closest is the site of an urned Bronze Age cremation burial at Plas Penryhyn located almost 3 km to the east (HER3050).

5.1.2 The desk-based assessment (Cooke et al. 2012) noted that the linear features identified by the geophysical survey (see below) matched field boundaries marked on the tithe map and first edition OS mapping. It concluded that the area may contain ancient field boundaries and ditches.

5.2 Geophysical survey results

5.2.1 Geophysical survey (Hopewell 2011a-b, 2012) identified several linear and sub circular anomalies which were interpreted as prehistoric enclosures.

5.3 Evaluation results

5.3.1 Evaluation trial trenching took place in spring 2016 (Wessex Archaeology 2016). A total of 15 trenches were excavated in Field L2, and 14 trenches in Field L4. The trenches were 1.8 m wide and between 30 m and 50 m long.

5.3.2 Three ditches were recorded within four of the trenches within Field L2, as well as a pit containing a charcoal rich fill.

5.4 Excavation results

5.4.1 The natural geology was light-yellow grey sandy clay. The subsoil comprised mid-red brown silt up to 0.45 m thick. The topsoil was mid-grey brown sand silt 0.27 m thick. A 2 m wide area of mid-grey silt colluvium (17024), 0.6 m thick, was recorded below the subsoil in the south of the Site.

5.4.2 A large ditch (17014; PRN76021; **Fig. 1; Plate 1**) up to 2 m wide and 0.8 m deep was excavated running east-west across the northern part of the Site, which correlated with the geophysics results and historic map evidence. No datable finds were recovered during the excavation but one sherd of medieval pot was found during the evaluation trenching. The ditch showed evidence of having been re-cut.

5.4.3 Immediately south of the large ditch was a small gully (17004) with a curved western terminus. No finds were recovered but a humic deposit was recorded in the terminus.

5.4.4 To the north of the large ditch and running out of the Site boundary was a spread of burnt material and stone (17039; PRN76021; **Fig. 1**). This was not a burnt mound as the stones were not heat affected and were larger and more angular than those usually encountered in a burnt mound. The stones were in an ash or charcoal deposit. The feature is interpreted as a refuse deposit.

5.4.5 In the south west of the Site (**Fig. 1**) were two further undated ditches (17022 and 17035) and three undated pits (17008, 17018 and 17037). The fill of pit 17008 (**Plate 2**) contained a fragment of chert.

5.5 Finds and dating evidence

5.5.1 One piece of struck chert was recovered from a pit (17008) on the south west of the Site. Two whetstones were recovered from the stone deposit (17040) in the north of the site.

5.6 Environmental

5.6.1 A total of four environmental samples comprising 12 10 litre buckets were collected from archaeological deposits at Area 17 for processing using a flotation method in order to identify potential botanical and faunal remains that may be present in the samples.

5.6.2 Features were sampled and there is high potential for the recovery of environmental information from the large ditch. C14 dates may be obtained from the charcoal deposit containing the stones/whetstones.

5.6.3 Overall, the rate of recovery of datable artefacts during excavation is notably poor in the region. As such, environmental samples are of high importance to provide data helping to establish a chronology and narrative. Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

5.7 Quantification of excavation data

Table 1 Quantification of excavation data

Data Category	Number
Contexts	44
Small finds	0
Bulk finds	0.205kg
Environmental samples	4 (120 litres)
Monochrome film	0
Digital photographs	70
Rectified photographs	0
GPS surveyed digital pre-excavation plans	✓
GPS surveyed digital excavation plans	✓
TST surveyed digital excavation plans	X
Hand drawn plans	0
Hand drawn sections	22

5.8 Recommendations for further work

5.8.1 All data categories should go to assessment and an assessment report should be produced for this site.

Table 2 Recommendations for further work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	All categories likely to warrant further analysis as part of overall project analysis
Publication of key data categories	All categories likely to warrant publication as part of overall project publication
Deposit archive	✓

6 DISCUSSION

6.1.1 All data categories should go forward to assessment level and form part of the overall analysis and publication of the Wylfa Newydd site. The large ditch may represent a persistent boundary that may have been in use from the medieval period or before until recently. The dating, characterisation and pattern of historic field systems is identified as a specific research aim in the WSI.

6.1.2 The burnt material containing the whetstones may be refuse from an industrial process. The deposit may be compared to the crude stone surfaces, furnaces and whetstones found in Area 2 (part of the current phase of archaeological works). A C14 date from this deposit would help inform the chronology of industrial activity in the area.

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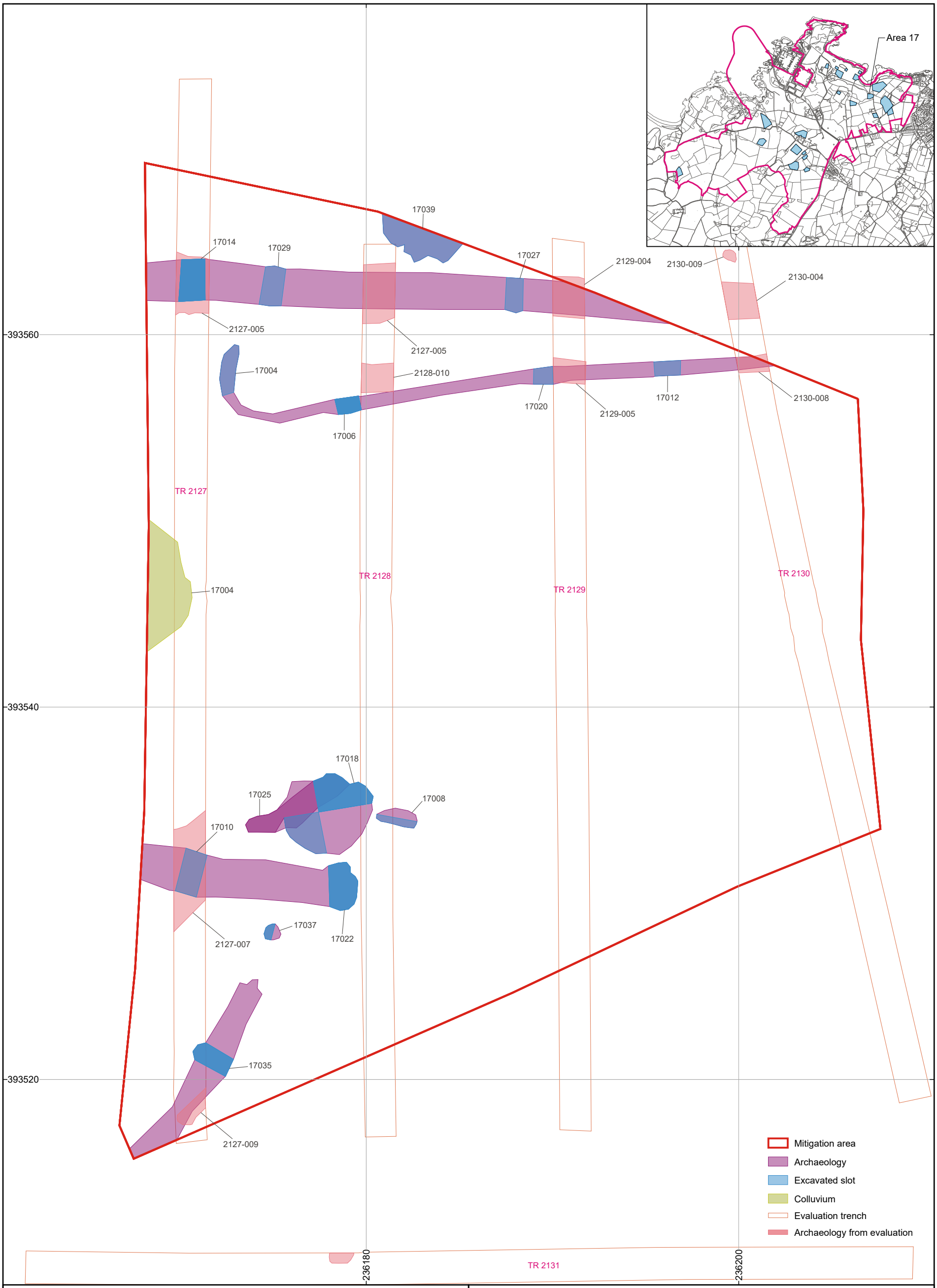
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Wylfa mitigation Area 17 plan

Figure 1



Plate 1: Section of ditch 17014 from north-west



Plate 2: Section of pit 17008 from south-west

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1-39 Area 18-field O6

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Document Information

Document title	Wylfa Area 18, Field O6
Document subtitle	Site Summary Report
Wessex Doc reference	209730.018
HNP Doc reference	WYN-WES-CON-REP-00012
Client name	Horizon Nuclear Power
Address	5210 Valiant Court Gloucester Business Park Delta Way Gloucester Gloucestershire GL3 4FE
Site location	Cemaes, Anglesey
County	Gwynedd
National grid reference	235300 392800
Statutory designations	None
Planning authority	Isle of Anglesey
Planning Inspectorate reference (DCO application)	EN010007
Museum name	Anglesey Archives (paper and digital), Oriel Ynys Môn (artefacts)
Museum accession code	35/2016
HER event number	PRN45392; PRN76023
WA project name	Wylfa remaining works 2018
WA project code	209730
Date of fieldwork	01/05/2017
Fieldwork directed by	Pete Noble
Project management by	Matthew Williams
Document compiled by	Matthew Williams, Ashley Tuck
Contributions from	Liz Chambers, Lorraine Mepham
Graphics by	Joanna Debska

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Summary

Wessex Archaeology was commissioned to carry out archaeological excavation and recording in Area 18 in field O6 at the Wylfa Newydd site. All works were carried out in accordance with the Written Scheme of Investigation and Technical Update, as agreed with Gwynedd Archaeology Planning Service.

The Site was centred on NGR 235300 392800 and comprised a single area of 544 sq. m. The Site contained a trackway of compacted stone and gravel. Similar trackways have been recorded in Field O5 and are provisionally dated to the Romano-British period.

Assessment is recommended for all data categories. The data from this Site should be considered in the analysis and publication of the whole Wylfa Newydd site.

Wylfa Area 18, Field O6

Site Summary Report

1 INTRODUCTION

1.1.1 Wessex Archaeology undertook archaeological excavation in Area 18 in the field known as O6 (**Fig. 1**; 'the Site').

1.1.2 The work was carried out in accordance with the technical update for Field O6 (Horizon Nuclear Power (HNP) 2016), and the original Written Scheme of Investigation produced for all trial trench evaluation and excavation (HNP 2015). These documents were produced in line with the overarching National Policy Statement for Energy (EN-1) (Department for Energy and Climate Change, 2011) and detailed the rationale, aims, methodologies, and standards to be employed during the work. Both documents were agreed with Gwynedd Archaeology Planning Services (archaeological planning advisor to Isle of Anglesey Council) prior to work starting. This document has been produced in accordance with briefing and guidance from Wardell Armstrong LLP.

1.1.3 This excavation was one element in a large scheme of works associated with the proposed construction of a nuclear power station at Wylfa. This Site Summary Report (SSR) has been commissioned by HNP as a supporting document for the application for Development Consent Order (DCO) and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site.

1.1.4 Historic Environment Record event numbers ('PRNs') were assigned following discussion with Nina Steel, Senior Historic Environment Record Archaeologist at Gwynedd Archaeological Trust. PRN45392 has been assigned to the Wylfa Newydd project as a whole and further event numbers have also been assigned to 'noteworthy components' of the project. Within Areas 18, 19 and 20, PRN76023 has been assigned to Romano-British activity.

2 BACKGROUND

2.1.1 The works were centred on NGR 235300 392800 (**Fig. 1**). The Site comprised of one area of 544 sq. m.

2.1.2 Area 18 lies in a local low point at a height of around 21 m aOD. The ground slopes down to the south-west towards the road to Cemlyn.

2.1.3 The overlying soil is freely draining slightly acidic loam (Cranfield Soil and Agrifood Institute 2019). The superficial geology comprises Devensian till with an underlying bedrock of mica schist and psammite (BGS 2019).

2.1.4 Archaeological work carried out in association with the project prior to the excavation of Area 18 included:

- *desk based assessment (Cooke et al. 2012)*
- *geophysical surveys (ASWYAS 2015; Hopewell 2012) and*

- *trial trenching (Headland 2017).*

2.1.5 The results of the preceding phases of work are summarised below. No other significant archaeological investigation has taken place within the area prior to the excavation of Area 18.

3 AIMS AND OBJECTIVES

3.1 Specific aims

3.1.1 The specific aims of the work within this site, as described in the WSI (HNP 2015; 2016), were:

- *To establish the true nature and function of the various archaeological remains present, specifically to identify the presence of any agricultural, domestic, industrial or ritual activity and the character of such.*
- *To establish the condition, age and stratigraphic sequence, of any archaeological / historical remain identified.*
- *Gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills.*
- *To understand how the remains seen within the investigation area relate to other known features across the landscape (chronologically, stratigraphically as well as spatially), with particular reference to the prehistoric activity in the fields to the west and the medieval activity to the north.*

3.2 Research objectives

3.2.1 In addition, a series of research objectives for the excavation of Area 18 were defined in the technical update (HNP 2016) based on a review of relevant archaeological research framework documents.

4 METHODOLOGY

4.1.1 All work was undertaken in accordance with the detailed methodology set out in the WSI (HNP 2015) and technical update (HNP 2016) and in compliance with current standards and guidance, e.g. CIfA guidance (CIfA 2014a-c) and Historic England guidance (Historic England 2015).

4.1.2 Environmental sampling was undertaken in accordance with Wessex Archaeology's Guidelines for Environmental (Wessex Archaeology nd) along and current guidance provided by Historic England (English Heritage 2011).

5 ARCHAEOLOGICAL RESULTS

5.1 Historic map evidence and documentary data

5.1.1 The desk-based assessment and historic map regression (Cooke et al. 2012) did not indicate any specific archaeological potential other than field boundaries that may have ancient origins.

5.2 Geophysical survey results

5.2.1 Geophysical survey (ASWYAS 2015; Hopewell 2012) did not identify any potential archaeological features other than field boundaries and sub circular features of uncertain, but likely agricultural origin.

5.3 Evaluation results

5.3.1 Evaluation trial trenching took place in 2016 (Headland 2017). A total of seven trenches were excavated in Field O6, the trenches were 1.8 m wide and between 30 m and 50 m long.

5.3.2 Area 18 was targeted on an early field boundary and associated pits.

5.4 Excavation results

5.4.1 The natural geology comprised orange grey clay, this was overlain by 0.15 m of orange brown clay silt relic ploughsoil and 0.15 m of mid-brown silt clay topsoil.

5.4.2 A 2.60 m wide stone trackway (18006; PRN76023; **Fig. 1; Plate 1–2**) was recorded running north-west to south-east across the Site. The track construction comprised a bedding layer (18008) of the orange grey sand clay (probably locally excavated from the natural geology) overlain by a layer of mid-grey brown silt clay. A stone surface (18007) comprised flat stones of the local psammite up to 0.07 m across.

5.4.3 The southern part of the track appeared to have been ploughed away.

5.4.4 Other features in the Site were investigated and found to be natural geology or bioturbation.

5.5 Finds and dating evidence

5.5.1 No finds were recovered from the Site.

5.6 Environmental

5.6.1 No suitable deposits were identified in the Site and therefore no samples were taken.

5.7 Quantification of excavation data

Table 1 Quantification of excavation data

Data Category	Number
Contexts	9
Small finds	0
Bulk finds	0kg
Environmental samples	0 litres
Monochrome film	0
Digital photographs	86
Rectified photographs	0
GPS surveyed digital pre-excavation plans	✓
GPS surveyed digital excavation plans	✓
TST surveyed digital excavation plans	X
Hand drawn plans	0

Hand drawn sections	2

5.8 Recommendations for further work

5.8.1 All data categories should go to assessment and an assessment report should be produced for this site.

Table 2 Recommendations for further work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	Stratigraphical data likely to warrant further analysis as part of overall project analysis
Publication of key data categories	Stratigraphical data likely to warrant publication as part of overall project publication
Deposit archive	✓

6 DISCUSSION

6.1.1 The trackway is clearly associated with the nationally significant Romano-British remains in Field O5 and will contribute to our understanding of Iron Age and Romano-British settlement and transport.

6.1.2 The Site should be included in the overall Wylfa publication.

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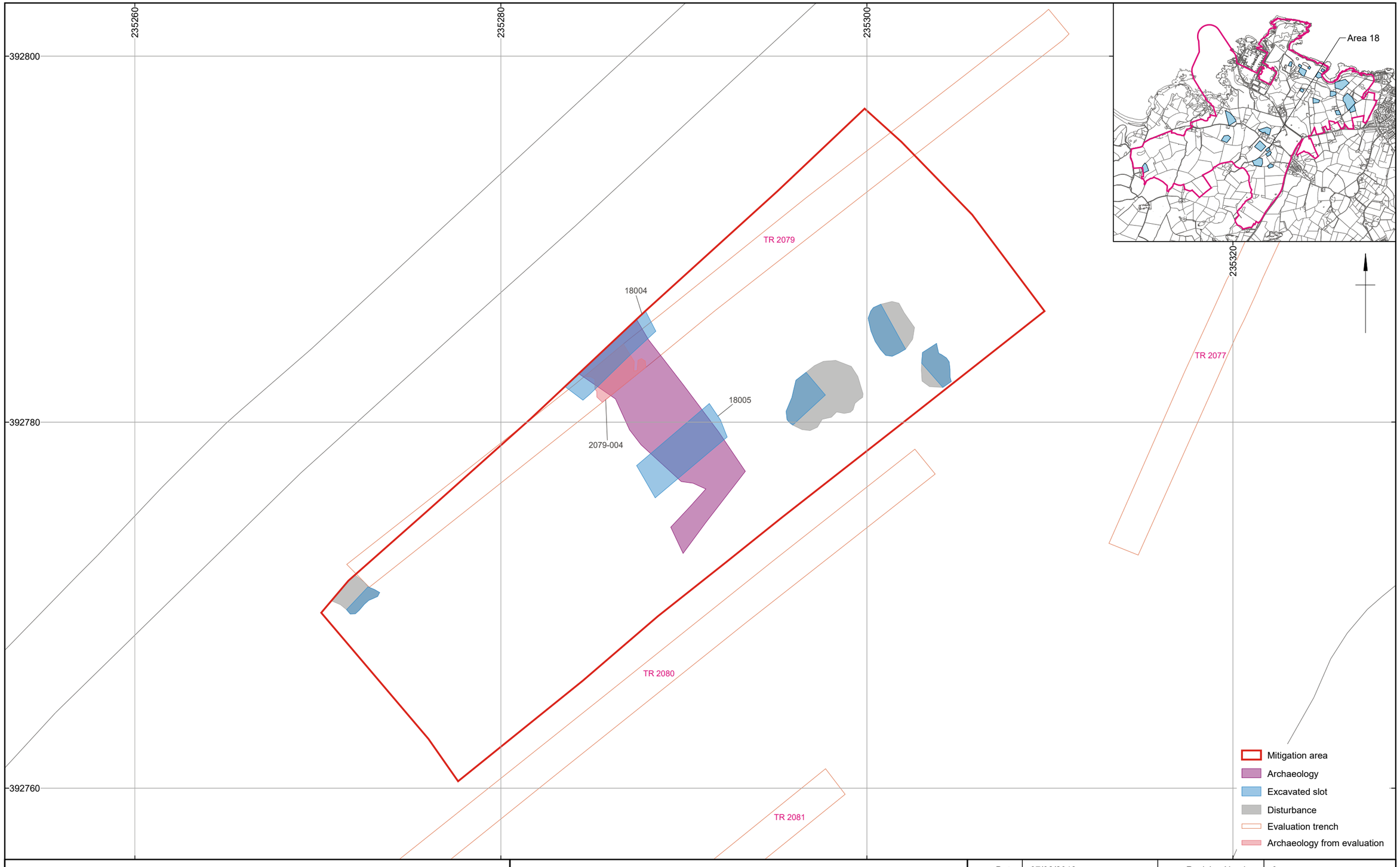
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Wylfa mitigation Area 18 plan

Figure 1



Plate 1: Plan of trackway 18006 from north-west

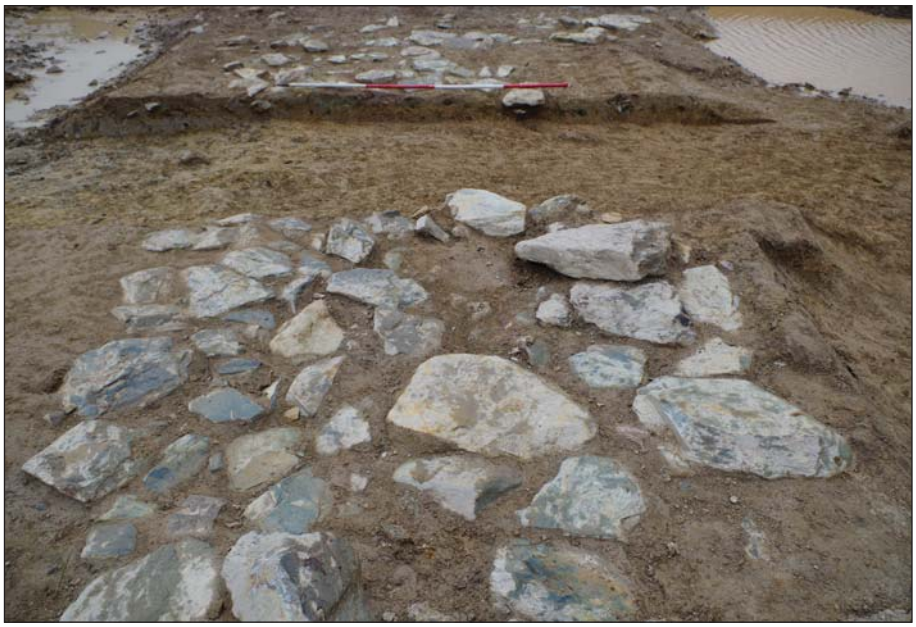


Plate 2: Plan of trackway 18006 from north-west

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1-40 Area 19-field O5n

Document Information

Document title	Wylfa Newydd Area 19, Field O5n
Document subtitle	Archaeological Site Summary Report
Wessex Doc reference	209730.019
Horizon Doc ref	WYN-WES-CON-REP-00020
Client name	Horizon Nuclear Power
Address	5210 Valiant Court Gloucester Business Park Delta Way Gloucester Gloucestershire GL3 4FE
Site location	Cemaes, Anglesey
County	Gwynedd
National grid reference	235300 392722
Statutory designations	None
Planning authority	Isle of Anglesey
Planning Inspectorate reference (DCO application)	EN010007
Museum name	Anglesey Archives (paper and digital), Oriel Ynys Môn (artefacts)
Museum accession code	35/2016
HER event number	PRN45392; PRN76023
WA project name	Wylfa remaining works 2018
WA project code	209730
Date of fieldwork	13/09/2017 to 22/02/2018
Fieldwork directed by	Pete Noble and Phil Weston
Project management by	Matthew Williams
Document compiled by	Phil Weston, Matthew Williams
Contributions from	Liz Chambers, Lorraine Mepham
Graphics by	Joanna Debska

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3		VH	
4		AWT	

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Summary

Wessex Archaeology was commissioned to carry out archaeological excavation in Area 19 in the northern part of field O5 known as O5n at the Wylfa Newydd site. All works were carried out in accordance with the Written Scheme of Investigation (Horizon Nuclear Power (HNP) 2015), and Technical Update (HNP 2017), as agreed with Gwynedd Archaeology Planning Service.

The Site was centred on NGR 235300 392722, the total excavation area was 795 sq.m. It was located in the base of a shallow valley, 340 m to the west of the settlement of Tregele. The excavation revealed Romano-British stone built roundhouses and a series of pits. There was some evidence for internal structures, and further buildings to the immediate west.

The Site is likely to be part of the same settlement recorded in the south of Field O5, and is therefore considered nationally important. Assessment is recommended for all data categories. The data from this site should be considered in the analysis and publication of the whole Wylfa Newydd site.

Wylfa Area 19, Field O5n

Site Summary Report

1 INTRODUCTION

1.1.1 Wessex Archaeology undertook archaeological excavation in Area 19 in the northern part of field O5 known as O5n (**Fig. 1**; 'The Site').

1.1.2 The work was carried out in accordance with the 'Technical update to the Written Scheme of Investigation for archaeological trial trenching and excavation: Investigation in Field O5. (Horizon Nuclear Power (HNP) 2016) and the original Written Scheme of Investigation produced for all trial trench evaluation and excavation (HNP 2015). These documents were produced in line with the overarching National Policy Statement for Energy (EN-1) (Department for Energy and Climate Change, 2011) and detailed the rationale, aims, methodologies, and standards to be employed during the work. All documents were agreed with Gwynedd Archaeology Planning Services (archaeological planning advisor to Isle of Anglesey Council) prior to work starting. This document has been produced in accordance with briefing and guidance from Wardell Armstrong LLP.

1.1.3 This excavation was one element in a large scheme of works associated with the construction of a nuclear power station at Wylfa. This Site Summary Report (SSR) has been commissioned by HNP as a supporting document for the application for the Development Consent Order (DCO) and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site.

1.1.4 Historic Environment Record event numbers ('PRNs') were assigned following discussion with Nina Steel, Senior Historic Environment Record Archaeologist at Gwynedd Archaeological Trust. PRN45392 has been assigned to the Wylfa Newydd project as a whole and further event numbers have also been assigned to 'noteworthy components' of the project. Within Areas 18, 19 and 20, PRN76023 has been assigned to Romano-British activity.

2 BACKGROUND

2.1.1 The works were centred on NGR 235300 392722 (**Fig. 1**). The total area of excavation was 795 sq.m.

2.1.2 Area 19 is situated in the base of a shallow valley, 340 m to the west of the settlement of Tregele; it was level at approximately 21 m above Ordnace Datum (aOD).

2.1.3 The overlying soil is freely draining slightly acidic loam (Cranfield Soil and Agrifood Institute 2019). The superficial geology comprises Devensian till with an underlying bedrock of mica schist and psammite (BGS 2019).

2.1.4 Archaeological work carried out in association with the project prior to the excavation of Area 19 included:

- *desk based assessment (Cooke et al. 2012)*

- *geophysical surveys (ASWYAS 2015; Hopewell 2011a-b; Hopewell 2012) and,*
- *trial trenching (Wessex Archaeology 2016; Headland 2017).*

2.1.5 The results of the preceding phases of work are summarised below. No other significant archaeological investigation has taken place within the area prior to the excavation of Area 19.

3 AIMS AND OBJECTIVES

3.1 Specific aims

3.1.1 The specific aims of the work within this site, as described in the WSI (HNP 2015; 2016), were:

- *To establish the true nature and function of the various archaeological remains present, specifically to identify the presence of any agricultural, domestic, industrial or ritual activity and the character of such.*
- *To establish the condition, age and stratigraphic sequence, of any archaeological / historical remain identified.*
- *Gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills.*
- *To understand how the remains seen within the investigation area relate to other known features across the landscape (chronologically, stratigraphically as well as spatially), with particular reference to the prehistoric activity in the fields to the west and the medieval activity to the north.*

3.2 Research objectives

3.2.1 In addition, a series of research objectives for the excavation of Area 19 were defined in the technical update (HNP 2016) based on a review of relevant archaeological research framework documents.

4 METHODOLOGY

4.1.1 All work was undertaken in accordance with the detailed methodology set out in the WSI (HNP 2015) and technical update (HNP 2016) and in compliance with current standards and guidance, e.g. CIfA guidance (CIfA 2014) and Historic England guidance (Historic England 2015).

4.1.2 All archaeological features were investigated and recorded as per standard procedure set out in the Wessex Archaeology fieldwork manual (Wessex Archaeology 2015).

4.1.3 Environmental sampling was undertaken in accordance with Wessex Archaeology's Guidelines for Environmental Sampling (Wessex Archaeology nd) along and current guidance provided by Historic England (English Heritage 2011).

5 ARCHAEOLOGICAL RESULTS

5.1 Historic map evidence and documentary data

5.1.1 An examination of historic maps in the Desk Assessment (Cooke et al. 2012) concluded that the existing field pattern in the area may have ancient origins, and that further field systems and boundaries were likely within the Site.

5.2 Geophysical survey results

5.2.1 The geophysical survey of the site was inconclusive and the responses that were apparent were interpreted as changes in the underlying geology (ASWYAS 2015).

5.3 Evaluation results

5.3.1 Evaluation trial trenching took place in 2016 (Wessex Archaeology 2016, Headland 2017). 24 trenches were dug in Field O5. The trenches were 1.8 m wide and between 30 m and 50 m long.

5.3.2 Eleven of the trenches identified archaeological remains consisting of boundary ditches, pits, postholes, stone deposits and a subterranean structure. Area 19 was focused on the location of trench 2083 (Headland 2017), which had revealed a concentration of features consisting of the remains of a potential prehistoric burnt mound, a possible cremation deposit, several pits, postholes and other potential structural remains. Some of the pits contained fired clay and fuel-ash slag suggesting close-by industrial activity.

5.4 Excavation results

5.4.1 The topsoil was 0.15–0.25 m thick and generally comprised mid-brown grey silt, it overlay mid-brown grey silt clay subsoil around 0.15 m thick. The underlying geology comprised orange brown clay with occasional pebbles and cobbles.

5.4.2 The south-western half of the Site contained several undated pits (19050, 19041, 19031, 19013, 19039, 19007, 19008 and 19004) and a substantial curvilinear ditch (19017) (**Fig. 1**). The ditch may have defined the space occupied by three possible structures (19197, 19124 and 19199) directly to the north-east (see below). No finds were recovered from the fills of these features to suggest a date or function.

5.4.3 The archaeological remains in the north-eastern half of Area 19 were more complicated; including three structures as well pits and burnt deposits, both internal and external to the buildings.

5.4.4 The south-west building (structure 19124; PRN76023), consisted of a partially surviving stone wall (19137) and internal stone surfaces (19138) supplemented with deposits, pits, postholes and wall construction cuts (**Fig. 1**). The truncated remains of the structure were a little over 5 m in diameter making it quite small for a roundhouse. It was also located in an area of low, marshy ground close to a running spring; it is thought, therefore, that the building may have served some industrial purpose. Deposit 19134 (described below; **Plate 2**) may represent material raked out from some industrial process. Fuel ash slag and fired clay identified during the evaluation also supports an industrial interpretation.

5.4.5 Structure 19199 (PRN76023) was located directly to the north-east of structure 19124 (**Fig. 1; Plates 1**). Structure 19199 consisted of three sides of a sub-rectangular, east-west aligned building, which extended beyond the limit of the excavation to the east. It was constructed predominantly of stone slabs (19162), which may have served as a

surface, raised up to provide a dry platform. The structure was partially paved internally, and a single internal pit/posthole (19120) was identified (**Fig. 1**). No dating evidence was recovered from the structure, nor finds that might indicate a function. The northern wall of structure 19199 appeared to have incorporated part of the wall belonging to structure 19197 directly to the north-east.

5.4.6 Structure 19197 (PRN76023) was round in plan and, similar to structure 19124. It was just over 5 m in diameter and defined by a partially surviving stone wall, pits and postholes (**Fig. 1**). As was the case with the other structures, no finds were recovered from deposits associated with this structure.

5.4.7 Several other pits and patches of surviving surface were identified distributed around the structures, but no finds were recovered during the mitigation that might date the complex or suggest internal activities. However, fuel ash slag and fired clay identified during the evaluation supports an industrial interpretation. A deposit of burnt material (19134; **Plate 2**) was identified directly to the north of structure 19124 (**Fig. 1**), which was initially thought to be the remains of a burnt mound. However, hand excavation revealed it to be a small, localised deposit with no associated trough or pits; it has, therefore, been interpreted as a shallow hearth or perhaps a rake-out deposit from the potential industrial activity taking place within the structures.

5.4.8 The small assemblage of potentially worked chert was recovered from a single context. The deposit was a silty layer up to 0.4 m deep that was initially interpreted as a residual subsoil overlying the structures. However, given its composition and its location in the base of a shallow valley, it is more likely to be a colluvial deposit. Therefore, any finds recovered from the deposit must be considered displaces and residual.

5.5 Finds and dating evidence

5.5.1 This finds assemblage is of negligible size, comprising eleven flakes of chert, one sherd of pottery, one struck flint, one fragment of undiagnostic fired clay, and one fragment of probable slag (ferruginous but not necessarily representing metalworking residue). The pottery sherd is modern, and the struck flint is a blade-like flake that may indicate an early prehistoric date.

5.5.2 The assemblage of potentially worked chert was recovered from a layer of colluvium (hillwash), up to 0.40 m deep, that overlay the archaeological horizon. This suggests prehistoric activity further upslope (east) from the site.

5.6 Environmental

5.6.1 A total of 43 environmental samples comprising 95 10 litre buckets were collected from archaeological deposits at Area 19 for processing using a flotation method in order to identify potential botanical and faunal remains that may be present in the samples.

5.6.2 The archaeology consisted stone structures, ditches, gullies, pits, postholes. It was appropriately sampled and there is high potential for the recovery of environmental information. Bulk samples and sub samples from the structures may inform on their function.

5.6.3 C14 dating will be an important dating method for dating deposits as very few artefacts were recovered.

5.6.4 Overall, the rate of recovery of datable artefacts during excavation is notably poor in the region. As such, environmental samples are of high importance to provide data helping to establish a chronology and narrative. Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

5.7 Quantification of excavation data

Table 1 Quantification of excavation data

Data Category	Number
Contexts	183
Small finds	0
Bulk finds	0.87kg
Environmental samples	43 (950 litres)
Monochrome film	0
Digital photographs	523
Rectified photographs	0
GPS surveyed digital pre-excavation plans	✓
GPS surveyed digital excavation plans	✓
TST surveyed digital excavation plans	x
Hand drawn plans	18
Hand drawn sections	64

5.8 Recommendations for further work

5.8.1 All data categories should go to assessment and an assessment report should be produced for this site.

5.8.2 The stratigraphical information from this site would warrant further analysis and publication; all data categories should be considered as part of the overall analysis and publication.

Table 2 Recommendations for further work

Quantification of archive	✓
Assessment of significance	✓
Further analysis of key data categories	Stratigraphical data likely to warrant further analysis
Publication of key data categories	All data categories should be included in the overall analysis and publication
Deposit archive	✓

6 DISCUSSION

6.1.1 The data recovered is considered reliable and it is recommended the environmental samples and finds are processed, analysed and that the site should go forward to full assessment.

6.1.2 The excavation revealed two small, circular structures and a third sub-rectangular building that extended beyond the limit of the excavation. The structures consisted of partially surviving stone wall sections, partial stone surfaces, postholes and pits. Further pits and possible rake-out deposits were also revealed, which are thought to be associated with the structures. The structures are considered too small to constitute domestic dwellings and are thought to be associated with an as-yet-unidentified industrial process. A section of ditch, including the terminus, just to the south-west of the structures raises the possibility that the structures occupied an enclosure.

6.1.3 The general form of the features, the stratigraphy (sealed beneath hillwash) and the large stone construction indicate that the remains in Area 19 are related to the extensive settlement excavated in the southern part of O5 (Area 20) 80 m to the south west. All these remains are considered nationally significant due to their scale, preservation and rarity.

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235280
235300
235320
392740
392720
392700
Area 19
19197
19134
19162
19124
19120
19138
19199
19137
19045
19048
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19043
19041
Mitigation area
Archaeology
Wall/structure

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Wylfa mitigation Area 19 plan

Figure 1



Plate 1: Structure 19199 from north-east



Plate 2: Spread 19134, possibly raked-out material from some industrial process, from south-west

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1-41 Area 20-field O5s

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Summary

Wessex Archaeology was commissioned to carry out archaeological excavation and recording in Area 20 in the southern part of field O5 (O5s) at the Wylfa Newydd site. All works were carried out in accordance with the Written Scheme of Investigation (Horizon Nuclear Power (HNP) 2015), and Technical Update (HNP 2017), as agreed with Gwynedd Archaeology Planning Service.

The Site was centred on NGR 235160 392610, the total excavation area was 8,352 sq.m. It was located in the base of a shallow valley, 450 m to the west of the settlement of Tregele. The excavation revealed settlement and industrial remains dating from perhaps the Bronze Age to Romano-British periods; including several stone built roundhouses and enclosures. The remains were extensive and the stone structures generally well preserved.

The remains represent the largest prehistoric/Romano-British settlement yet discovered on Anglesey. The duration of activity on the site is also exceptional and the remains are relatively well preserved. As such the Site has been interpreted as nationally significant prior to formal assessment of the results. Assessment is recommended for all data categories. The data from this site should be considered in the analysis and publication of the whole Wylfa Newydd site.

Wylfa Area 20, Field O5s

Site Summary Report

1 INTRODUCTION

1.1.1 Wessex Archaeology undertook archaeological excavation in Area 20 in the southern part of field O5, known as O5s (**Fig. 1**; 'the Site').

1.1.2 The work was carried out in accordance with the 'Technical update to the Written Scheme of Investigation for archaeological trial trenching and excavation: Investigation in Field O5. (Horizon Nuclear Power (HNP) 2016) and the original Written Scheme of Investigation produced for all trial trench evaluation and excavation (HNP 2015). These documents detailed the rationale, aims, methodologies, and standards to be employed during the work. All documents were agreed with Gwynedd Archaeology Planning Services (archaeological planning advisor to Isle of Anglesey Council) prior to work starting. This document has been produced in accordance with briefing and guidance from Wardell Armstrong LLP.

1.1.3 This excavation was one element in a large scheme of works associated with the proposed construction of a nuclear power station at Wylfa. This Site Summary Report (SSR) has been commissioned by HNP as a supporting document for the application for the Development Consent Order (DCO) and represents the first phase of post excavation analysis regarding the archaeological investigations at the Wylfa Newydd site.

1.1.4 Historic Environment Record event numbers ('PRNs') were assigned following discussion with Nina Steel, Senior Historic Environment Record Archaeologist at Gwynedd Archaeological Trust. PRN45392 has been assigned to the Wylfa Newydd project as a whole and further event numbers have also been assigned to 'noteworthy components' of the project. Within Areas 18, 19 and 20, PRN76023 has been assigned to Romano-British activity, PRN76023 has been assigned to Iron Age activity, and PRN76024 has been assigned to the earliest phase of prehistoric activity.

2 BACKGROUND

2.1.1 The works were centred on NGR 235160 392610 (**Fig. 1**). The total area of excavation was 8,352 sq.m.

2.1.2 Area 20 is located on a north facing hillside and the base of a shallow valley, 450 m to the west of the settlement of Tregele. The Site slopes down from 26.90 m above Ordnace Datum (aOD) in the south of the site to 19.50 m aOD in the north west of the site (Headland 2017).

2.1.3 The underlying geology consists of metaphoric mica schist and psammite bedrock overlaid by superficial deposits of Devensian till (BGS 2019).

2.1.4 Archaeological work carried out in association with the project prior to the excavation of Area 19 included:

- *desk based assessment (Cooke et al. 2012)*
- *geophysical surveys (ASWYAS 2015; Hopewell 2011a-b; Hopewell 2012) and*
- *trial trenching (Wessex Archaeology 2016).*

2.1.5 The results of the preceding phases of work are summarised below. No other significant archaeological investigation has taken place within the area prior to the excavation of Area 20.

3 AIMS AND OBJECTIVES

3.1 Specific aims

3.1.1 The specific aims of the work within this site, as described in the WSI (HNP 2015; 2016), were:

- *To establish the true nature and function of the various archaeological remains present, specifically to identify the presence of any agricultural, domestic, industrial or ritual activity and the character of such.*
- *To establish the condition, age and stratigraphic sequence, of any archaeological / historical remain identified.*
- *Gain information on the past environment of the landscape surrounding the investigation area via the recovery, and study, of micro and macro fossils from the feature fills.*
- *To understand how the remains seen within the investigation area relate to other known features across the landscape (chronologically, stratigraphically as well as spatially), with particular reference to the prehistoric activity in the fields to the west and the medieval activity to the north.*

3.2 Research objectives

3.2.1 In addition, a series of research objectives for the excavation of Area 20 were defined in the technical update (HNP 2016) based on a review of relevant archaeological research framework documents.

4 METHODOLOGY

4.1.1 All work was undertaken in accordance with the detailed methodology set out in the WSI (HNP 2015) and technical update (HNP 2016) and in compliance with current standards and guidance, e.g. CIfA guidance (CIfA 2014a-c) and Historic England guidance (Historic England 2015).

4.1.1 All archaeological features were investigated and recorded as per standard procedure set out in the Wessex Archaeology fieldwork manual (Wessex Archaeology 2015).

4.1.2 Environmental sampling was undertaken in accordance with Wessex Archaeology's Guidelines for Environmental Sampling (Wessex Archaeology nd) along and current guidance provided by Historic England (English Heritage 2011).

5 ARCHAEOLOGICAL RESULTS

5.1 Historic map evidence and documentary data

5.1.1 An examination of historic maps in the Desk Assessment (Cooke et al. 2012) concluded that the existing field pattern in the area may have ancient origins, and that further field systems and boundaries were likely within the Site.

5.2 Geophysical survey results

5.2.1 The geophysical survey of the Site was inconclusive and the responses that were apparent were interpreted as changes in the underlying geology (ASWYAS 2015).

5.3 Evaluation results

5.3.1 Evaluation trial trenching took place in 2016 (Wessex Archaeology 2016; Headland 2017). 24 trenches were dug in Field O5. The trenches were 1.8 m wide and between 30 m and 50 m long.

5.3.2 Eleven of the trenches identified archaeological remains consisting of boundary ditches, pits, postholes, stone deposits and a subterranean structure. Area 20 was focused on three trenches 371, 373 and 1301, which revealed a potential burnt mound and a packed stone deposit which was interpreted as consolidation for the wet ground.

5.4 Excavation results

General stratigraphy

5.4.1 The topsoil was 0.15–0.25 m thick and generally comprised mid brown grey silt, it overlay mid-brown grey silt clay subsoil around 0.15 m thick. The underlying geology comprised orange brown clay with occasional pebbles and cobbles.

Site formation

5.4.2 Layers of colluvium (hillwash) were present on the central slope and across the flat valley floor in the northern part of Site. The colluvium was up to 0.5 m thick at the base of the slope and present in large areas across the upper slope and valley floor. At least two major layers were identified which sealed significant archaeological horizons. The colluvium closely resembled the mixed glacial till (the natural geology), and in some cases was only identified by following archaeological features which extended below it.

Bronze Age/Iron Age (PRN76025)

5.4.3 Evidence for early settlement and activity was recorded along the valley floor. This activity may date to the Bronze Age or perhaps to the Iron Age. In the north-west were two groups of pits (eg 331132 and 331734) which contained occasional prehistoric (currently thought to be Bronze Age) pottery (**Fig. 2**). The group furthest to the east contained large posthole type pits in an arc and may represent a circular building (**Fig. 2**).

5.4.4 In the north of the Site was a substantial burnt mound (30307), which sealed a clay lined trough (**Fig. 2**). The mound had been used as a base for an Iron Age roundhouse (20984) (**Fig. 3**).

Iron Age (PRN76024)

5.4.5 The Iron Age remains were the most prominent and extensive remains on site. They consisted of ten stone built roundhouses (330577, 331596, 331235, 331373, 20984, 331249, 333568, 331694, 331838 and 331741), three stone lined wells (332554, 331724,

and 333678), five slab lined storage pits (331418, 30153, 20602, 30406 and 330947) and cobbled surfaces (**Fig. 3**). Storage pit 331418 is shown in **Plate 1**.

5.4.6 The walls of the roundhouses consisted of an inner ring of orthostats (upright stone slabs) laid edge to edge, an outer ring of rough faced dry stone wall and stone rubble infill. A detail of wall 331974 from roundhouse 330577 is shown in **Plate 2**. Large flat orthostats, placed perpendicular to the wall terminals marked the entrance and some houses (330577 and 331596) had large slab thresholds. The floors were compact clay and had curved, stone built capped drains running across the centre and around the edges of the houses. Drain 331066 under roundhouse 20984 is shown in **Plate 3**. House 330577 showed evidence for replacing and rerouting the drain. There were also occasional pits and postholes of various size, form and layout within the houses; it was not always clear whether these were associated with the house.

5.4.7 The roundhouses were between 9 m and 11.30 m in diameter and were in varying states of preservation. Some structural remains (walls and/or drains) and rubble remained in all examples. Most orthostats had been removed; these may have been taken by farmers to avoid plough damage and/or for reuse (some similar stones are visible in the northern wall boundary of field O5). House 330577 had a well-preserved northern half containing upright orthostats, however the southern half of the structure had been completely removed.

5.4.8 Three substantial wells were recorded (332554, 331724 and 333678; **Fig. 3**). These were circular, between 1.20 m and 3.30 m in diameter and up to 1.50 m deep; they differed from the storage pits (see below) by having roughly coursed stone lining rather than upright slabs. Wells 331724 and 333678 had channels running south from the site boundary and the nearby brook. The channels sloped down southwards, indicating that they were drawing water from the brook to the well. Well 332554 did not have a channel but did have coursed internal linings and crude steps built into the side.

5.4.9 The storage pits (331418, 30153, 20602, 30406 and 330947) were approximately circular, up to 2 m across and 1.2 m deep (**Fig. 3**). They were lined with a single course of large upright stone slabs around 0.55 m across and were 0.9 m high from the base of the pit and a single flat slab at the base. There was no obvious evidence for use but all fills were sampled.

5.4.10 Two enclosure type structures (30491 and 20704) were partly constructed using orthostats (**Fig. 3**). Structure 30491 consisted of two rows of orthostats, 8 m and 13 m long, and 4.60 m apart. Enclosure 20704 consisted of a row of orthostats 13.30 m long with a 5.10 m long south western return at the south end. Two short 2.60 m southwest returns in the north half of the wall formed what may have been a small cell.

5.4.11 Two trackways (333656 and 332445) were identified running southeast to northwest directly downslope. Trackway 333656 was ephemeral and ran between roundhouses 331596 and 331373; trackway 332445 consisted of a patchy metalled surface within a slight hollow, which had later filled with dark brown soil (**Fig. 3**). It had a maximum width of 2.40 m. The edges were unclear and there was no evidence for a kerb or roadside ditch.

5.4.12 Surrounding the roundhouses along the northern edge of the site were patches of rough cobbling. It was best preserved between roundhouses 331373 and 331249, and along the northern edge of the Site. There were two distinct layers of cobbles, with the lower layer sealing potential Bronze Age features.

5.4.13 Three shallow, truncated gullies (333268, 333275 and 333187) in close proximity to each other were identified on the valley floor (**Fig. 3**). No finds were retrieved from these features and the dating is based on form and stratigraphic position suggesting they were from an early phase of the Iron Age.

5.4.14 A hollow-way (331618) ran southeast to northwest forming a boundary between the roundhouse 331373 (to the west) and the burnt mound 30307 (to the east), although the chronology of the feature is not yet well understood (**Fig. 3**).

Romano-British (PRN76023)

5.4.15 Four roundhouses (20864, 20871, 20774 and 30505) and two enclosure structures (20591/20637, 331848) were dated to the Romano-British period (**Fig. 4**). The features in this phase have been dated using a combination of finds, stratigraphy and construction methods.

5.4.16 Roundhouse 20864 (**Plate 4**) was located at the top of the slope in the south of the site (**Fig. 4**). It consisted of a drip gully, postholes and an internal circular stone capped drain; the gully diameter was 13 m. Several sherds of Samian pottery were found within colluvium associated with the roundhouse. The form and location of roundhouse 20864 informed the dating of roundhouses 20871 and 20774.

5.4.17 Enclosure 20591/20637 extended east from the east side of roundhouse 20864; it measured 18.60 m long (east to west) and was over 18 m wide (into the southern limit of excavation) (**Fig. 4**). The northern part of the enclosure consisted of a sunken rectangular area which ran the length of the enclosure and was 9.60 m wide. It was surrounded by a flush-faced dry stone wall which was best preserved in the north east corner; the inner faces of the sunken area appeared to have been faced. A small furnace, containing several sherds of Romano-British pottery, fed into the sunken area from the south. The southern part of the enclosure contained the furnace and the remains of large slab paving in the south east.

5.4.18 Roundhouse 20871 consisted of a ring gully 11.50 m across, and circular stone capped internal drain (**Fig. 4**). It was located on the valley slope; the northern half of the roundhouse was on an artificial platform up to 0.07 m thick, which created a level platform off the side of the slope. The platform overlay numerous early (possibly Bronze Age) pits.

5.4.19 Immediately east of roundhouse 20871 was trackway 332445, which was flanked by the Iron Age orthostats (30491). The southern row of orthostats appeared to have been reinforced by coursed stonework similar to that used in enclosure 20591/20637. The eastern end had a return running north which formed an enclosure with 20491 (**Fig. 4**).

5.4.20 Five metres east of the enclosure was roundhouse 20774, which was positioned at the top of the slope (**Fig. 4**). It also consisted of a drip gully, 9.20 m across, several postholes and a stone capped drain.

5.4.21 Roundhouse 30505 (**Fig. 3**) had been constructed at the north end of Iron Age structure 20704 (**Fig. 3**). It is possible that earlier structure was modified to accommodate the roundhouse. Assessment and analysis of the chronology of the Site may lead to a refined interpretation of the relationship of these features. On the outside roundhouse 30505 had a drip eaves gully, but there were limited features in the interior.

Undated

5.4.22 Many features and some structures cannot yet be assigned a period and will be dated following stratigraphic, artefact and environmental assessment. These include the pits in the southern part of the site and the postholes, pits and surfaces in the northern corner of the site.

Finds and dating evidence

5.4.23 This site produced a relatively large assemblage in which animal bone, pottery, fired clay and stone are well represented; other finds types (ceramic building material, metalwork, slag, glass and wood) occurred in small quantities.

5.4.24 Dating evidence is provided primarily by the pottery, and this includes prehistoric, Romano-British and post-medieval/modern material. The prehistoric sherds are undiagnostic, but on fabric grounds at least one sherd could be Neolithic. The Romano-British assemblages consists largely of a mixture of samian and Black Burnished ware.

5.4.25 The metalwork includes one datable object, a one-piece sprung brooch of early to mid-1st century AD date. Other metal objects include iron nails, with some objects unidentifiable in advance of X-raying.

5.4.26 There are a small number of pieces of struck flint and chert, but not including any chronologically diagnostic pieces. However, of interest amongst the stones are at least ten spindle-whorls (disc and cylindrical forms; one bun-shaped example has an incomplete central perforation and there is one other cylindrical object of the right size that could be a 'blank'), and seven slate fragments, roughly trimmed to disc shapes and with a central or slightly off-centre perforation. The latter are unlikely spindle whorls due to their irregularity, but could perhaps have functioned as fishing weights. Three further slate 'discs' are unperforated. Other stone objects include quern fragments (at least two saddle querns, one complete rotary quernstone and fragments of at least two others), and two objects that could have been used for grinding (objects with interiors hollowed out), while at least three, and possibly four pebbles show signs (wear marks) of having been used as rubbers or pounders. Two other ovoid pebbles have worn grooves around the girth, suggesting that they may have functioned as weights (perhaps thatch weights).

5.4.27 The fired clay includes some fragments with burnt/vitrified surfaces that could be interpreted as hearth lining, and there is a very small quantity of slag, but this is light and vesicular and, while presumably a by-product of some pyrotechnical activity is not necessarily to be associated with metalworking.

5.4.28 Quantities of animal bone are skewed by the presence of one large group (roughly 8.5 kg) from a single context (cattle) which is a modern burial, this was mentioned by a local farmer on site. The rest of the bone is very fragmentary and is likely to contain a high proportion not identifiable to species.

5.4.29 Other finds (post-medieval glass, unworked wood) are not considered to be of any significance to the site.

5.5 Environmental

5.5.1 A total of 363 environmental samples comprising 851 ten litre buckets were collected from archaeological deposits at Area 20 for processing using a flotation method in order to identify potential botanical and faunal remains that may be present in the samples.

5.5.2 Key features comprised pits, ditches, postholes, occupation layers, and well fills. No waterlogged deposits were encountered. Deposits were sampled appropriately in accordance with national guidance and the Wessex Archaeology sampling policy.

5.5.3 There is a high potential for environmental information from the sampled features to provide information on the natural environment and farming practices. Burnt material and occupation layers from within the structures may inform on industrial processes.

5.5.4 Finds were relatively scarce; bulk sample processing will increase the finds assemblages and allow more accurate dating of deposits.

5.5.5 C14 dating will be an important method of dating the remains, especially the Bronze Age deposits.

5.5.6 Overall, the rate of recovery of datable artefacts during excavation is notably poor in the region. As such, environmental samples are of high importance to provide data helping to establish a chronology and narrative. Because of this, as it is possible that charred plant remains will be present for use in absolute dating methods in samples from the archaeological features, it is critical that the archaeological potential of these deposits with regards to the environmental data is assessed following processing.

5.6 Quantification of excavation data

Table 1 Quantification of excavation data

Data Category	Number
Contexts	4274
Small finds	77
Bulk finds	28.023kg
Environmental samples	363 samples (8510 litres)
Monochrome film	0
Digital photographs	20,000
Rectified photographs	6,000
GPS surveyed digital pre-excavation plans	✓
GPS surveyed digital excavation plans	✓
TST surveyed digital excavation plans	x
Hand drawn plans	399
Hand drawn sections	986

5.7 Recommendations for further work

5.7.1 All data categories should go to assessment and an assessment report should be produced for this site.

Table 2 Recommendations for further work

Quantification of archive	✓
Assessment of significance	✓

Further analysis of key data categories	All data likely to warrant further analysis
Publication of key data categories	All data categories should be included in the overall analysis and publication
Deposit archive	✓

6 DISCUSSION

6.1.1 Area 20 contained highly significant archaeological remains which had not been anticipated in this part of Anglesey. The remains from the Bronze Age, Iron Age and Romano-British periods were extensive, moderately well preserved and rare in terms of scale and density.

6.1.2 Bronze Age burnt mounds and pit groups are well known on the island. These remains provide evidence for exploitation of natural resources and will contribute to our knowledge of the Bronze Age landscape.

6.1.3 The Iron Age remains consisted of stone built roundhouses, wells, storage pits, enclosures and trackways. A feature of this period is the use of large stone slabs; the roundhouses and enclosure walls were constructed using orthostats and the storage pits were lined with upright slabs. Water management was also an important feature, two of the wells appeared to draw water from a nearby stream and some of the roundhouses were slightly raised (one was positioned on the burnt mound), perhaps to avoid wet ground. All houses contained capped drains, although it is not clear whether these were for general drainage or a specific industrial purpose. Some houses contained evidence for activity such as hearths and burnt deposits.

6.1.4 There were very few finds and preservation of soft deposits was moderate, probably due to the regular annual flooding, however the preservation of the structural remains, including internal drains, coursed walls and orthostats, was exceptional. The results will contribute significantly to our knowledge of Iron Age settlement, construction methods, industry, and the relationship with the landscape (specifically water management).

6.1.5 The Romano-British remains were similar, consisting of roundhouses and associated enclosures, and there is no evidence for a hiatus in settlement. The roundhouses had no stone walls but retained the capped internal drains. They were located further up the slope than the Iron Age houses. It is likely that the Iron Age and Romano-British structures were occupied at the same time, and the location of the later Roman buildings gave them vantage over the existing Iron Age roundhouses.

6.1.6 Remains of stone buildings are known in Anglesey (eg Din Lligwy) but not of this scale and density. Although the site at Din Lligwy superficially resembles the stone-built roundhouses from this site that have preliminarily ascribed to the Iron Age, similar structures at Din Lligwy date to the 3rd–4th centuries AD. Parallels for the Area 20 site are not limited to Din Lligwy.

6.1.7 Assessment and analysis should seek to refine the chronology and function of the structures. The apparent abandonment of building styles such as flush-faced walling may represent a shift in the power structures of the island. The relationship between this Site

and Area 4 should also be considered in this respect; Area 4 contains a large Roman military site which directly overlooks Area 20.

6.1.8 All these remains have been interpreted as nationally significant at this stage prior to formal assessment of the results. The significance of the site is due to the scale, preservation and rarity of the remains. It is worth nothing that the well preserved structural remains extend beyond the limit of excavation to the west, north and east, and therefore the true scale and significance of the settlement is not known.

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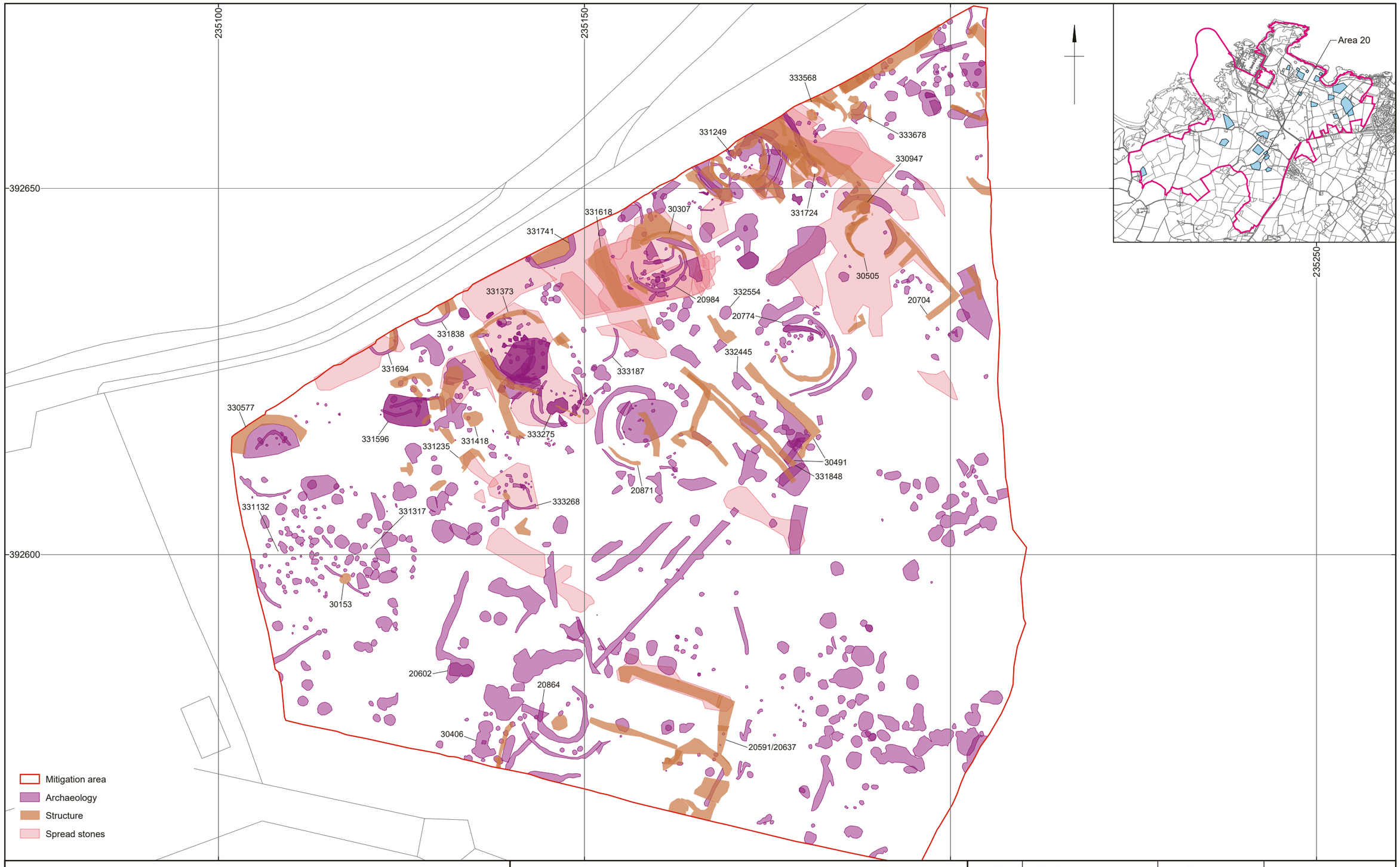
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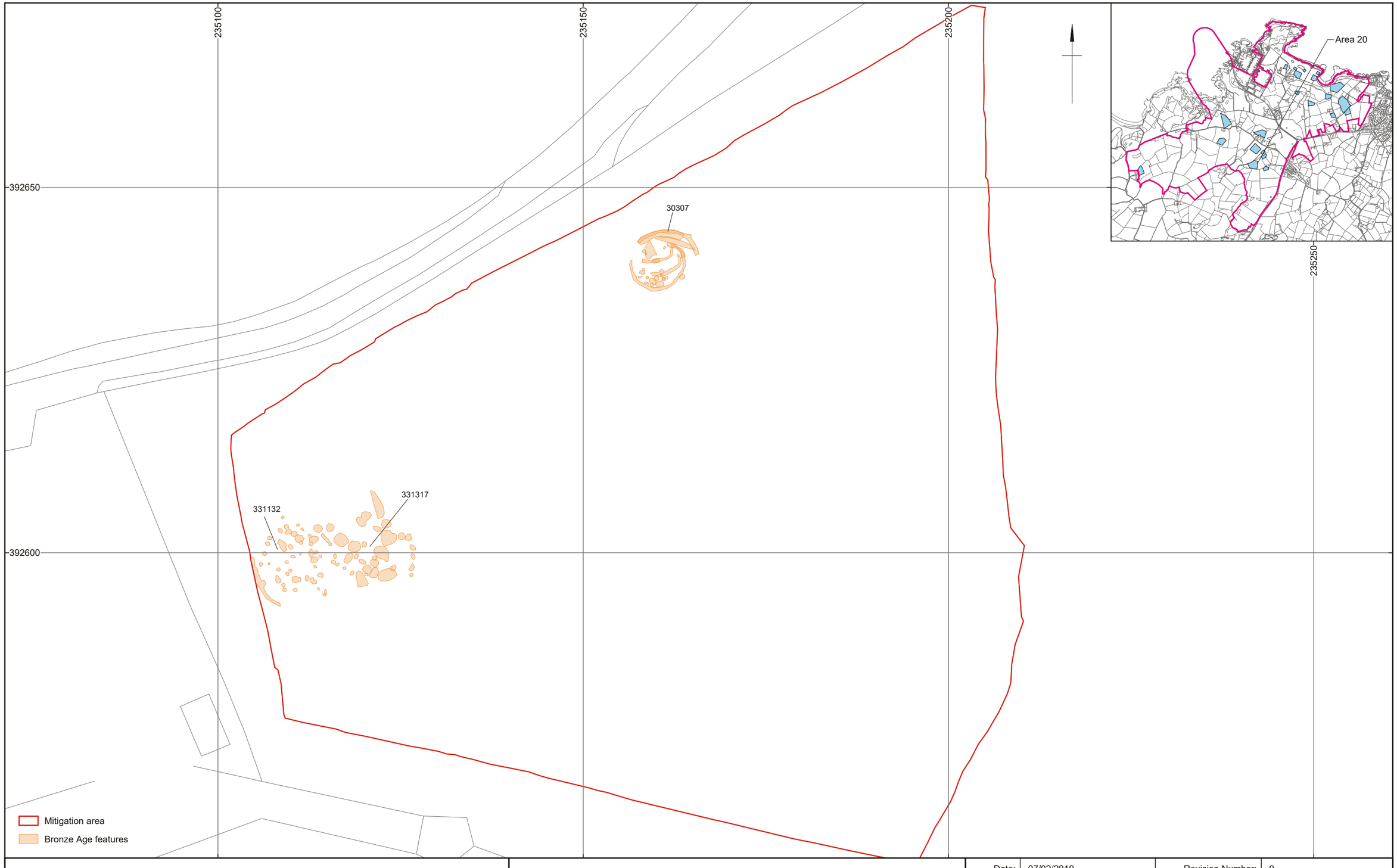
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Wylfa mitigation Area 20 plan

Figure 1



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Wylfa mitigation Area 20 early (Bronze Age?) phase plan

Figure 2



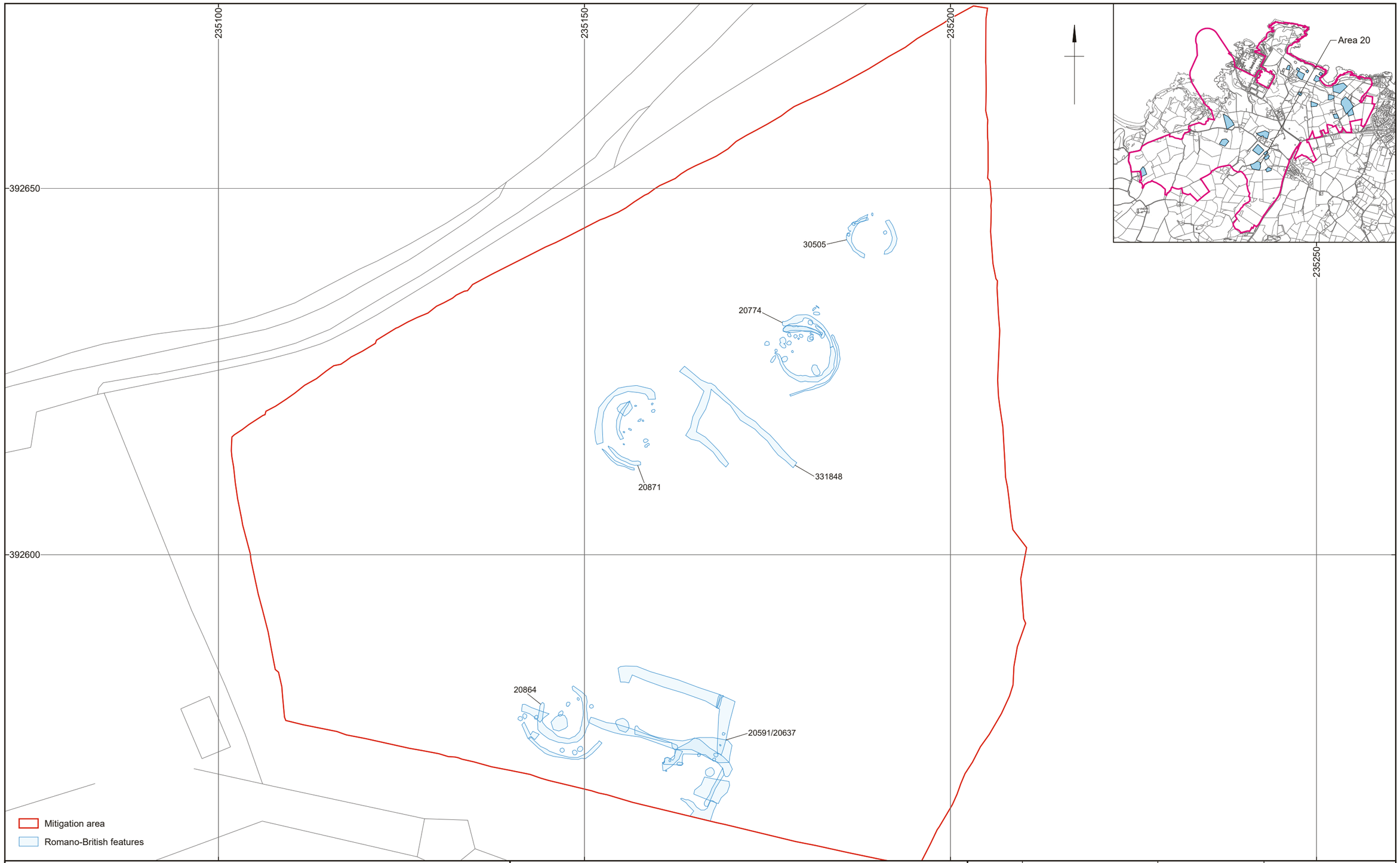
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Wylfa mitigation Area 20 Iron Age phase plan

Figure 3



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Wylfa mitigation Area 20 Romano-British phase plan

Figure 4



Plate 1: Stone-lined pit 331418 from south



Plate 2: Detail of wall 331974 of roundhouse 330577 from south-west

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Plate 3: Drain 331066 under roundhouse 20984 from south-east



Plate 4: Roundhouse 20864 from south-east

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