Tarradale Through Time 2017

Mesolithic Shell Middens at Tarradale, Muir of Ord

Archaeological Evaluation and Test Pitting

Data Structure Report

AOC Project Nos.: ***70215-2A, 70215-2B***

Date: ***13th December 2017***

AOC Archaeology Group

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On Behalf of:	***Tarradale Through Time*** **North of Scotland Archaeological Society**
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Abstract

This report details the results of a programme of archaeological evaluation and test pitting undertaken at two sites near Tarradale House, Muir of Ord on behalf of North of Scotland Archaeological Society (NOSAS).

The fieldwork included open area excavation on the site of previous evaluation undertaken by NOSAS in 2015 to the southeast of a raised beach terrace at Tarradale House (2B) and test pit and trial trench evaluation at a new site on a raised promontory to the east of Tarradale House (2A).

At Site 2B, a rigorous programme of sampling of a shell midden layer has provided information to characterise its content which consists primarily of oyster, cockle, periwinkle and mussel shell along with small amounts of mammal and fish bone, worked bone/antler artefacts and struck stone objects. Several highly significant artefacts were recovered. These include an antler harpoon, fragments of antler mattocks and a bone point. Below the upper shell midden, excavation revealed potential structural remains in the form of stone settings associated with a lower shell-rich layer.

At Site 2A, a small area of test pit excavation on the surface of the ridge was limited by extensive tree root systems. The test pit excavation identified a shell-rich horizon and evidence for human modification in the underlying subsoil. Evidence for stone tool manufacture and possible vitrified residues were also present. At the base of the terrace, two evaluation trenches uncovered a rich shell midden layer dominated by cockle, periwinkle and oyster shell that contained some animal bone and possible worked quartz. Similarly to Site 2B, the upper shell midden covered a cobbled layer, which overlay an underlying shell horizon.

On-site wet sieving and sorting of shell midden samples was undertaken by volunteers of the North of Scotland Archaeological Society.

1.0 Introduction

1.1 *Tarradale Through Time* (TTT) is investigating the multi-period archaeological landscape around Tarradale House, near Muir of Ord, located in Ross-shire in the north of Scotland. Under the direction of the North of Scotland Archaeological Society (NOSAS), *TTT* aims to interpret the chronological development of settlement through a series of community archaeology projects on five key sites.

1.2 Field-walking by NOSAS had located 8 spreads of shell midden within ploughsoil along the top and base of a raised beach shoreline to the east and west sides of Tarradale House. The middens are believed to represent the earliest occupation evidence at Tarradale, dating to the Mesolithic period, c 7,000-8,000 years ago. A programme of archaeological evaluation and test pitting, led by AOC Archaeology Group and West Coast Archaeological Services, and undertaken by community volunteers, was carried out during October 2017. The purpose of the fieldwork was to examine the shell midden layers and associated buried archaeology present on the shell midden sites. Two sites were targeted: 2A located on a raised promontory to the east of Tarradale House and 2B located at the base of a raised beach terrace at Tarradale House.

2.0 Site Location

2.1 Site 70215-2A (east site) was located on top of a promontory to the east of Tarradale House (**Figure 1**). The promontory, a low ridge aligned NW-SE, would have formed a prominent area of raised ground along the early post-glacial shoreline (**Plate 1**). The site was located under dense vegetation and had not been ploughed in recent times, although an area at the northwest end of the ridge had been reportedly quarried by local farmers in recent years for gravel extraction.

2.2 Site 70215-2B (west site) was located at the base of the raised beach terrace on the southeast side of the grounds of Tarradale House (**Figure 1**). The site had been investigated previously by NOSAS in 2015 and was located under rough grasses and extending into the ploughed field on the south side (**Plate 2**).

Plate 1: *View SE across the promontory, Site 70215-2A (Beauly Firth to right)*

Plate 2: *Looking W across the location of Site 70215-2B*

3.0 Archaeological Background

3.1 Overview

3.1.1 The *Tarradale Through Time* (TTT) project is investigating and recording the multi-period archaeological remains of the Tarradale landscape – 750 hectares of mainly agricultural land east of Muir of Ord, on the north side of the Beauly Firth in Ross-shire in the Highlands of Scotland. Previous work has consisted of numerous programmes of field-walking, metal-detecting, geophysical survey and desk-based research. *TTT* is a community archaeology project, engaging with local and regional members of the community in outreach, training and volunteer opportunities.

3.1.2 Today, the Tarradale landscape consists of raised estuarine beaches situated at the west end of the Beauly Firth on the north side of the River Beauly. The ground comprises regularly ploughed flat or gently undulating improved ground, which rises to the north towards the Mulbuie Ridge – a natural landscape feature containing many notable prehistoric monuments. Cropmarks visible on aerial photographs (by Jim Bone) have revealed evidence for extensive buried archaeology in the landscape, with a particular concentration of sites between Tarradale House and Gilchrist to the northwest. The features identified include a significant barrow cemetery, rectilinear and circular enclosures and a linear road NW of Tarradale House; a ring-ditch near Bellevue Farmhouse; enclosures and pits near Bellevue Cottages; an occupation site between Bellevue Cottages and Balvattie; and three concentric ditches at the end of a small promontory at Gilchrist thought to represent a fort or defended site. A Neolithic chambered cairn is also present in the Tarradale landscape.

3.1.3 Between 1991-1993, excavation of a cropmark enclosure by G D B Jones identified the remains of a ditched enclosure, post-built structures and hearths in the field NW of Tarradale House. The work suggested that there was a Late Bronze Age/Early Iron Age period of unenclosed settlement and a mid-1st millennium AD phase of enclosure in addition to Mesolithic activity (Gregory and Jones 2001). In 2013, a magnetometry survey was undertaken by the University of Aberdeen of an adjacent area thought to contain a barrow cemetery on the basis of cropmarks. The survey revealed numerous anomalies identified as possible circular and square barrows and enclosures. In 2015, a gradiometer survey was undertaken by AOC Archaeology over an area to the northwest of the barrow site. The survey identified several high positive anomalies providing evidence for the presence of archaeological remains, but highlighted the difficulty of interpretation as a result of the ephemeral nature of the sites and the mixed ground and soil conditions.

3.1.4 During several years of field-walking in ploughed areas, TTT volunteers have found extensive evidence of multiple prehistoric and later periods of occupation in the landscape. These finds include a late Bronze Age socketed axe head and Migdale-type flat bronze axe, Bronze Age arrowheads and Beaker pottery, a Neolithic leaf-shaped arrowhead and two polished stone axe heads, as well as extensive scatters of predominantly flint lithics.

3.2 Mesolithic Landscape

3.2.1 Potential Mesolithic evidence has been found at Tarradale. Eight shell midden sites, comprising spreads of marine shells, were recorded by NOSAS at locations found along the

top and base of the raised beach shoreline to the east and west of Tarradale House (**Figure 1**). The raised beach represents a former shoreline that now appears further inland due to sea level changes associated with isostatic rebound after the last ice age and the reclamation of land for farming practices. Project volunteers undertook auguring at the sites to reveal that the shell midden layers survived below the plough soil (Grant 2016).

3.2.2 One shell midden site located 500m to the west of Tarradale House (marked as 'C' in Figure 1) was previously excavated by NOSAS in 2015 by test pit excavation. The test pits revealed that a 0.25m-0.3m deep shell midden layer survived in this area, deepening towards the downslope (SW) side. Analysis of the shell layer showed that mussels and periwinkles predominated the assemblage. At least two dark organic lenses are visible in photographs of the test pit sequence, layers that are interspersed between what appears to be an upper shell midden and a lower shell midden layer, and probably representing occupation horizons.

3.2.3 A second shell midden site (70215-2B) was investigated by NOSAS at the base of a terrace located to the east side of Tarradale House. A shell midden layer was uncovered at 9m OD above a gravel/cobble layer along the top of the former shore. The small trench evaluation located a marine mollusc shell midden (context 3), which also contained an antler tine, butchered animal bone (Grant 2016) and fish bones of pollock/saithe, herring, cod and goby (Ceron-Carrasco 2015). Charcoal sample analysis identified a diverse range of charcoal types: alder, birch, hazel, oak, ash, Scots pine, elm and willow – representing use as domestic fuel from the local woodland resources that would have been present during the Holocene Period (Ramsay undated). A sample of antler from the midden was radiocarbon dated to 6204-6005 cal BC (SUERC-46140) and a charcoal sample was radiocarbon dated to 6632-6480 cal BC (SUERC-46141). The shell midden layer covered a surface of small stones and gravel with possible evidence for large stone settings.

3.2.4 NOSAS has also recovered significant quantities of flint, quartz, and chert debitage, including struck flakes and microliths (**Plates 3-5**), during several years of field-walking across the ploughed fields in the landscape surrounding Tarradale House. The majority of the lithics comprise flint, many of which appear to represent Mesolithic debitage, scrapers and cores on the basis of the small size (less than 50mm); bloodstone was also believed to be present in the assemblage. Particular concentrations seem to be associated with the locations of the shell middens (Grant 2016).

3.3 Mesolithic Research

3.3.1 The Mesolithic of Scotland has generally been characterised by lithic scatters, distinctive bone and antler artefacts, and shell middens, especially in coastal locations (ScARF 2012). Few in situ features survive on many sites, while organic or faunal material is usually absent on open-air lithic scatter sites. However, a wealth of faunal evidence is preserved in the alkaline conditions of some of the shell middens and within caves and rock shelters. Shell midden sites are by no means common in the Scottish Mesolithic record, but because of the rich environmental and artefactual remains they produce, they play a dominant role in accounts of the period. This makes the investigation of the shell midden sites at Tarradale of paramount importance to the understanding of some of the earliest settlers of Scotland, including the associated economic evidence. The period as a whole provides the foundation

for the human occupation of Scotland and is crucial for understanding prehistoric society, both in Scotland and across Northwest Europe.

3.3.2 Shell middens have always loomed large in the study of Mesolithic Europe (Milner *et al.* 2007) and have exerted a powerful influence on perceptions of coastal habitation; so much so, that midden sites have been considered a defining characteristic of the Scottish Mesolithic, often viewed as part of a mobile life-cycle. Yet they are rare in the Scottish Mesolithic and new Mesolithic sites are rarely middens. Existing midden sites display little consistency in size and content and while some have produced evidence for internal structures, some appear to result solely from specialised activities. The rich organic preservation, as found within middens, has ensured that these types of site have been well-studied in the past. Nevertheless, research has tended to group them together as if they represent a uniform phenomenon, despite the fact that in many cases all that they share in common is the presence of marine shells within a coastal location.

3.3.3 The end of the 1970s witnessed the start of a campaign to investigate shell middens including the large and enigmatic sites along the Forth Valley (Sloan 1982; 1983). The sites, located at Nether Kinneil, Inveravon, Mumrills, Cadger's Brae and Braehead, are extensive, extending to between 27 metres and over 150 metres in length, and primarily made up of oyster shells. The anthropogenic origin of the middens has continued to be suspected, however the presence of anthropogenic indicators including butchered domestic animals and ceramics at Nether Kinneil suggests otherwise, while radiocarbon dates place activity at the site in the 5th millennium BP (5-4000 cal BC). Some of the sites have produced earlier dates in the 6th millennium BP (6-5000 cal BC), thus a Mesolithic date for some of the sites at least seems probable (Ashmore 2004b). Other importance shell midden sites were investigated on the island of Oronsay between 1970 and 1979 (Mellars 1987).

3.3.4 One site that displays many similar characteristics to the Tarradale shell middens was excavated by Myers and Gourlay (1991) at Muirtown, Inverness. Also located on the shores of the Beauly Firth, the shallow and seemingly patchy nature of the shell deposits suggested a series of short-term occupations, with the well-defined concentrations of particular shellfish species representing the refuse from individual gathering trips or meals. However, the absence of stone tools and debitage, combined with the limited evidence for exploitation of other food resources other than shellfish, suggested a restricted function for the site. A single radiocarbon date obtained from Muirtown indicates activity for the earliest sequence of deposits in the 4th millennium BC, the final stages of the Later Mesolithic.

3.3.5 The shell middens that have been investigated to date have shown variations in the shells and other food remains they contain, while there is also considerable variation in their artefactual component. Excavations at some sites have also shown the importance of looking beyond the middens, especially around their periphery, where specific activity areas have been identified – indicating that midden data is essentially incomplete until the adjacent non-midden areas have been investigated (Pollard *et al.* 1996). The investigation of shell midden sites also have an important role to play in our understanding of the Mesolithic – Neolithic transition, with the potential to build new narratives that describe and explain what happened in Scotland from the first appearance of new life ways, at some time between 4300 BC and 4000 BC.

***Plates 3 - 5**: Selection of struck flint recovered by NOSAS during field-walking (provided by NOSAS)*

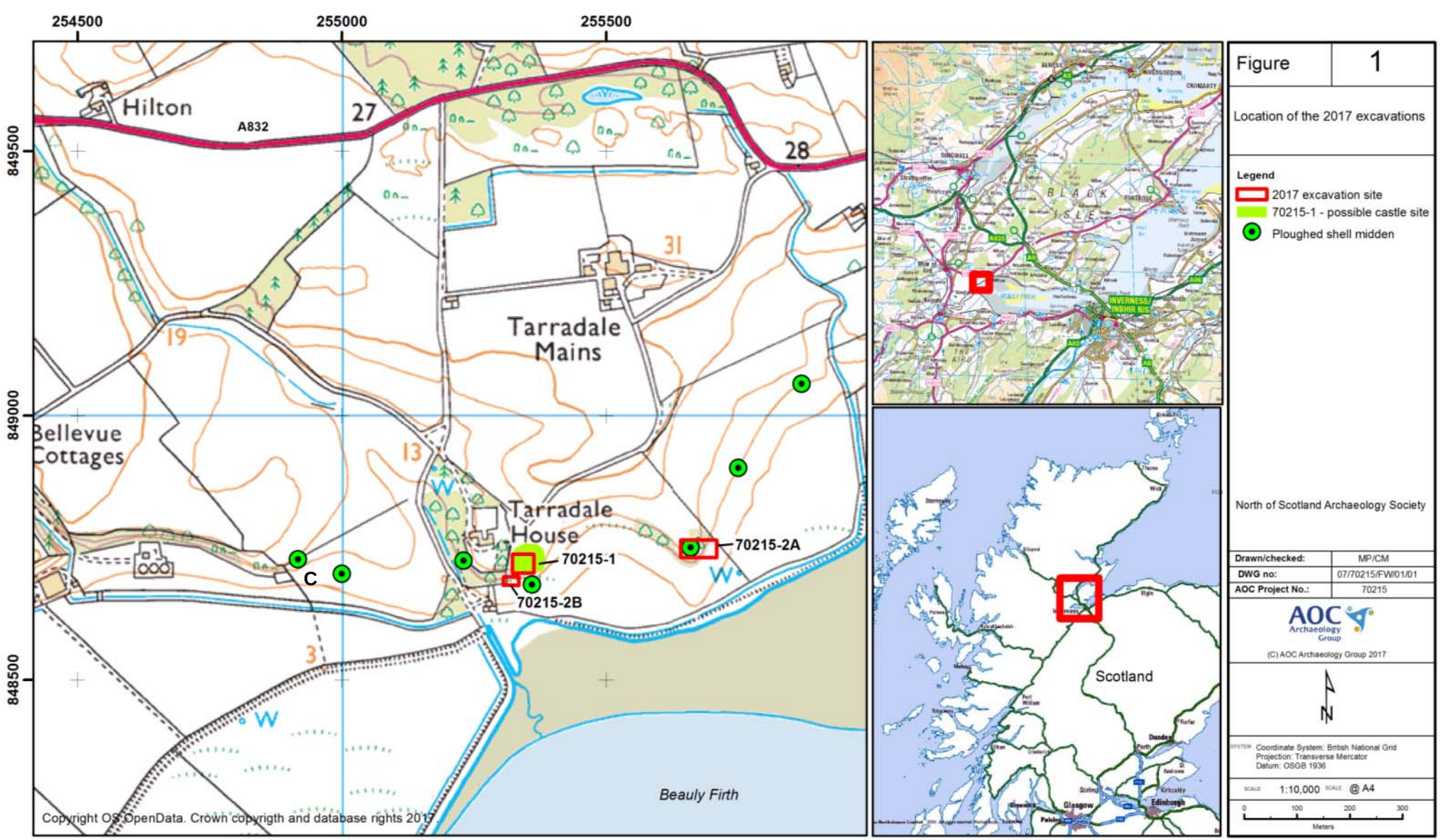

Figure 1: *Site location map of the 2017 excavations*

4.0 Fieldwork

4.1 Objectives

4.1.1 The *Tarradale Through Time* project research goals are to locate, interpret and record the significance and extent of archaeological remains at key sites. The primary objective is to improve the understanding of the archaeological and historical landscape by undertaking archaeological evaluation. The Chartered Institute for Archaeologists (CIfA) defines an archaeological evaluation as 'a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land... field evaluation defines their character, extent, quality and preservation, and enables an assessment of their worth in a local, regional, national or international context as appropriate' (CIfA 2014(a)).

4.1.2 The purpose of the Mesolithic project was to investigate the locations of shell midden sites at Tarradale. The aims of the archaeological works were:

i. To establish the presence or absence of archaeological remains within the area around the possible shell midden site
ii. To excavated by hand any overburden in order to expose the archaeological deposits
iii. To excavate, sample and record shell midden contexts and any associated features exposed within or below the layers
iv. To employ a robust sampling strategy for the 100% recovery of economic and artefactual material
v. To make recommendations for post-excavation work, including environmental analysis, shellfish analysis, artefact analysis and radiocarbon dating

4.2 Methodology

4.2.1 70215-2A – East site

Shovel pit investigation identified shell deposit locations on the surface of the ridge and at the base of the hill. As a result, six hand-dug, 1m^2 test pits were sited in these locations on the top of the ridge and two linear, 2m-wide trenches were excavated at the base of the ridge to the southeast side (**Figure 2**). This was a variance to the proposed project design (Birch and Peteranna 2017).

Five test pits, TP3-TP7, were excavated along the ridge, spaced out at 5m intervals along a central NW-SE aligned baseline. Two additional test pits (TP8-TP9) were excavated one-metre to the northeast side of TP4 and TP5. These two test pits were extended and joined up to form a trench (TP8/9) measuring 2.5m long x 1.5m wide.

On-site dry sieving was undertaken of initial samples from soil layers below the turf, which were found to be sterile of archaeological material. 100% sampling of the shell midden layers was undertaken for wet sieving from TP3 and TP4 and for on-site dry sieving of shell midden layers in TP8. One 10L sample per 10cm spit of each archaeological context was retained for off-site flotation or other sample processing/analysis.

Two trenches measuring 2m wide were excavated at the base of the ridge. Topsoil stripping was conducted under archaeological supervision by a mechanical digger fitted with a straight-edged bucket. Trench 1 (northeast trench) measured 6.5m WNW-ESE and Trench 2 (southwest trench) measured 8.6m WNW-ESE. Sub-trench excavation was undertaken to maximise volunteer time and resources. Approximately 75% of the shell midden layers excavated was processed by dry sieving on-site, with the exception of approximately 100L processed by wet sieving and 50L sampled and retained for processing under laboratory conditions.

4.2.2 70215-2B – West site

This site had been previously investigated with a 1m-wide trench aligned N-S from the base of the terrace. A trench measuring 8m x 6m was set out over the area of the previous trench (as determined by NOSAS). The actual area exposed varied from the project design proposal. Turf and topsoil were stripped under archaeological supervision by a mechanical excavator fitted with a straight-edged bucket.

The excavation site was laid out in 1m^2 grids for excavation of the shell midden layers. A rigorous sampling strategy was employed during the excavation process, with 100% bulk samples taken on alternate grid squares per 10cm spit on a mosaic patterning for wet-sieving. Individual 10L samples were also retained from each identified context and 10cm spit within the individual grid squares, for processing under laboratory conditions. Material excavated from other grid squares were subjected to 50% dry sieving to ensure that important artefacts or ecofacts were identified and retained for analysis. The sampling process generated a significant number of samples for on-site wet-sieving (summary of the results in Appendices 4; 5) and laboratory processing, with approximately 60% of the total shell midden deposits exposed on site removed through excavation.

4.2.3 General Methodology

Field recording was undertaken in accordance with standards of the MoLAS Archaeological Field Manual and current CIfA standards and practices and as per the project design (Birch and Peteranna 2017).

As stated above, a combination of wet and dry sieving was undertaken of all shell middens and associated samples per test pit/trench/grid for the retrieval of artefacts and ecofacts. This was conducted using low pressure water to sieve soil through a 1.5mm mesh. All samples were processed per context and depth with small finds retained for drying, recording and storage. All artefacts were treated as small finds, collected and retained and located by depth in the test pit/trench/grid. Bulk samples in 10L tubs were taken from archaeological contexts and shell midden layers for processing under laboratory conditions.

All features were allocated individual numbers and blocks of numbers were used for the two sites to easily distinguish different excavation areas. A record of the full sequence of all archaeological deposits is listed in Appendix 1. Plans were drawn at a scale of 1:20, with all test pit and trench sections drawn at 1:10 or 1:20.

Digital photographs were taken throughout the project, to include record shots of all features, structures and working shots. A Trimble Geo-XR RTK GPS rover was utilised for the recording of trench locations, grids and significant findspots in three dimensions. All three dimensional data and all site plans were entered into a GIS system referenced to the British National Grid.

5.0 Results: 70215-2A

5.1 Summary

5.1.1 Seven test pits and two trenches (**Figures 2-5**) were excavated at Site 2A, focussing on the locations of shell layers identified by shovel pits. A mixed shell layer up to 0.2m deep was uncovered on the surface of the promontory, concentrated near the southeast edge. A small amount of archaeological material recovered from the deposits included struck stone flakes (including a worked core), a small amount of mammal bone, a few possible ferrous slag or vitrified residue lumps and several possible struck quartz flakes. The struck stone flakes and stone core have been interpreted as material from coarse stone working. Thin mixed lenses of material (including shell) and a modified subsoil layer below the shell context indicated that further human activity may have taken place on the ridge – although the conclusions were unclear within the small area exposed.

5.1.2 The two trenches excavated at the base of the hillslope provided the opportunity to excavate the shell midden layer on the seaward side of the ridge. It contained a mixture of marine shell species, including oyster, cockle, periwinkle and mussel along with a small amount of animal bone, antler and possible struck quartz flakes. A concentration of oyster shell was present close to the base of the hill, while possible ash lenses were present at the downslope end. The upper shell midden covered a cobbled layer and underlying lower shell layer. The site formation processes relating to the shell midden, which appears to overlie a naturally-laid or man-made cobbled beach deposit, are unclear. It is possible that some of the material had been reworked by natural bioturbation or human activity.

5.2 Test Pits

5.2.1 The test pits were sited across the top of the ridge to the northwest of the trenches excavated at the base of the hill. Seven test pits were excavated over the centre of the surface spaced at a distance of 5m apart, targetting locations of shell identified by shovel pits. Five test pits assessed the shell midden layer along a NW-SE axis, determining that there was a concentration of shell at the southeast end of the ridge, which dissipated towards the northwest. Two further test pits were located to establish the extent of the layer towards the northeast. This showed that shell-rich layers were present across the ridge in this direction. The scope of the test pitting was limited by the ground conditions, which were littered with extensive tree root systems, and the number of volunteers present during the fieldwork.

5.2.2 Three of the test pits, TP5, TP6 and TP7 provided no archaeological results, excavating on to a sterile subsoil (404) below the topsoil. In contrast, the test pits toward the southeast end of the ridge uncovered a shell-rich silty layer including pea gravel. In Test Pit 3, this revealed a simple sequence of a shell midden layer (403) up to 0.20m deep, with 15-20% fragmentary

mussel, periwinkle, cockle, scallop and oyster shell, overlying a sterile subsoil. In Test Pit 4, the shell midden layer (405) contained a more dense shell concentration, with 50-60% fragmentary periwinkle, cockle, scallop and oyster shell up to 0.15m deep. Below shell midden (405), the underlying deposit (406) comprised mostly sterile subsoil with pockets of shell deposits. In places within this layer, mixed deposits suggested that human activity may have taken place and context (406) was interpreted as a modified subsoil, similar to (413) in Test Pit 8/9.

5.2.3 Two test pits, TP8 and TP9, investigated the area to the north of TP4. The two pits were extended and connected, revealing a more complex sequence of potentially archaeological layers. The upper deposits containing possible shell midden material, (407) and (408), appeared as a slight sediment change in the archaeological sequence. The upper shell midden (407) contained around 70% fragmentary shell, mostly mussel and some cockle and some small charcoal fragments. Below this, context (408) contained less shell (primarily cockle) with occassional clusters of cobbles that may have represented modification to the underlying subsoil (413). A lens of mostly sterile silt (414) also contained pockets of shell, suggesting it had been modified. The shell midden layers had built up against a large recumbent slab (411) representing what may have been a natural boulder ustilised as a setting. However, there was no evidence for any particular activity associated with it.

5.2.4 The shell midden layers from TP3 and TP4 were processed by wet sieving of 10cm spits. The remaining deposits in the test pits were dry sieved on-site, with the exception of soil samples retained for lab processing. The shell midden layers (403), (405) and (407) represent the same context, with the horizontal spread suggesting that the deposit extended over an area towards the southeast end of the ridge, deepest in the location of TP4. The lower layers containing shell, (406), (408) and (413), represented the same lower horizon, with evidence for possible stone clusters and cuts into the natural subsoil that may have represented human modification to the surface below the shell. Some of these patches were interpreted as possible stake-holes (412). While the large slab (411) represented an intriguing potential feature, there were no clear archaeological features identified in the archaeological sequence across the surface of the ridge.

5.2.5 Shell was retained for analysis, with visual identification suggesting that potentially a greater quantity of oyster shell concentrated in the upper 10cm spit of the midden. A small amount of charcoal and possible mammal bone was recovered during sieving. Interestingly, several fragments of a possible vitrified residue (SF408 and SF424) were found in the shell layer (405) in TP4. A possible iron rivet (SF419), struck stone flakes (SF417-8) and a worked stone core (SF413) (**Plate 6**) were recovered from the shell layer (407) in TP8/9. While the origin of the possible iron and vitrified material is unknown, the large struck stone flakes and worked core were an exciting discovery that may represent stone tool processing – providing definite evidence for human activity on the ridge.

5.3 Trench 1

5.3.1 Trench 1 was located at the base of the southeast side of the promontory, about 15m northeast of Trench 2. The ground sloped uphill from southeast to northwest, and the surface had a stepped appearance, believed to represent the edge of the ploughed area as it moved seawards over time. In Trench 1, a thick upper topsoil covered a short shell midden sequence that ran across the length of the trench and merged with a richer,organic soil at the

downslope (southeast) end. There were indications of hand-cut furrows through the middle of the topsoil horizon (**Plate 9**).

5.3.2 The primary shell layer (304) was described as a mid brown-grey silt with 60-70% small shell fragments of primarily cockle, periwinkle and oyster. A dense concentration of large, whole oyster shells (316) had formed in situ at the northwest (uphill) end of the trench within the upper shell midden (**Plates 11; 12**). A thin shell lens (305) overlay (304) and was thought to represent an area where the shell midden had been disturbed by cultivation. A small amount of mammal bone was recovered from the shell layers (304) and (305).

5.3.3 At the southeast end of the trench, a dark gritty silt (302) ran over the shell midden (304). It contained scattered small cobbles, some small charcoal fragments and thin shell-rich lenses at the base. This layer abutted a gravel layer that contained some cobbles (310).The sequence was similar to the shell and cobble layers in Trench 2.

5.4 Trench 2

5.4.1 Shell Midden

The archaeological sequence in Trench 2 (**Plate 10**) was similar to the sequence in Trench 1, with an upper shell midden layer overlying gravelly cobbled surface. The sequence was mostly in situ across over half of the trench. Over the northwest (upslope) end, the sequence had suffered disturbance by significant large tree root activity, burrowing and insertion of a burial pit.

The upper layer (307) in the archaeological sequence consisted of a mixed silt with 30-40% small shell fragments at the base of which was a layer of small cobbles. Removal of the cobbles revealed a rich shell midden layer up to 0.15m deep consisting of fragmentary shell (cockle, mussel, periwinkle and oyster) mixed with patches of blackened silt/ash that contained some small charcoal fragments and mammal bone. This layer continued to the northwest side of the trench baulk, as shell midden (315), where there was significant disturbance due to large tree roots and bioturbation. A thin gravelly silt layer (317) formed the base of the sequence, containing infrequent small shell fragments over sterile subsoil.

The archaeological sequences in Trench 1 and Trench 2 was similar, with the upper shell midden appearing over a gravelly cobble surface, below which a dense, compact shell midden layer contained pockets of darker silt with charcoal inclusions – possibly representing ash layers – towards the downslope end of the trench.

5.4.2 Human burial

Within the topsoil sequence, an oval, shallow pit (311) contained the remains of a sheep burial (**Plate 7**), which had been disturbed by a large tree root. Intriguingly, approximately 1m to the northwest of this, the surface of a pit (314) containing a human burial was uncovered near the base of the lower topsoil (303) layer. The pit had cut through the shell midden layer (315), but had not been immediately visible due to the bioturbation and tree root activity. After removal of the upper fill of the pit, the surface of a human skull was identified and the

edges of the cut defined (**Plate 8**). The pit measured 0.6m wide and at least 1.6m long but extended about 0.1m further beyond the northwest side of the trench edge.

There was no clear indication of a date for the human burial other than the stratigraphy identified in the trench section. Despite the disturbance by tree roots and burrowing, it appeared that the pit had partly cut through the lower ploughsoil layer and had cut through the underlying shell layer. This indicated that the burial pit dated to before the formation of the turf and topsoil and post-dated the shell midden formation by considerable time. The feature was left unexcavated in situ.

Plate 6: *SF413, struck stone core from Test Pit 8/8*

Plate 7: *Sheep burial (311), facing WSW*

Plate 8: *Human burial pit (314), facing WSW (not excavated)*

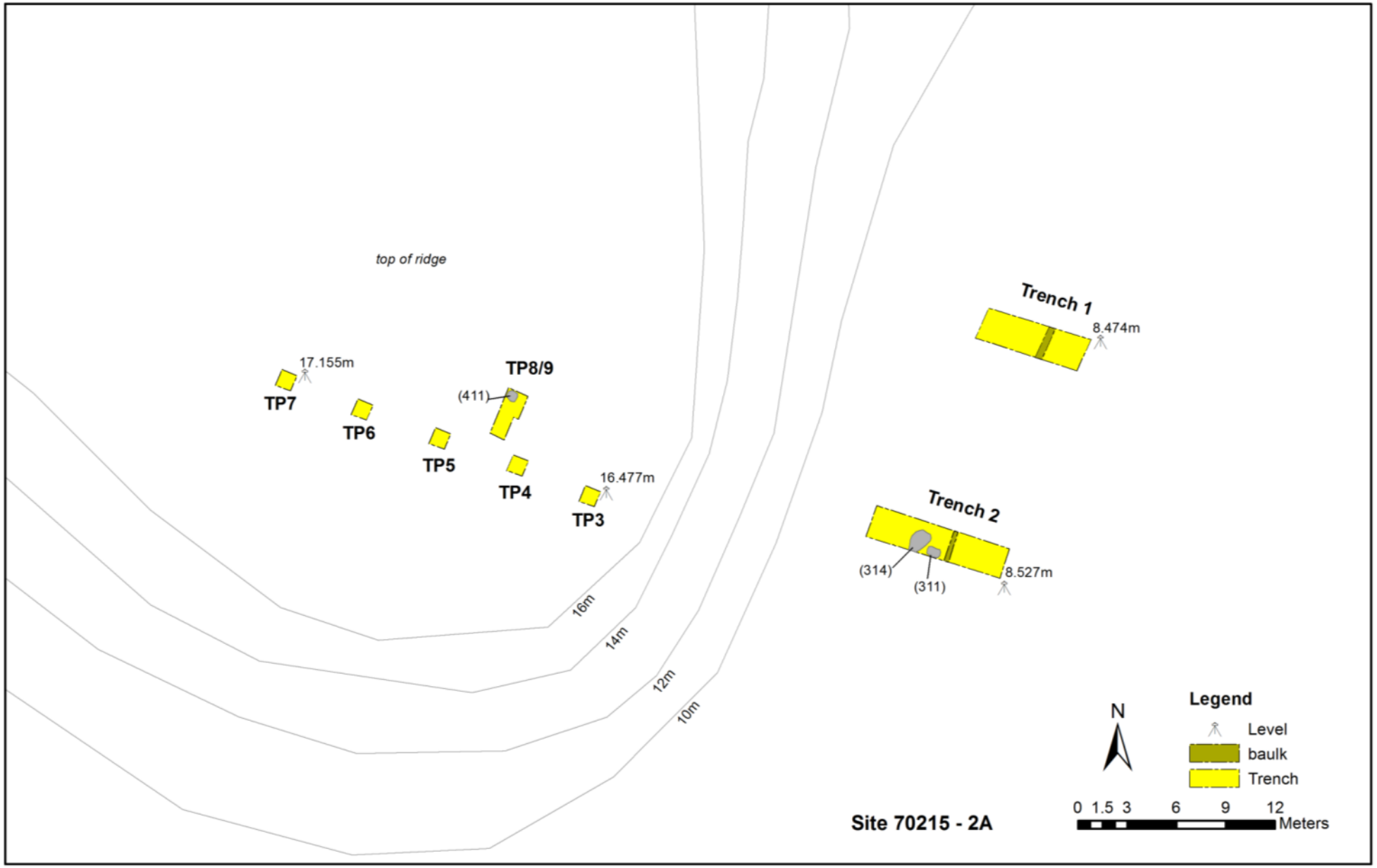

Figure 2: *Site 70215-2A trench and feature locations*

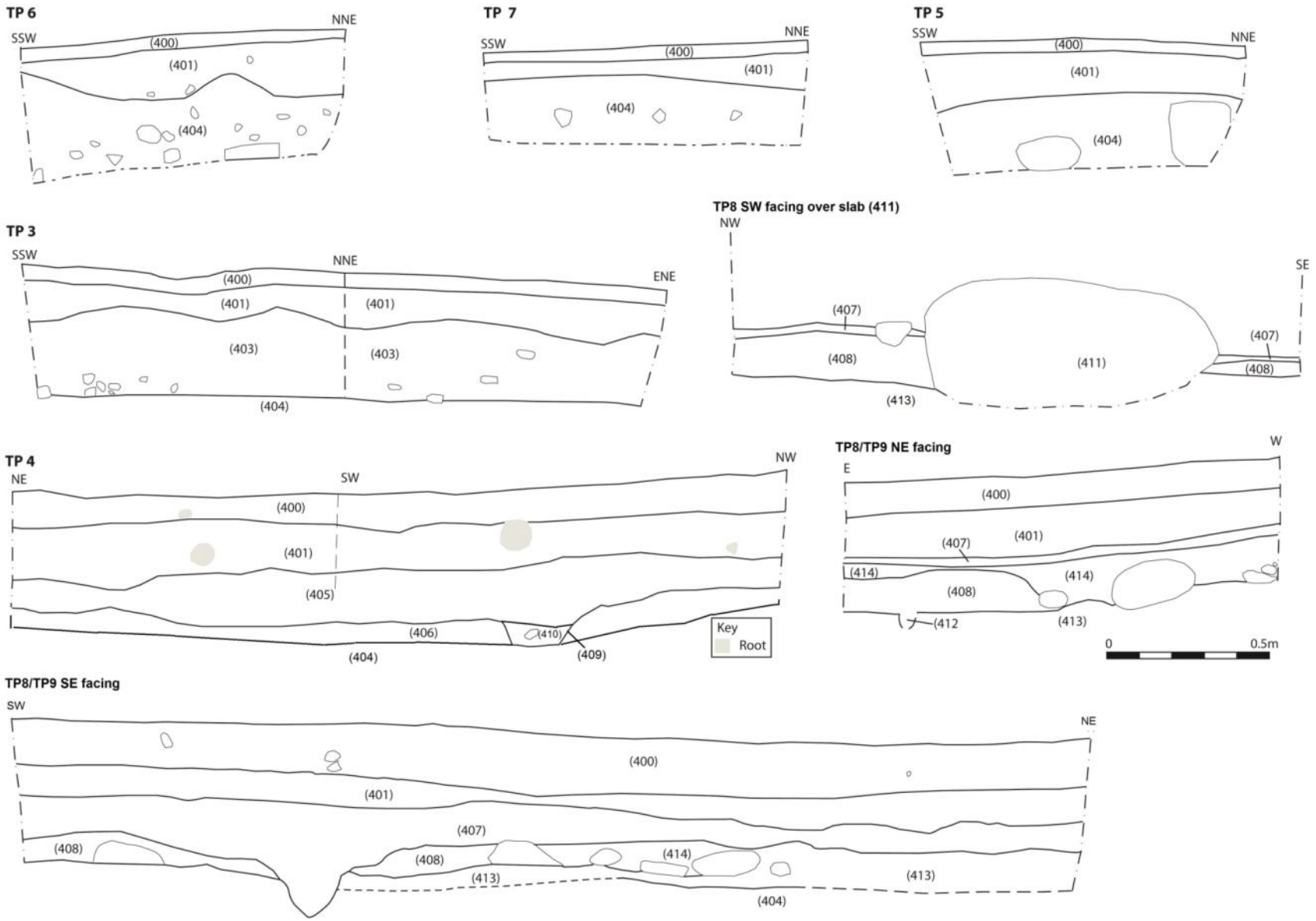

Figure 3: *Test pit section drawings*

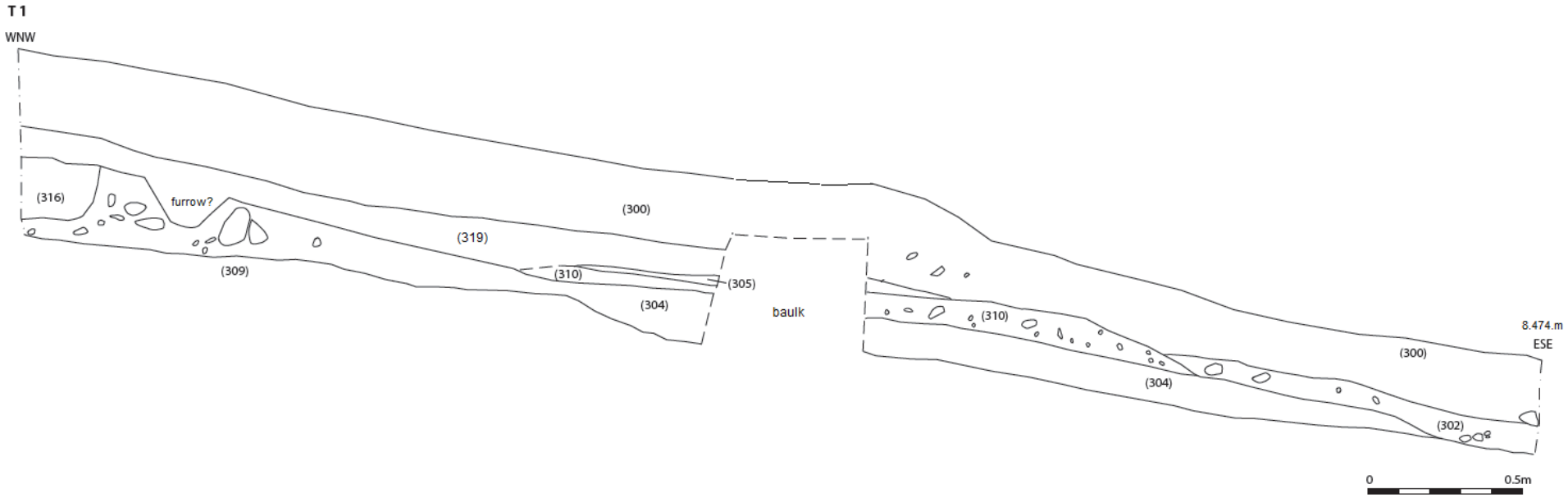

Figure 4: *SW-facing section of Trench 1*

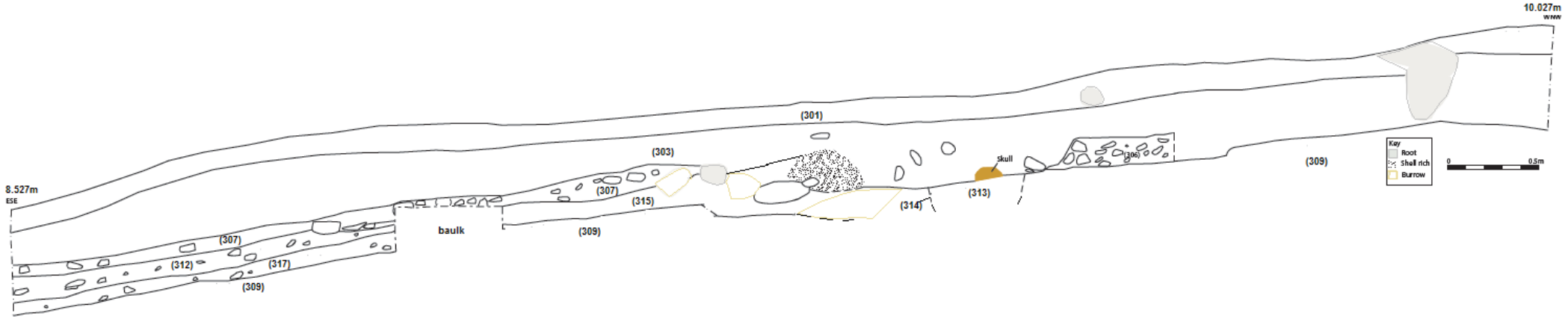

Figure 5: *NE-facing section of Trench 2*

Plate 9: *SW-facing section of Trench 1*

Plate 10: *NE-facing section of Trench 2*

Plate 11: *Trench 1, showing shell midden (304) in ESE-facing sections, facing NW*

Plate 12: *NW end of Trench 1, shell midden in section (304) and oyster-shell deposit (316) to right*

6.0 Results: 70215-2B

6.1 Summary

6.1.1 Excavated using a 1m square grid pattern, the 8 m by 6 m evaluation trench (**Figures 6-8; Plate 13**) produced a complex sequence of shell midden deposits (204) comprising mussel, cockle, periwinkle, oyster, whelk and potentially other marine shells and some fish bone. The site formation processes relating to the shell midden, which appears to overlie a naturally-laid or man-made cobbled beach deposit (214), have yet to be established. It is possible that some of the material has been reworked by natural bioturbation or human activity during prehistory.

6.1.2 Upon completion of the set excavation time, the topsoil and slope-wash overburden had been completely removed from above the midden and approximately 60% of the midden deposits excavated. The results were significant for the excavation in this location, showing that the shell midden layer overlay further archaeological horizons that included possible stone settings that may represent structural remains. The presence of significant antler and bone artefacts provided highly important results for the evaluation.

6.2 Midden (204)

6.2.1 The surface of the main shell midden layer (204) was uncovered below the ploughsoil (202), which had been significantly disturbed by ploughing and what appeared to be post-medieval cultivation furrows. Located at the base of the terrace and hillslope on the south side, the hillwash layer (203) offered considerable protection from these destructive activities on the north side. The south side of the midden and underlying cobbled surface had been truncated by deep ploughing.

6.2.2 Over the surface of the midden, a large shallow scoop/pit (207) (**Plate 15**), measuring approximately 3.8m x 4.2m contained a homogenous clayey silt (205) mostly derived from the slopewash deposits to the north side. Within this layer, an area of larger stone clasts was uncovered, revealing a circular, stone-lined feature (216) and at least two arcs of stones (215) (**Plate 14**). The stones were found to sit directly over the cut into the midden deposits, suggesting that these were laid down after the cut had been formed. The circular stone feature, which measures 0.35m in diameter internally, is similar in morphology to a setting uncovered at the Mesolithic site of Smittons in Dumfries & Galloway (Edwards 1996, 114), although the function is unknown.

6.2.3 In the northwest quadrant of the trench, a shallow curvilinear ditch (211), 0.55-0.65m wide, up to 0.12m deep and aligned NW-SE, cut through the surface of the midden. It contained a mottled silty soil (210) within which large oyster shells had been set upright. A fragment of worked antler tine (SF254) was recovered from the ditch, along with a small amount of animal bone and small charcoal fragments. On the south side of the ditch, a possible large amorphous pit (212) up to 0.6m deep also had cut into the midden. It contained mostly homogenous hillwash material, similar to feature (207).

6.2.4 The midden was excavated in 1m^2 grids, in 10cm spits, with sampling undertaken in bulk per spit. It was characterised as a light brown-orange loosely compact silt with occasional small

cobbles and ash patches. The shell layer comprised mostly fragmented oyster, whelk, periwinkle, mussel and cockle shells and small amounts of small charcoal fragments. Frequent fragments of mammal bone and small amounts of fish bone were found scattered across the layer. Numerous possible struck quartz flakes and a small amount of possible worked flint was also found within the layer, with no particular concentrations noted.

6.2.5 There were several significant worked bone and antler artefacts recovered from the shell midden (**Figure 7; Plates 16-19**): a large antler pick fragment (SF226) and an antler harpoon fragment (SF 228) from the surface of the midden on the east side of the trench; a possible worked tooth or tusk (SF229) from grid 12; a fragment of worked tusk/tooth (SF245) from grid 8; and a fragment of a worked bone point (SF267) from grid 46. The entirety of layer (204) was not excavated on the north and northwest sides of the excavation trench.

6.3 Stone Settings

6.3.1 Concentrated over the southern sector of the excavation area, a cobbled layer was uncovered (214) (**Figure 8**; **Plate 20**). It contained both rounded and angular small to medium stone clasts, displayed by a wide range of stone types. The compact surface, whether natural in origin (part of a raised beach) or man-made, would have formed a good surface on which to conduct activities. Where exposed, spreads of burnt shell and organic-rich sediments were found in places overlying the cobbles; one particular patch of material in the SE sector of the trench was thought to potentially relate to a hearth. Some fire-cracked stone was noted, interpreted as related to possible cooking activities on site.

6.3.2 In the SE area, at least three stone clusters surrounded by charcoal-rich sediments and crushed marine shell were also identified, forming a slight arc aligned NW-SE. Two further larger settings of small boulders interpreted as post settings may be the ephemeral remains of structures set into the cobbled surface. The extent of these potential features was not fully excavated due to time constraints and the interpretation of these features can only be undertaken by removal of more of the overlying midden deposits and evaluation of the potential features.

6.4 Preliminary Interpretation

6.4.1 Excavation of the midden deposits so far has produced butchered animal bone, worked bone, worked antler and a small number of lithics – the latter dominated by quartz. At least one cobble anvil stone has also been recovered and a number of nationally important antler artefacts including at least one antler handle/armature, a fragment of a biserial harpoon and two T-shaped perforated antler mattocks/picks. Prior to this excavation, only four known examples of T-shaped antler picks/mattocks have been recovered from Scottish sites including one from the midden site on the island of Risga, Loch Sunart (Highland); an example from Meiklewood, Carse of Stirling (Stirlingshire); one from the Priory Midden on the island of Oronsay (Inner Hebrides); and a possible example from Crantit Farm on the island of Orkney (Elliot 2014). The examples recovered from Tarradale extend their known area of distribution significantly. Radiocarbon dates for three of the examples discussed above are set out below. The T-shaped antler picks and mattocks recovered from British and other European countries have produced a wide range of dates (Kew Bridge, Thames London -

8820±100 BP to Hammersmith, Thames London - 2240±100 BP), indicating their use over a significant time period.

Site	Lab No.	14C Age BP	Calibrated BC (95.4%)
Meiklewood	OxA-1159	5920±80	5207-4706
Isle of Risga	OxA-2023	6000±90	5207-4706
Crantit Farm	OxA-4606	3385±55	1876-1526
Priory Midden	-	-	4600-3740

Table 1 – T-shaped antler pick/mattocks recovered from Scottish sites (after Elliot, 2014)

6.4.2 If the stone settings uncovered below the midden are the remains of light-weight tent-like structures including wind-breaks and screens, they would fit with other limited forms of evidence revealed at other Mesolithic sites in Scotland including Kinloch on the island of Rhum (Wickham-Jones 1990), the Oronsay Middens (Mellars 1987), Smittons in Dumfries and Galloway (Edwards 1996, 114), Newton on Islay (McCullough 1989), and on the island of Risga in Loch Sunart (Mann 1920; Pollard *et al*. 1996, 165-82; Pollard 2000, 143-52). In particular, the range of features uncovered by Pollard and his team on Risga in 1997 resemble in many ways those tentatively identified in Trench 2B at Tarradale including a foundation slot, stone alignments, stone settings and a cobbled surface. If the features at Tarradale were confirmed, then these would be significant discoveries, especially in light of the important assemblage of antler artefacts recovered from the associated midden deposits. Such discoveries would also add to a growing number of sites displaying ephemeral structural features relating to the occupation of these sites.

Plate 13: *Looking southeast over the 70215-2B excavation site*

Plate 14: *Stone settings (215)/ (216), after removal of (205)*

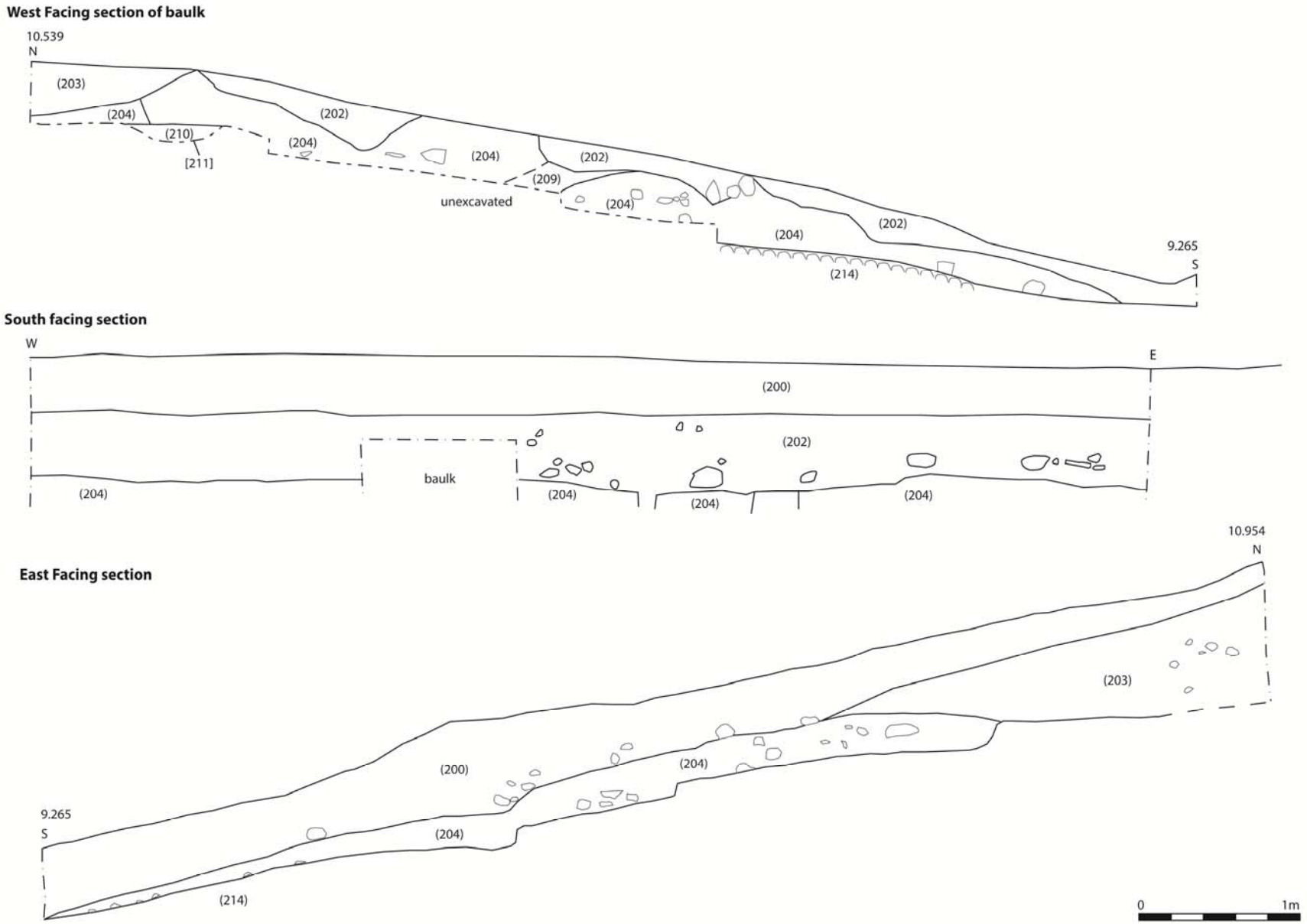

Figure 6*: *Site 70215-2B trench sections

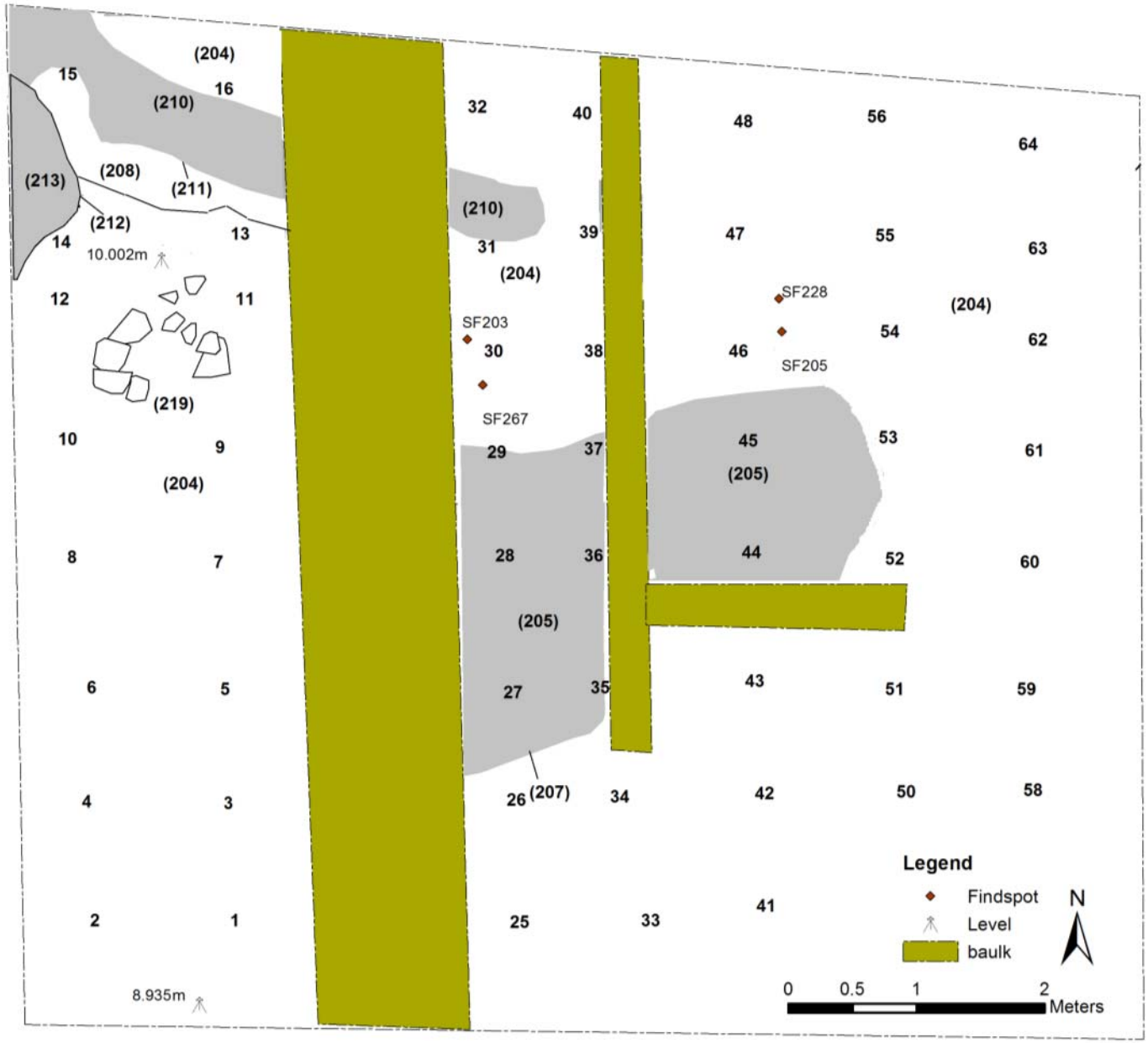

Figure 7*: *Plan showing the location of context (204), findspots and surface features (grids shown numbered)

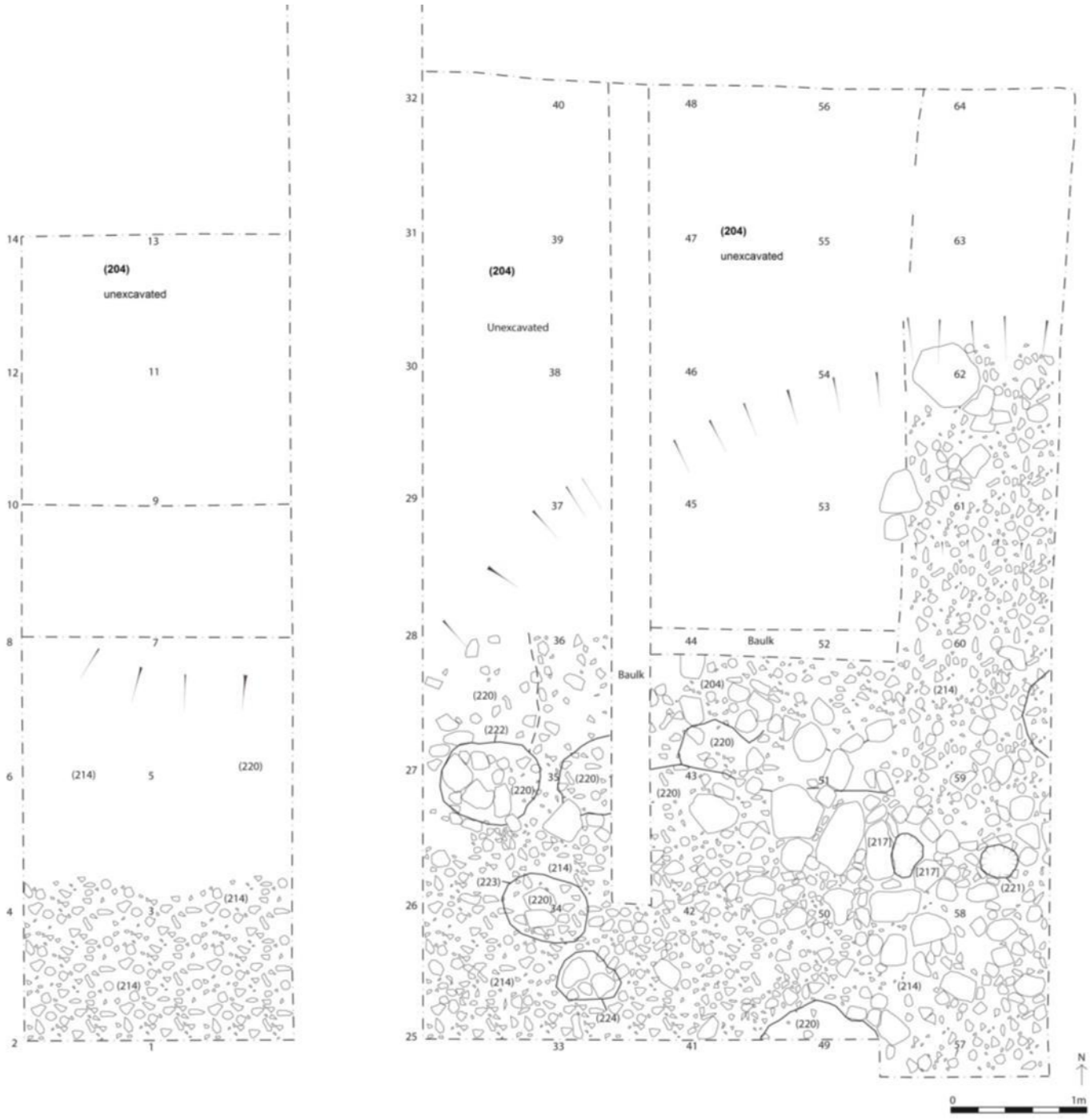

Figure 8: *Post-excavation plan showing the feature locations after excavation of shell midden (204)*

Plate 15: *W-facing section of baulk, showing fill/cut 205/207 in section, and stone settings (215) and (216) in back, with underlying midden (204)*

***Plate* 16:** *SF203 antler mattock and tine*

***Plate* 17:** *SF205, antler set plus cranial fragments*

***Plate* 18:** *SF228 antler biserial harpoon* fragment

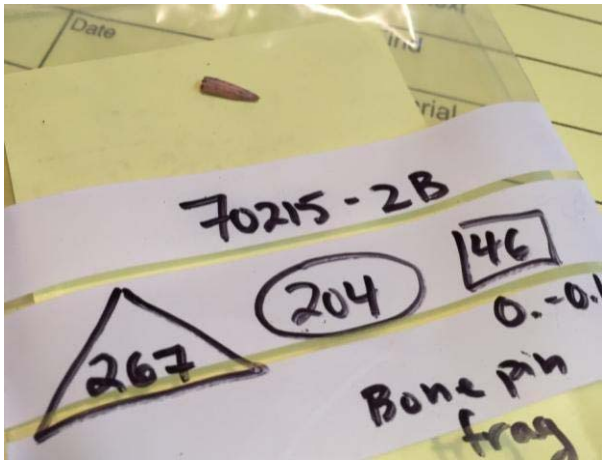

Plate 19: *SF267 bone point*

Plate 20: *High-pole photograph of the 70215-2B trench, post-excavation of shell midden (204), showing the cobbling (214) and possible stone settings*

7.0 Conclusions and Recommendations

7.1 Coastal shell middens represent an important, but poorly understood element of the archaeological record of Europe. They survive in a multitude of forms and have great variability in terms of chronology, size, composition, and morphology. Activity at these sites was undoubtedly related to the availability of local shellfish resources, but was also dictated by contemporary social, economic, and environmental factors. The skills required for shellfish collection are considered to be "nonspecialised," meaning that whole communities can take part, and in certain parts of Europe the vast shell middens that survive are a testament to the use of coastal resources on a large scale. The study of shell middens is also important because it can provide a range of information, from diet to socioeconomic patterns (Noble *et al*. 2017; Bailey *et al*. 2013; Milner *et al*. 2007; Woodman 2013).

7.2 The fieldwork undertaken on the shell middens at Tarradale, as a part of the *Tarradale Through Time Project*, have confirmed Late Mesolithic activity which had already been indicated by the two radiocarbon dates from the primary midden recovered during a small phase of evaluation in 2015: an antler sample provided a date of 6204-6005 cal BC (SUERC-46140) and a charcoal sample dated to 6632-6480 cal BC (SUERC-46141).

7.3 The evaluation has proven that extensive humanly-generated and modified shell layers are present at both sites near Tarradale House. On the eastern site (2A) at the base of the ridge, the rich shell and animal bone midden formed in association with a cobble layer with evidence for burning present within it. This site contrasts with the archaeological sequence at the top of the ridge, where a gravelly layer with scattered shell fragments contained small fragments of possible vitrified residue and an iron rivet. This may be an indication of two different periods of use of human activity on the site.

7.4 The western site (2B), where a much wider area was evaluated, is not disimmilar to the lower eastern site (2A). The shell midden overlay a cobbled surface that appears to contain structural evidence. The exposed areas have revealed ephemeral structural features and spreads of occupation debris relating to Late Mesolithic activity on site. These features may relate to temporary windbreaks, hearths and post settings, around which the midden deposits have accumulated. The continued build-up of midden, and possible reworking of this material, has also resulted in the burial of these features.

7.5 Most significant was the artefactual evidence – items of material culture clearly representing Mesolithic occupation in the form of antler and bone tools and evidence for coarse stone-working. As was found on the eastern site 2A, a lack of substantial lithics processing evidence may suggest that antler; bone and stone tools represent the major artefacts associated with this period of occupation.

7.6 The importance of the shell midden site at Tarradale is not in doubt, especially with regards to the assemblage of antler tools recovered. A programme of post-excavation analysis, to include artefact, animal bone, and botanical and shell analysis, is recommended, in advance of future excavation. The processing of these samples would provide detailed data regarding the shellfish exploitation, other economic factors such as the exploitation of animals and fish, and potential environmental remains. The analysis of these samples by the recovered grid squares will also allow comparisons to be made across the site in any variances in

depositional practices. There is also the potential to recover smaller lithics and lithic debitage that was not recovered during excavation and antler and bone working debris. This work would provide detailed data to understand the archaeological material recovered thus far, and would greatly inform future sampling strategy.

7.7 Finally, the Mesolithic shell middens identified at Tarradale have the capacity to fill a significant void in our knowledge, understanding and distribution of this site type in Scotland. Trench 2B, to the east of Tarradale House, has already produced a nationally significant range of antler artefacts and potential features relating to temporary structures. Further excavation certainly has great potential to understand the formation processes involved in the shell middens, cobbled surfaces and possible structural settings. Future fieldwork also has the potential to retrieve more artefactual evidence to understand on-site activities.

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8.0 References

Bailey, G. N., Hardy K. & Camara, A. (ed) 2013 *Shell Energy: An introduction. In Shell Energy: Mollusc Shells as Coastal Resources*: pp.1–6, Oxford: Oxbow Books.

Ceron-Carrasco, R 2015. *The Fish Remains from the Shell Midden near Tarradale House.*

Chartered Institute for Archaeologists, 2014(a). *Standards and guidance: Archaeological evaluation.*

Chartered Institute for Archaeologists, 2014(b). *By-laws of the Institute for Archaeologists: Code of Conduct*.

Edwards, K 1996 'The Contribution of Tom Affleck to the Study of the Mesolithic of Southwest Scotland'; In Pollard, T. & Morrison, A. (ed) *The Early Prehistory of Scotland*, Edinburgh: Edinburgh University Press, pp.108-22.

Elliot, B 2014 'Facing the Chop: Redefining British Antler Mattocks to Consider Large-scale Maritime Networks in the Early Fifth Millennium Cal BC *European Journal of Archaeology* (0), 1-23

Highland Council. 2012. *Standards for Archaeological Work.*

Highland Historic Environment Record (HHER). 2017. Accessed at her.highland.gov.uk on

Historic Environment Scotland. 2017. National Collection of Aerial Photography (NCAP). Accessed online at ncap.org.uk on 15th September 2017

McCullough, R. 1989 Excavations at Newton, Islay; *Glasgow Archaeological Journal*, 15, 21-53.

Mellars, P. 1987 *Excavation on Oronsay*. Edinburgh: Edinburgh University Press.

Milner, N., Craig, O E and Bailey, G N (eds) 2007 Shell Middens in Atlantic Europe. Oxbow: Oxford.

Myers A M & Gourlay R B 1991 'Muirtown, Inverness: preliminary investigation of a shell midden. Proc Soc Antiq Scot, 121, 17-25.

National Map Library of Scotland, 2017. Accessed at http://maps.nls.uk on 15th September 2017

Noble, G., Turner, J., Hamilton, D., Hastie, L., Knecht, R., Stirling, L., Sveinbjarnarson, O., Upex, B. & Milek, K. 2017 'Early Medieval Shellfish Exploitation in Northwest Europe: Investigations at the Sands of Forvie Shell Middens, Eastern Scotland, and the Role of Coastal Resources in the First Millennium AD, *The Journal of Island and Coastal Archaeology*, DOI: 10.1080/15564894.2017.1329242.

Pollard, T, Atkinson, J & Banks, I. 1996 'It is the technical side of my work which is my stumbling block: A shell midden site of Risga reconsidered'; in Pollard, T. & Morrison, A. (ed) *The Early Prehistory of Scotland*, Edinburgh University Press, pp.108-22.

Pollard, T. 2000 'Risga and the Mesolithic occupation of Scottish Islands'. In Young, R (ed) *Mesolithic Lifeways: Current research from Britain and Ireland*, Leicester Archaeology Monographs No.7.

Ramsay, S, undated. *Tarradale Shell Midden (TD Bailey 15): Charcoal Analysis*

Sloan, D 1982 'Nether Kinneil'. Current Archaeology 84, 13-15.

Wickham-Jones, C.R. 1990 *Rhum: Mesolithic and later sites at Kinloch, excavations 1984-86,* Edinburgh: Society of Antiquaries of Scotland Monograph Series No. 7.

Woodman, P. 2013 *Shell energy: An overview.* In *Shell Energy: Mollusc Shells as Coastal Resources* N. Bailey, K. Hardy, and A. Camara (eds.), pp.299–307. Oxford: Oxbow Books.

Plate 21: *View SSE over the Tarradale 2B site*

Plate 22: *Excavation in progress on the 2B site, facing W*

Plate 23: *View ESE over Trench 2 on the Tarradale 2A site*

Plate 24: *Test pit excavation in progress at 2A, facing ESE*

Plate 25: *Discussion over the human burial at 2A, facing WSW*

Appendix 1 List of Contexts

Site Name	Trench No.	Context No.	Type	Description	Small Finds	Filled by	Fill of	Cut by	Cuts	Overlies	Underlies	Same As	Interpretation
70215-2A													
70215-2A	Trench 1	**300**	Deposit	Mid to dark brown-grey coarse sandy silt with occasional small gravel inclusions.	Victorian glass, ceramics and iron nails	-	-	-	-	300, 302, 319	-	-	Turf/topsoil in trench 1.
70215-2A	Trench 2	**301**	Deposit	Mid to dark brown-grey sandy silt with tree roots and occasional small to medium rounded stones.	Victorian glass, ceramics and iron nails	-	-	-	-	-	-	-	Topsoil in trench 2.
70215-2A	Trench 1	**302**	Deposit	Mixed dark grey-brown-black silt and mid to dark brown gritty silt with some gravel inclusions. Some shell lenses within. 12-18cm deep under 300.	Possible worked quartz	-	-	-	-	305, 309	300	-	Organic layer at SE end of trench
70215-2A	Trench 2	**303**	Deposit	Mid brown coarse sandy silt under topsoil.	-	-	-	-	-	306, 307, 308	301	-	Lower topsoil in trench 2.
70215-2A	Trench 1	**304**	Deposit	Mid brown-grey silt with inclusions (60-70%) of small shell fragments (cockle, periwinkle, oyster). Deposit undulates but slopes downhill where it is richer. Cut at the W end by a v-shaped cut. Dark lens at the base in the WNW end.	-	-	-	-	-	309	305, 310, 316	-	Shell midden, possibly moved and sorted by tidal movement.

Site Name	Trench No.	Context No.	Type	Description	Small Finds	Filled by	Fill of	Cut by	Cuts	Overlies	Underlies	Same As	Interpretation
70215-2A	Trench 1	**305**	Deposit	Mid brown-grey silt with small cockle, periwinkle, mussel and oyster fragments. Mixed with 10% pea gravel. 3-5cm deep but intermittent across the trench.	-	-	-	-	-	304, 310	300, 302	-	Shell lens, probably affected by ploughing.
70215-2A	Trench 2	**306**	Deposit	Thin lens of shell (mostly oyster with occasional periwinkle) over pale yellow-grey-brown pea gravel/pebbly silt, against the base of the downhill slope.	-	-	-	-	-	309	303	-	Shell midden and slope wash.
70215-2A	Trench 2	**307**	Deposit	Mixed mid brown-grey silt with 40% small shell fragments (periwinkle, cockle, mussel, oyster, scallop and some whole oyster) over and within a layer of small cobbles.	-	-		-	-	-	303	-	Shell midden and cobble layer
70215-2A	Trench 2	**308**	Fill	Mid brown silt with thin small shell patches and 1-2% small gravel inclusions.	Animal bone	-	311	-	-	-	301	-	Fill of 311, sheep burial.
70215-2A	Trench 1, 2	**309**	Deposit	Mid orange-brown sandy gravel	-	-	-	-	-	-	-	-	Natural subsoil.
70215-2A	Trench 1	**310**	Deposit	Compact mid-brown gravelly silt with some small rounded stones under shell lens 305.	-	-	-	-	-	304	305	-	Contemporary with cobble silt layer 307 in T2.

Site Name	Trench No.	Context No.	Type	Description	Small Finds	Filled by	Fill of	Cut by	Cuts	Overlies	Underlies	Same As	Interpretation
70215-2A	Trench 2	**311**	Cut	Shallow cut through topsoil 303, measuring 0.7m NW-SE by 0.45m and 0.25-0.3m deep. Cut unclear since the fill was mixed with a shell lens.		308	-	-	303	-	308	-	Sheep burial
70215-2A	Trench 2	**312**	Deposit	Rich shell lens, loosely compact. Mid grey silt with small shell fragments (cockle, mussel, periwinkle and some oyster), some small stones (10cm long) and charcoal fragments mixed with darkened silt patches. Maximum depth 20cm.	-	-	-	-	-	317, 309	307	-	Shell midden
70215-2A	Trench 2	**313**	Fill	Mid-brown loose silt with mixed thin lens of small shell fragments and some large oyster shells. Appears to be mixed material brought in from underlying shell midden.	Human remains	-	314	-	-	-	-	-	Grave, containing inhumation.
70215-2A	Trench 2	**314**	Cut	Sub-oval/sub-rectangular cut 1.4m NE-SW by 0.6m wide. Possibly under 307 but mixed with shell lenses and tree root activity so difficult to see if fill is below 303 or 307.		313	-	-	-	-	-	-	Grave, containing inhumation.

Site Name	Trench No.	Context No.	Type	Description	Small Finds	Filled by	Fill of	Cut by	Cuts	Overlies	Underlies	Same As	Interpretation
70215-2A	Trench 2	**315**	Deposit	Mid brown-grey sandy silt with pea gravel (1%), possible rare small charcoal flecks and oyster, cockle and periwinkle shells in pockets. Shell patches within the layer (10-20%), mostly cockle. Animal burrowing and bioturbation throughout.	Some animal bone	-	-	-	-	309	307	-	Base of shell midden, same as 312 to the WNW side.
70215-2A	Trench 1	**316**	Deposit	Deposit of mostly oyster shell in NW corner of T1, 15-20cm thick. In situ midden	-	-	-	318	-	304	300	-	Shell midden, pre 304.
70215-2A	Trench 2	**317**	Deposit	Mid orange-brown pea gravel sandy silt with 5% small shell fragments.	-	-	-	-	-	309	312	-	Base of shell layer 312, overlies natural
70215-2A	Trench 1	**318**	Cut	Cut through 316 shell midden in WNW end of trench.	-	-	-	-	-	-	-	-	Unknown - not excavated
70215-2A	Trench 1	**319**	Deposit	Mid brown-orange sandy gravelly soil	-	-	-	-	-	304, 305	300	-	Lower topsoil./slopewash T1
70215-2A	Test pits	**400**	Deposit	Turf layer on top of ridge over the test pits.	-	-	-	-	-	401	-	-	Turf layer above test pits.
70215-2A	Test pits	**401**	Deposit	Dark brown coarse sandy silt with frequent tree roots.	-	-	-	-	-	402, 402	400	-	Topsoil.
70215-2A	TP5, TP6, TP7	**402**	Deposit	Pale brown coarse sandy silt with 5% small gravel inclusions, very sterile. 0.15-0.2m below turf and 0.15m deep.	-	-	-	-	-	404	400	-	Topsoil to subsoil transition.

Site Name	Trench No.	Context No.	Type	Description	Small Finds	Filled by	Fill of	Cut by	Cuts	Overlies	Underlies	Same As	Interpretation
70215-2A	TP3	**403**	Deposit	Mid brown pea gravelly silty sand with 10% small broken shell fragments (oysters, mussels, whelks, cockles, mostly fragmentary). Up to 20cm deep.	-	-	-	-	-	404	400, 401	-	Shell midden - layer appears to have petered out towards SE end of promontory, is very mixed with a pea gravelly silt.
70215-2A	TP3-9	**404**	Deposit	Pale orange-yellow-brown pea gravel with scattered small to large rounded stones.	-	-	-	-	-	-	402, 403	-	Natural subsoil.
70215-2A	TP4	**405**	Deposit	Mid grey-brown silt with 50-60% small broken shell fragments including periwinkle, cockle, scallop, oyster, mostly fragmented but some whole. 10-15cm deep.	-	-	-	-	-	404	400, 401	-	Shell midden layer, much thicker and denser than TP3.
70215-2A	TP4	**406**	Deposit	Mixed mid orange-brown gravelly silt with pockets of shell and 5-10% small to medium rounded stones.	-	-	-	-	-	404	405	413	Layer below the shell midden.
70215-2A	TP8	**407**	Deposit	Mid brown-grey silt with 70-80% small broken shell fragments (mostly mussel) and with occasional small charcoal fragments. 3-5cm deep.	-	-	-	-	-	408, 414	401	-	Shell midden under 401 and abuts slab 411.
70215-2A	TP8	**408**	Deposit	Mid orange-brown gravelly silt with 60% shell (mostly cockle). About 10cm deep. Abuts large slab 411.	-	-	-	-	-	404	407	-	Shell midden under 407 and abuts 411.

Site Name	Trench No.	Context No.	Type	Description	Small Finds	Filled by	Fill of	Cut by	Cuts	Overlies	Underlies	Same As	Interpretation
70215-2A	TP4	**409**	Cut	Possible linear slot through 406. Runs across TP4 measuring 0.25-0.29m wide.	-	410	-	-	406	-	-	-	Linear slot?
70215-2A	TP4	**410**	Fill	Mid brown-orange gravelly silt, fill of linear slot [409] containing large stones with shell midden layer in it.	-	-	409	-	-	-	-	405	Fill of linear slot 409.
70215-2A	TP8	**411**	Slab	Large schist slab measuring 0.89m N-S by 0.86m long and 0.2-0.25m deep. Shell middens 407/408 built up against it.	-	-	-	-	-	-	401, 407	-	Slab with shell middens built up against it.
70215-2A	TP8	**412**	Cut	Several small possible stake holes c. 6-7cm across, cut through the base layer 413.	-	-	-	-	-	-	408	-	Stake holes? Or Root/burrow pockets?
70215-2A	TP8	**413**	Deposit	Mid brown-orange sandy silt mixed with the base of 408. Human modified layer over natural 404.	-	-	-	-	-	404	408	406	Human modified layer below the shell midden.
70215-2A	TP8	**414**	Deposit	Pale-mid brown sandy silt abuts 408.	-	-	-	-	-	413	407	-	
70215-2B			e										
70215-2B	-	**200**	Deposit	Dark brown-black soil with occasional flecks of charcoal and 5% small rounded stones; burrowing and root disturbance	Victorian ceramics					202, 203			Topsoil

Site Name	Trench No.	Context No.	Type	Description	Small Finds	Filled by	Fill of	Cut by	Cuts	Overlies	Underlies	Same As	Interpretation
70215-2B	-	**201**	Deposit	Mixed soil/subsoil removed from excavation in NOSAS 2015 evaluation trench							200		Trench backfill from 2015
70215-2B	-	**202**	Deposit	Mid brown loose soil with mixed in small shell midden fragments; visible bands of rig and furrow 1-3m wide orientated NE-SW	antler fragments, lithics					204	200, 203		Soil layer that has been mixed by disturbance from rig & furrow cultivation
70215-2B	-	**203**	Deposit	Light brown loosely compact silt with frequent small rounded stones, contains some animal bone and shell						202, 204	200		Hill wash layer
70215-2B	-	**204**	Deposit	Light brown-orange loosely compact silt with occasional small rounded stone and ash patches; contains shell, crushed shell (including oyster), fragments of animal bone and antler and some fragments of charcoal; undulating surface dipping down to the south and NW; cut through by modern ploughing at south side and by 2015 evaluation trench	Antler, quartz			207, 211, 212		214, 217, 218, 219, 220	202, 203, 205, 206, 210, 213	208	In situ shell midden deposit - upper layer
70215-2B	-	**205**	Fill	Yellow/buff clayey silty sand inside oval hollow (207)			207			206, 215, 216, 204	202, 203		Sterile, hill wash infill

Site Name	Trench No.	Context No.	Type	Description	Small Finds	Filled by	Fill of	Cut by	Cuts	Overlies	Underlies	Same As	Interpretation
70215-2B	-	**206**	Deposit	Medium-large beach cobbles (0.1-0.4m) lying on surface of midden within context 205; forms an arc from NE to E						204	205		Structural alignment/stone setting?
70215-2B	-	**207**	Cut	Suboval, shallow scoop or pit that forms a hollow in the shell midden; cut is unclear on the S side where it forms a flat surface		205				204	202, 203, 205, 206, 207, 215, 216		Hollow/work surface? Within the midden - antler artefacts found in close proximity to the hollow
70215-2B	-	**208**	Deposit	Oyster shell-rich deposit within the shell midden, abuts layer 210; curvilinear in plan	animal bone			211		204	204	204	Oyster-rich shell midden band; within 0.1-0.2m layer in context 204
70215-2B	-	**209**	Deposit	2 x almost linear patches of shell-rich midden running WNW-ESE				211, 212		204	204	204	Shell midden bands within 0-0.1m layer in context 204
70215-2B	-	**210**	Deposit/ Fill	Mid orange-brown mottled silty soil that contains small upright large oyster shells and filling a possible cut or depression within midden 204; up to 0.12m deep with gently sloping sides	worked antler		211			211, 204	203		Possible cut fill of a curvilinear ditch 211
70215-2B	-	**211**	Cut	Curvilinear, shallow ditch cut running NW-SE; gently sloping sides 0.55-0.65m wide and 0.12m deep; continues under N baulk of trench and runs out at SE end	antler	210			204, 208, 209	204	210		Curvilinear ditch - possible structure cut on surface of midden

Site Name	Trench No.	Context No.	Type	Description	Small Finds	Filled by	Fill of	Cut by	Cuts	Overlies	Underlies	Same As	Interpretation
70215-2B	-	**212**	Cut	Deep, steep-sided cut forms an amorphous shape in the NW corner of trench; measures 1.55m N-S by 0.40m and 0.6m deep; not fully excavated		213			204, 211	204	213		Possible pit or stone hole? Tree throw? Not fully excavated
70215-2B	-	**213**	Fill	Homogenous brown silt soil with small rounded beach cobbles, fine roots and shell fragments deriving from slope wash and silting			212			212, 214, 204	203	203?	Fill of 212, slope wash/silting
70215-2B	-	**214**	Deposit	Gently sloping cobbled surface below shell midden 204; rounded and subangular cobbles 0.05-0.1m long w/ some larger stones up to 0.3m long; some clusters of larger stones that may represent structural settings							204, 217, 220		Cobbled surface or natural beach deposit over which midden layer 204 formed; some evidence of ash in place
70215-2B	-	**215**	Structure ?	Curving arch of stone aligned NW-SE, consists of stones 0.1-0.3m long set in 2 courses deep over the base of midden 204; there is a second arc running S to NE						204, 207, 218	203, 205	206	Remnants of wind break or other stone setting structure (possible use - to hold down skin-covered structure)
70215-2B	-	**216**	Structure ?	Circular stone setting comprising stones 0.15-0.3m long; setting measures 0.35m x 0.4m internally and						204, 207, 218	205	206	Possible post setting or other setting structure; similar features to those on Risga and

Site Name	Trench No.	Context No.	Type	Description	Small Finds	Filled by	Fill of	Cut by	Cuts	Overlies	Underlies	Same As	Interpretation
				0.18m deep; set within cut 207									Smittons
70215-2B	-	**217**	Structure ?	Possible stone setting of large stones 0.2-0.4m long, measures 0.25m diameter internally and 0.2m deep; overlain by midden 204						214?	204		Possible post setting or other setting structure; similar features to those on Risga and Smittons
70215-2B	-	**218**	Deposit	Pea gravel and crushed shell deposit in NE section of trench, 0.01-0.02m deep and deepens to 0.05m deep at N end						214	204, 215, 216		Water-washed material, redeposited midden?
70215-2B	-	**219**	Structure ?	Subcircular spread of small-medium subangular stones, some of which are fire-cracked and heat-affected within midden 204; measures 0.6m N-S x 0.5m; patches of dark, ashy midden and burnt shell around it							204		Possible remains of hearth within shell midden 0.1-0.2m layer
70215-2B	-	**220**	Deposit	Thin, intermittent ash spread (black-grey wood ash?) that overlies cobbling 214 at base of midden 204; contains charcoal flecks and some burnt/crushed shell; patches extend 1-3m in length						214	204, 218		Hearth rake-outs in base of midden layer 204?

Site Name	Trench No.	Context No.	Type	Description	Small Finds	Filled by	Fill of	Cut by	Cuts	Overlies	Underlies	Same As	Interpretation
70215-2B	-	**221**	Cut	Circular cut or depression within cobbling 214; located 0.4m east of stone settings; 0.22m in diameter and 0.5m deep (not fully excavated						214	204, 220		Not fully excavated; possible post setting
70215-2B	-	**222**	Structure ?	Subcircular, possible cut 0.55m x 0.45m; contains darker sandy silt fill with larger stones than in layer 214						214	204, 220		Not fully excavated; possible post setting
70215-2B	-	**223**	Structure ?	Subcircular, possible cut 0.55m x 0.42m; contains darker sandy silt fill with larger stones than in layer 214						214	204, 220		Not fully excavated; possible post setting
70215-2B	-	**224**	Structure ?	Subcircular, possible cut 0.4m diameter; contains darker sandy silt fill with larger stones than in layer 214						214	204, 220		Not fully excavated; possible post setting

Appendix 2 List of Small Finds

Site Name	Find No.	Context No.	Layer	Trench / Grid No.	Material	Description	Date
70215-2A							
70215-2A	**400**	407	-	TP8	Lithic	Struck? quartz	05/10/2017
70215-2A	**401**	300	-	Trench 1	Glass	Victorian glass sherds	04/10/2017
70215-2A	**402**	300	-	Trench 1	Fe	19th/20th iron	04/10/2017
70215-2A	**403**	300	-	Trench 1	Ceramic	Victorian ceramic sherds	04/10/2017
70215-2A	**404**	302	-	Trench 1	Lithic	Struck? quartz	04/10/2017
70215-2A	**405**	302	-	Trench 1	Lithic	Struck? quartz x 2	07/10/2017
70215-2A	**406**	300	-	Trench 1	Stone	Worked? cobble	07/10/2017
70215-2A	**407**	300	-	Trench 1	Glass	Bottle glass	07/10/2017
70215-2A	**408**	405	-	TP4	Fe	Vitrified residue?	07/10/2017
70215-2A	**409**	305	-	Trench 1	Bone	Worked? bone	07/10/2017
70215-2A	**410**	305	-	Trench 1	Stone	Worked? cobble	07/10/2017
70215-2A	**411**	300	-	Trench 1	Fe	Plough tip	07/10/2017
70215-2A	**412**	308	-	Trench 2	Bone	Bone from sheep burial, possibly fragments of other bone mixed within	08/10/2017
70215-2A	**413**	407	-	TP8	Stone	Worked stone - struck stone core	08/10/2017
70215-2A	**414**	407	-	TP7	Ceramic	Possible small sherd medieval? Ceramic	09/10/2017
70215-2A	**415**	401	-	TP8	Lithic	Struck? quartz	09/10/2017
70215-2A	**416**	402	-	-	Stone	Worked stone?	09/10/2017
70215-2A	**417**	407	-	TP8	Stone	Struck stone flakes	15/10/2017
70215-2A	**418**	407	-	TP8	Stone	Struck stone flakes (c.20 flakes)	15/10/2017
70215-2A	**419**	407	-	TP8	Fe	Iron rivet?	15/10/2017
70215-2A	**420**	313	-	Trench 2	Stone	Chipped stone?	15/10/2017
70215-2A	**421**	301	-	Trench 2	Brass	Tip of shotgun cartridge	15/10/2017
70215-2A	**422**	302	-	Trench 2	Glass	Bottle glass base (Victorian)	15/10/2017
70215-2A	**423**	307	-	Trench 2	Quartz	Struck? quartz x 1	15/10/2017
70215-2A	**424**	405	-	TP4	Fe	Vitrified residue? Slag? X 5-7 lumps from 0-0.1m layer	15/10/2017
70215-2A	**425**	425	-	TP8	Stone	Struck stone flakes (c.20 flakes)	15/10/2017

Site Name	Find No.	Context No.	Layer	Trench / Grid No.	Material	Description	Date
70215-2A	**426**	403	-	TP3	Quartz	Struck? quartz x 1 from 0-0.1m layer	15/10/2017
70215-2B							
70215-2B	**200**	200	-	-	Iron	Staples	24/09/2017
70215-2B	**201**	200	-	-	Fe	Length modern-ish wire	24/07/2017
70215-2B	**202**	200	-	-	Fe	Nail	24/09/2017
70215-2B	**203**	202	-	-	Antler	Antler- worked, possible pick or mattock?	30/09/2017
70215-2B	**204**	202	-	-	Ceramic	Possible pottery	30/09/2017
70215-2B	**205**	202	-	-	Antler	Worked antler? Base of skull fragment	30/09/2017
70215-2B	**206**	202	-	-	Antler	Large fragment, 3 pieces	30/09/2017
70215-2B	**207**	Spoil	-	-	Fe	Nails from spoil metal detector	
70215-2B	**208**	Spoil	-	-	Fe	Fe blade from spoil, metal detector	
70215-2B	**209**	202	-	-	Ceramic	Modern ceramic	
70215-2B	**210**	203	-	-	Bone	Tooth?/polished bone?	
70215-2B	**211**	202	-	-	Bone	Worked bone?	04/10/2017
70215-2B	**212**	202	-	-	Ceramic	Three pieces, one is glazed redware	
70215-2B	**213**	202	-	-	Glass	Sherds of glass x 2	
70215-2B	**214**	202	-	-	Fe	Nail	
70215-2B	**215**	-	-	-	-	VOID	
70215-2B	**216**	-	-	-	-	VOID	
70215-2B	**217**	-	-	-	-	VOID	
70215-2B	**218**	-	-	-	-	VOID	
70215-2B	**219**	204	-	-	Lithic	Possible worked quartz	04/10/2017
70215-2B	**220**	-	-	-	-	VOID	
70215-2B	**221**	-	-	-	-	VOID	
70215-2B	**222**	204	0-0.1m	10	Stone	Hammer stone	05/10/2017
70215-2B	**223**	204	0-0.1m	10	Lithic	Possible worked quartz	05/10/2017
70215-2B	**224**	204	0-0.1m	12	Lithic	Possible worked quartz	05/10/2017
70215-2B	**225**	-	-	-	-	VOID	
70215-2B	**226**	204	-	E side of trench	Antler	Antler pick, one large piece and two small fragments	05/10/2017

Site Name	Find No.	Context No.	Layer	Trench / Grid No.	Material	Description	Date
70215-2B	**227**	204	-	E side of trench	Bone	Worked bone	05/10/2017
70215-2B	**228**	204	-	E side of trench	Antler	Harpoon fragment, antler	05/10/2017
70215-2B	**229**	204	0-0.1m	12	Tooth	Worked tooth?	04/10/2017
70215-2B	**230**	204		-	Ceramic	Ceramic sherd?	07/10/2017
70215-2B	**231**	204	0-0.1m	26	Quartz	Struck Quartz	07/10/2017
70215-2B	**232**	204	0-0.1m	46	Antler	Worked antler x 2	07/10/2017
70215-2B	**233**	204	0-0.1m	54	Antler	Worked antler with perforation	07/10/2017
70215-2B	**234**	-		-	-	VOID	
70215-2B	**235**	204	0.1-0.2m	10	Lithic	Struck lithics?	07/10/2017
70215-2B	**236**	202		-	Lithic	Struck quartz? x 15	07/10/2017
70215-2B	**237**	204	0-0.1m	25	Lithic	Struck quartz, a possible tool	07/10/2017
70215-2B	**238**	204	0-0.1m	3	Lithic	Two pieces of struck quartz. 0-0.1m	07/10/2017
70215-2B	**239**	204		11	Lithic	Two pieces of struck quartz, one possible thumb scraper	07/10/2017
70215-2B	**240**	204		-	Lithic	One piece struck quartz	07/10/2017
70215-2B	**241**	203		-	Fe?	Vitrified residue??	07/10/2017
70215-2B	**242**	204	0-0.1m	33	Lithic	Struck quartz?	07/10/2017
70215-2B	**243**	204	0.1-0.2m	12	Lithic	Struck quartz?	07/10/2017
70215-2B	**244**	204	0-0.1m	8	Ceramic?	One piece of possible ceramic	07/10/2017
70215-2B	**245**	204	0-0.1m	8	Bone	Worked bone, possible tusk tool	
70215-2B	**246**	204	0-0.1m	12	Lithic	Struck quartz? x 4	07/10/2017
70215-2B	**247**	-		-	-	VOID	
70215-2B	**248**	-		-	-	VOID	
70215-2B	**249**	202		-	Bone	Worked bone with perforation?	07/10/2017
70215-2B	**250**	203		-	Ceramic	Salt glazed pottery	07/10/2017
70215-2B	**251**	200		-	Ceramic	Misc. pottery - medieval?	30/09/2017
70215-2B	**252**	204		-	Stone	Possible worked stone	07/10/2017
70215-2B	**253**	204		-	Stone	Possible hammer stone	08/10/2017
70215-2B	**254**	210		-	Antler	Worked antler, with hole at the end	08/10/2017
70215-2B	**255**	204		-	Bone	Worked bone	08/10/2017

Site Name	Find No.	Context No.	Layer	Trench / Grid No.	Material	Description	Date
70215-2B	**256**	204		-	Lithic	Struck flint?	08/10/2017
70215-2B	**257**	204	0-0.1m	41	Quartz	Struck quartz?	08/10/2017
70215-2B	**258**	204		-	Stone	Possible worked stone	08/10/2017
70215-2B	**259**	204	0-0.1m	41	Stone	Possible worked stone	08/10/2017
70215-2B	**260**	210		-	Lithic	Possible worked quartz pebble	08/10/2017
70215-2B	**261**	204	0.1-0.2m	45	Lithic	Two possible worked quartz fragments	15/10/2017
70215-2B	**262**	204		-	Stone	Pebble found during sieving of context 204	15/10/2017
70215-2B	**263**	204	0-0.1m	47	Lithic	Struck? quartz	15/10/2017
70215-2B	**264**	204	0-0.1m	42	Lithic	Struck? quartz	15/10/2017
70215-2B	**265**	204		-	Bone	Worked bone?	03/11/2017
70215-2B	**266**	204	0.1-0.2m	9	Lithic	Possible struck quartz	03/11/2017
70215-2B	**267**	204	0-0.1m	46	Bone	Bone point fragment	03/11/2017
70215-2B	**268**	204		E side of trench	Antler	Antler fragment from east trench	03/11/2017
70215-2B	**269**	204		-	Stone	Large struck stone flakes	03/11/2017
70215-2B	**270**	204		46	Lithic	Struck quartz x 1	03/11/2017
70215-2B	**271**	204		46	Stone	Small stone, possible bored end (?)	03/11/2017
70215-2B	**272**	204		46	Lithic	Small struck? flakes x 6 (flint?)	03/11/2017
70215-2B	**273**	204		46	Lithic	Small struck quartz flakes?	03/11/2017
70215-2B	**274**	204		46	Stone	Two possible notched stone tools	03/11/2017
70215-2B	**275**	204		46	Lithic	Struck? quartz x 4	03/11/2017
70215-2B	**276**	204		46	Lithic	Struck? flint x 1	03/11/2017
70215-2B	**277**	204		34	Lithic	Struck? quartz	03/11/2017
70215-2B	**278**	204		27	Stone	Notched stone flake?	03/11/2017
70215-2B	**279**	204		27	Bone	Worked bone?	03/11/2017
70215-2B	**280**	204		12	Lithic	Struck? quartz	03/11/2017
70215-2B	**281**	204		11	Lithic	Struck? quartz	03/11/2017
70215-2B	**282**	204		27	Lithic	Struck? quartz	03/11/2017
70215-2B	**283**	204		46	Lithic	Struck? quartz and flint flakes	03/11/2017
70215-2B	**284**	204		11	Lithic	Struck? quartz	03/11/2017

Site Name	Find No.	Context No.	Layer	Trench / Grid No.	Material	Description	Date
70215-2B	**285**	204		4	Lithic	Struck? quartz	03/11/2017
70215-2B	**286**	204		6	Lithic	Struck? quartz	03/11/2017
70215-2B	**287**	204		3	Lithic	Struck? quartz	03/11/2017
70215-2B	**288**	204		3	Lithic	Struck? quartz	03/11/2017
70215-2B	**289**	204		10	Lithic	Struck? quartz	03/11/2017
70215-2B	**290**	204		25	Lithic	Struck? quartz	03/11/2017
70215-2B	**291**	204		25	Charcoal	?	03/11/2017
70215-2B	**292**	204		25	Bone	Worked bone?	03/11/2017

Appendix 3 List of Retained Samples

Site Name	Context No.	Trench No.	Grid No.	Layer	Type	Sample Size	Comments
70215-2A							
70215-2A	**Spoil**	Trench 2	-	-	Mammal bone	-	1 x tooth, 1 x mammal bone fragment
70215-2A	**300**	Trench 1	-	-	Mammal bone	0.1L	Misc. mammal bone for ID
70215-2A	**300**	Trench 1	-	-	Shell	1L	Shell for ID
70215-2A	**301**	Trench 2	-	-	Shell	1L	Shell for ID
70215-2A	**301**	Trench 2	-	-	Mammal bone	1L	Misc. mammal bone for ID
70215-2A	**302**	Trench 1	-	-	Charcoal	-	Charcoal (wet sieving residue)
70215-2A	**303**	Trench 2	-	-	Shell	5L	Shell for ID
70215-2A	**303**	Trench 2	-	-	Mammal bone	0.1L	1 x mammal bone for ID
70215-2A	**304**	Trench 1	-	-	Mammal bone	1L	Misc. mammal bone for ID
70215-2A	**304**	Trench 1	-	-	Charcoal	-	Charcoal (wet sieving residue)
70215-2A	**304**	Trench 1	-	-	Soil	40L	Soil sample for processing (5 tubs)
70215-2A	**305**	Trench 1	-	-	Shell	1L	Shell for ID (dry sieving)
70215-2A	**305**	Trench 1	-	-	Soil	10L	Soil sample for processing (1 tub)
70215-2A	**305**	Trench 1	-	-	Mammal bone	-	Misc. mammal bone for ID x 5-8 fragments
70215-2A	**307**	Trench 2	-	-	Soil	10L	Soil sample for processing (1 tub)
70215-2A	**307**	Trench 2	-	-	Shell	2L	Shell for ID (dry sieving)
70215-2A	**307**	Trench 2	-	-	Mammal bone	-	Misc. mammal bone for ID x 3 fragments
70215-2A	**307**	Trench 2	-	-	Charcoal	-	Charcoal (wet sieving residue)
70215-2A	**312**	Trench 2	-	-	Soil	25-30L	Soil sample (charcoal-rich) for processing (3 tubs)
70215-2A	**312**	Trench 2	-	-	Shell	2L	Shell for ID (dry sieving)
70215-2A	**313**	Trench 2	-	-	Mammal bone	0.2L	Misc. mammal bone for ID
70215-2A	**315**	Trench 2	-	-	Charcoal	-	Charcoal (wet sieving residue)
70215-2A	**315**	Trench 2	-	-	Shell	5L	Hand retrieved oyster shell for ID
70215-2A	**316**	Trench 1	-	-	Soil	8-10L	Soil sample for processing (2 bags)
70215-2A	**402**	TP4	-	-	Shell	3L	Hand retrieved shell for ID
70215-2A	**403**	TP3	-	0.1-0.2m	Shell	-	Shell residues from 0.1-0.2m (wet sieving)

Site Name	Context No.	Trench No.	Grid No.	Layer	Type	Sample Size	Comments
70215-2A	**403**	TP3	-	-	Shell / charcoal	-	Shell and charcoal residues from 0-0.1m (wet sieving)
70215-2A	**403**	TP3	-	0.1-0.2m	Charcoal		Charcoal from 0.1-0.2m (wet sieving residue)
70215-2A	**403**	TP3	-	-	Soil	8-10L	Soil sample from 0-0.1m for processing (1 bag)
70215-2A	**403**	TP3	-	-	Soil	8-10L	Soil sample from 0.1-0.2m for processing (1 bag)
70215-2A	**403**	TP3	-	-	Shell	-	Shell residues from 0.1-0.2m (wet sieving)
70215-2A	**405**	TP4	-	-	Charcoal	-	Charcoal (wet sieving residue)
70215-2A	**405**	TP4	-	-	Shell	2-4L	Shell from 0.1-0.2m (dry sieving) for ID
70215-2A	**405**	TP4	-	-	Charcoal	-	Charcoal (wet sieving residue) from 0-0.1m
70215-2A	**405**	TP4	-	-	Shell	2-4L	Shell from 0.1-0.2m (dry sieving) for ID
70215-2A	**405**	TP4	-	-	Soil	15-20L	Soil sample from 0.1-0.2m for processing (2 tubs)
70215-2A	**406**	TP4	-	-	Shell	1L	Shell from (dry sieving) for ID
70215-2A	**406**	TP4	-	-	Charcoal	-	Charcoal (wet sieving residue)
70215-2A	**407**	TP8	-	-	Soil	5L	Soil sample for processing (1 bag)
70215-2A	**407**	TP8	-	-	Charcoal	-	Charcoal (wet sieving residue)
70215-2A	**407**	TP8	-	-	Shell	-	Shell (wet sieving residue)
70215-2A	**408**	TP8	-	-	Soil	5L	Soil sample from 0-0.1m for processing (1 bag, small amount of burnt bone)
70215-2A	**413**	TP8	-	-	Soil	8-10L	Soil sample from 0-0.1m for processing (1 tub)
70215-2A	**413**	TP8	-	-	Bone	-	Mammal bone from 0-0.1m for ID (small bag)
70215-2B							
70215-2B	**200**	-	-	-	Bone	1/2L	Misc. mammal bone
70215-2B	**202**	-	-	-		-	Retents of wet sieving (202)
70215-2B	**204**	-	-	-	Shell	1L	Mainly oyster
70215-2B	**204**	-	-	-	Bone	1L	Misc. mammal bone
70215-2B	**202**	-	-	-	Bone	1L	Misc. mammal bone
70215-2B	**202**	-	-	-	Antler	-	Antler
70215-2B	**203**	-	-	-	Bone	-	Misc. mammal bone
70215-2B	**204**	-	-	-	Bone	-	Raptor claw?
70215-2B	**204**	-	2	0-0.1m	Shell	-	Shell
70215-2B	**204**	-	2	0-0.1m	Bone		Misc. mammal bone

Site Name	Context No.	Trench No.	Grid No.	Layer	Type	Sample Size	Comments
70215-2B	**204**	-	2	0-0.1m	Soil	10L	Soil sample (shell midden)from 0-0.1m for processing (1 tub)
70215-2B	**204**	-	3	0-0.1m	Soil	10L	Soil sample (shell midden)from 0-0.1m for processing (1 tub)
70215-2B	**204**	-	3	0-0.1m	Shell	-	
70215-2B	**204**	-	3	0.1-0.2m	Shell	-	
70215-2B	**204**	-	3	0.1-0.2m	Shell	1L	Soil sample from 0.1-0.2m for processing (1 tub)
70215-2B	**204**	-	3	0-0.1m	Bone	-	Misc. mammal bone
70215-2B	**204**	-	3	0.1-0.2m	Bone	-	Misc. mammal bone
70215-2B	**204**	-	3	0-0.1m	Fish	-	Fish vertebra
70215-2B	**204**	-	4	0-0.1m	Bone	-	Bone fragments
70215-2B	**204**	-	4	0-0.1m	Shell	-	Whelks and cockle sample
70215-2B	**204**	-	4	0-0.1m	Shell	-	Shell oyster sample
70215-2B	**204**	-	4	0-0.1m	Bone	-	Bone sample
70215-2B	**204**	-	5	0.1-0.2m	Bone	-	Misc. mammal bone
70215-2B	**204**	-	5	0.1-0.2m	Charcoal	-	Charcoal
70215-2B	**204**	-	6	0-0.1m	Bone	-	Mammal bone fragments and antler?
70215-2B	**204**	-	6	0.1-0.2m	Charcoal	-	Charcoal
70215-2B	**204**	-	6	0.1-0.2m	Fish bone	-	very small amount fish bone
70215-2B	**204**	-	6	0.1-0.2m	Shell	-	
70215-2B	**204**	-	6	0.1-0.2m	Bone	-	Misc. mammal bone
70215-2B	**204**	-	6	0.2-0.3m	Shell	-	
70215-2B	**204**	-	6	0.2-0.3m	Bone	-	Misc. mammal bone
70215-2B	**204**	-	6	0.1-0.2m	Soil	10L	Soil sample from shell midden from 0.1-0.2m for processing (1 tub)
70215-2B	**204**	-	7	0.1-0.2m	Soil	10L	Soil sample from shell midden from 0.1-0.2m for processing (1 tub)
70215-2B	**204**	-	7	0.2-0.3m	Soil	10L	Soil sample (shell midden) from 0.2-0.3m for processing (1 tub)
70215-2B	**204**	-	7	0.1-0.2m	Bone	-	Misc. mammal bone
70215-2B	**204**	-	7	0.1-0.2m	Fish bone	-	Very small fish bone
70215-2B	**204**	-	7	0.2-0.3m	Bone	-	Misc. mammal bone, some burnt fragments

Site Name	Context No.	Trench No.	Grid No.	Layer	Type	Sample Size	Comments
70215-2B	**204**	-	7	0.2-0.3m	Charcoal	-	Charcoal
70215-2B	**204**	-	7	0.2-0.3m	Shell	-	
70215-2B	**204**	-	8	0.1-0.2m	Shell	-	
70215-2B	**204**	-	8	0-0.1m	Shell	-	Shell mixed
70215-2B	**204**	-	8	0.2-0.3m	Soil	10L	Soil sample from 0.2-0.3m for processing (1 tub)
70215-2B	**204**	-	8	0.1-0.2m	Bone	-	Misc. mammal bone
70215-2B	**204**	-	8	0.1-0.2m	Bone	-	Misc. mammal bone
70215-2B	**204**	-	8	0.2-0.3m	Bone	-	Misc. mammal bone
70215-2B	**204**	-	9	0.1-0.2m	Shell	-	Shell mixed sample
70215-2B	**204**	-	9	0.1-0.2m	Bone	-	Misc. mammal bone
70215-2B	**204**	-	9	0.1-0.2m	Charcoal	-	Charcoal from wet sieving
70215-2B	**204**	-	9	0-0.1m	Shell	-	Mixed shell
70215-2B	**204**	-	9	0-0.1m	Bone	-	Bone fragment
70215-2B	**204**	-	9	0.1-0.2m	Shell	-	Shell
70215-2B	**204**	-	9	0.1-0.2m	Bone	-	Misc. mammal bone
70215-2B	**204**	-	9	0-0.1m	Fish bone	-	Fish bone, very small bag
70215-2B	**204**	-	9	0-0.1m	Bone	-	Misc. mammal bone
70215-2B	**204**	-	10	0-0.1m	Shell	-	Mixed shell
70215-2B	**204**	-	10	0.1-0.2m	Shell	-	Shell sample oyster
70215-2B	**204**	-	10	0.1-0.2m	Soil	10L	Soil sample from shell midden from 0.1-0.2m for processing (1 tub)
70215-2B	**204**	-	10	0.1-0.2m	Bone	-	Misc. mammal bone
70215-2B	**204**	-	10	0-0.1m	Bone	-	Misc. mammal bone
70215-2B	**204**	-	10		Bone	-	Misc. mammal bone
70215-2B	**204**	-	11	0.1-0.2m	Shell	-	
70215-2B	**204**	-	11	0-0.1m	Soil	10L	Soil sample (shell midden)from 0-0.1m for processing (1 tub)
70215-2B	**204**	-	11	0.1-0.2m	Charcoal	-	Charcoal from wet sieving
70215-2B	**204**	-	11	0.1-0.2m	Shell	-	Soil sample from shell midden from 0.1-0.2m for processing (1 tub)
70215-2B	**204**	-	11	0.1-0.2m	Bone	-	

Site Name	Context No.	Trench No.	Grid No.	Layer	Type	Sample Size	Comments
70215-2B	**204**	-	11	0-0.1m	Fish bone	-	Fish bone and very small antler
70215-2B	**204**	-	11	0.1-0.2m	Bone	-	Teeth and bone fragments
70215-2B	**204**	-	11	0.1-0.2m	Fish bone	-	
70215-2B	**204**	-	11	0-0.1m	Bone	-	1 small bag mixed small bone fragments
70215-2B	**204**	-	12	0-0.1m	Bone	-	Small burnt bone fragment
70215-2B	**204**	-	12	0-0.1m	Charcoal	-	Charcoal from wet sieving
70215-2B	**204**	-	12	0.1-0.2m	Soil	10L	Soil sample from shell midden from 0.1-0.2m for processing (1 tub)
70215-2B	**204**	-	12	0.1-0.2m	Shell	-	
70215-2B	**204**	-	12	0.1-0.2m	Bone	-	Bone and tooth
70215-2B	**204**	-	12	0.1-0.2m	Bone	-	
70215-2B	**204**	-	12	0-0.1m	Bone	-	Bone from wet sieving
70215-2B	**204**	-	12	0-0.1m	Shell	-	
70215-2B	**204**	-	13	0-0.1m	Shell	-	
70215-2B	**204**	-	13	0-0.1m	Bone	-	
70215-2B	**204**	-	14	0-0.1m	Shell	-	
70215-2B	**204**	-	14	0-0.1m	Shell	-	
70215-2B	**204**	-	14	0-0.1m	Bone	-	
70215-2B	**204**	-	25	0-0.1m	Soil	10L	Soil sample from shell midden from 0-0.1m for processing (1 tub)
70215-2B	**204**	-	25	0-0.1m	Bone	-	Mammal bone
70215-2B	**204**	-	26	0-0.1m	Shell	-	
70215-2B	**204**	-	26	0-0.1m	Shell	-	Ashy shell spread above cobbles. Bulk
70215-2B	**204**	-	26	0-0.1m	Bone	-	Mammal Bone
70215-2B	**204**	-	27	0-0.1m	Soil	10L	Soil sample from shell midden from 0-0.1m for processing (1 tub)
70215-2B	**204**	-	27	0-0.1m	Bone	-	
70215-2B	**204**	-	27	0-0.1m	Shell	-	
70215-2B	**204**	-	27	0-0.1m	Bone	-	
70215-2B	**204**	-	33	0-0.1m	Shell	-	Mixed shell
70215-2B	**204**	-	33	0-0.1m	Bone	-	Mammal Bone

Site Name	Context No.	Trench No.	Grid No.	Layer	Type	Sample Size	Comments
70215-2B	**204**	-	34	0-0.1m	Soil	10L	Soil sample from shell midden from 0-0.1m for processing (1 tub)
70215-2B	**204**	-	34	0-0.1m	Bone	-	Small amount fish bone
70215-2B	**204**	-	35	0-0.1m	Shell	-	
70215-2B	**204**	-	35	0-0.1m	Soil	10L	Soil sample from shell midden from 0-0.1m for processing (1 tub)
70215-2B	**204**	-	36	0-0.1m	Bone	-	
70215-2B	**204**	-	37	0-0.1m	Bone	-	
70215-2B	**204**	-	37	0-0.1m	Shell	-	Oyster shells
70215-2B	**204**	-	41	0-0.1m	Bone	-	
70215-2B	**204**	-	41	0-0.1m	Charcoal	-	Charcoal from wet sieving
70215-2B	**204**	-	41	0-0.1m	Shell	-	
70215-2B	**204**	-	41	0-0.1m	Soil	10L	Soil sample from shell midden from 0-0.1m for processing (1 tub)
70215-2B	**204**	-	42	0-0.1m	Shell	-	
70215-2B	**204**	-	42	0-0.1m	Bone	-	
70215-2B	**204**	-	42	0-0.1m	Soil	10L	Soil sample from shell midden from 0-0.1m for processing (1 tub)
70215-2B	**204**	-	43	0-0.1m	Shell	-	
70215-2B	**204**	-	43	0-0.1m	Bone	-	One large, one small
70215-2B	**204**	-	43	0-0.1m	Soil	10L	Soil sample from shell midden from 0-0.1m for processing (1 tub)
70215-2B	**204**	-	45	0.1-0.2m	Bone	-	
70215-2B	**204**	-	45	0.1-0.2m	Shell	-	
70215-2B	**204**	-	45	0.1-0.2m	Charcoal	-	Charcoal from wet sieving
70215-2B	**204**	-	46	0-0.1m	Bone	-	Fish bone
70215-2B	**204**	-	46	0-0.1m	Bone	-	Mammal bone
70215-2B	**204**	-	46	0.1-0.2m	Fish bone	-	Small fish bone
70215-2B	**204**	-	46	0.1-0.2m	Bone	-	
70215-2B	**204**	-	46	0-0.1m	Shell	-	
70215-2B	**204**	-	46	0-0.1m	Soil	10L	Soil sample from shell midden from 0-0.1m for processing (1 tub)

Site Name	Context No.	Trench No.	Grid No.	Layer	Type	Sample Size	Comments
70215-2B	**204**	-	46	0.1-0.2m	Soil	10L	Soil sample from shell midden from 0.1-0.2m for processing (1 tub)
70215-2B	**204**	-	47	0-0.1m	Bone	-	
70215-2B	**204**	-	47	0-0.1m	Soil	10L	Soil sample from shell midden from 0-0.1m for processing (1 tub)
70215-2B	**204**	-	54	0-0.1m	Bone	-	Mammal bone sample
70215-2B	**204**	-	54	0.1-0.2m	Bone	-	
70215-2B	**204**	-	55	0-0.1m	Shell	-	Soil sample from shell midden from 0-0.1m for processing (1 tub)
70215-2B	**204**	-	55	0-0.1m	Fish bone	-	Small fish bone
70215-2B	**204**	-	55	0-0.1m	Bone	-	
70215-2B	**205**	-	-	-	Soil	10L	Soil sample for processing
70215-2B	**210**	-	-	-	Charcoal	-	Charcoal from wet sieving
70215-2B	**210**	-	-	-	Charcoal	-	Charcoal from wet sieving
70215-2B	**210**	-	-	-	?	-	?
70215-2B	**210**	-	-	-	Bone	-	Misc mammal bone
70215-2B	**210**	-	-	-	Soil	10L	Soil sample from shell midden from 0-0.1m for processing (1 tub)

Appendix 4: Description of Retents from Wet Sieving

Site Name	Context No.	Test Pit	Grid No.	Layer	Comments	Quantity
70215-2A						
70215-2A	**305**				One lithic quartz flake	8L
70215-2A	**307**				30 large pieces of charcoal and 2 bones	10L
70215-2A	**403**	**3**		0.1-0.2		10L
70215-2A	**405**	**4**		0-0.1	Charcoal, 9 pieces of bone, 9 pieces of possible slag	45L
70215-2A	**405**	**4**		0.1-0.2		25L
70215-2A	**406**	**4**			Charcoal	15L
70215-2B						
70215-2B	**204**		2	0-0.1	Charcoal, 5 lithics, small pieces of bone, two burnt, One tooth	18L

Site Name	Context No.	Test Pit	Grid No.	Layer	Comments	Quantity
70215-2B	**204**		3	0-0.1	Charcoal, many small lithic fragments, many bone fragments include possible teeth	37L
70215-2B	**204**		3	0.1-0.2	Charcoal, quartz lithics, small pieces of bone	15L
70215-2B	**204**		6	0.1-0.2	Charcoal pieces, 3 lithics, pieces of bone, Fish bone	28L
70215-2B	**204**		7	0.1-0.2	Charcoal pieces, Quartz lithics, bone pieces, 5 fish bones	40L
70215-2B	**204**		9	0-0.1	Charcoal pieces, bone pieces, 2 very small fish bone	25L
70215-2B	**204**		10	0-0.1	Charcoal pieces, possible scraper, 3 bone pieces	5L
70215-2B	**204**		11	0-0.1	Charcoal pieces, 8 quartz and flint lithics, pieces of bone, fish bones and tooth	40L
70215-2B	**204**		11	0.1-0.2	Charcoal pieces, 7 lithics, bone fragments, fish bone and teeth	60L
70215-2B	**204**		12	0-0.1	Charcoal pieces, pieces of bone, fish bone	30L
70215-2B	**204**		12	0.1-0.2	Charcoal, 2 quartz lithics, 16 bone pieces,14 fish bones	50L
70215-2B	**204**		25	0-0.1	Charcoal, 12 quartz lithics, bone and antler pieces	24L
70215-2B	**204**		27	0-0.1	Charcoal, 2 struck quartz lithics, bone and antler pieces	20L
70215-2B	**204**		27	0.1-0.2	Charcoal,1 lithic, pieces of bone, 2 fish bone	30L
70215-2B	**204**		34	0-0.1	Charcoal, 2 quartz lithics, bone pieces, Fish bone	30L
70215-2B	**204**		46	0-0.1	Charcoal, range of lithics, bone, antler and tooth, fish bone and possible crab claw	80L
70215-2B	**204**		46	0.1-0.2	Charcoal, Quartz and stone lithics, bone pieces, Fish bone	40L
70215-2B	**204**		55	0-0.1	Charcoal, 1 lithic, bone, fish bone	40L

Appendix 5: Description of Shell Quantity from Wet Sieving

Site Name	Context No.	Grid No.	Layer	Comments	Quantity
70215-2A					
70215-2A	**305**				4L
70215-2A	**307**				4L
70215-2A	**403**		0.1-0.2		2L
70215-2A	**405**		0-0.1	Large quantity of oyster shells, c.60% oyster with mixed fragments of other shell	30L
70215-2A	**405**		0.1-0.2	Large quantity of cockle	15L

Site Name	Context No.	Grid No.	Layer	Comments	Quantity
				shells, c.40% cockle with mixed fragments of other shell	
70215-2A	**406**				7-8L
70215-2B					
70215-2B	**204**	2	0-0.1		10L
70215-2B	**204**	3	0-0.1		22-24L
70215-2B	**204**	3	0.1-0.2		5L
70215-2B	**204**	6	0.1-0.2		20L
70215-2B	**204**	7	0.1-0.2		20L
70215-2B	**204**	9	0-0.1		10L
70215-2B	**204**	10	0-0.1		5L
70215-2B	**204**	11	0-0.1	Large quantity of oyster shells, c.30-40% oyster with mixed fragments of other shell	20L
70215-2B	**204**	11	0.1-0.2		32-35L
70215-2B	**204**	12	0-0.1		15L
70215-2B	**204**	12	0.1-0.2		20L
70215-2B	**204**	25	0-0.1		15L
70215-2B	**204**	27	0-0.1		15L
70215-2B	**204**	27	0.1-0.2		10L
70215-2B	**204**	46	0-0.1		40-45L
70215-2B	**204**	46	0.1-0.2	Large quantity of oyster shells, c.30-40% oyster with mixed fragments of other shell	20L
70215-2B	**204**	55	0-0.1		20L

Appendix 6 List of Drawings

Drawing No.	Sheet No.	Description	Scale	Date	Initials
70215-2A					
S1	1	TP3 SE facing and SW facing trench sections	1:10	05/10/2017	MMM
S2	1	TP5 SE facing trench section	1:10	05/10/2017	MMM
S3	1	TP6 SE facing trench section	1:10	05/10/2017	MMM
S4	1	TP7 SE facing trench section	1:10	05/10/2017	MMM
S5	1	TP8 SE facing section A-B, showing (411)	1:10	05/10/2017	JWom
S6	1	TP8, stokehole 412	1:10	05/10/2017	JWom
S7	1	TP8 N facing section	1:10	05/10/2017	JWom
S8	1	TP8 ESE facing section through boulder (411)	1:10	06/10/2017	JWom
S9	2	TP6 SW facing section	1:10	07/10/2017	KC
S10	2, 3	T2 NNE facing trench section showing midden (312/315) and burial (314)	1:10	07/10/2017	MP
S11	3	TP4 NW and NE facing sections	1:10	06/10/2017	MP
S12	3	T1 SSW facing trench section (2 parts)	1:10	07/10/2017	MP
S13	4	TP4 SW facing trench section	1:10	08/10/2017	MP
S14	4	TP9-TP8 E facing trench section	1:10	08/10/2017	MP
Plan 1	4	TP9-TP8 Post-ex of shell midden to (413) showing stake holes	1:20	07/10/2017	JWom
Plan 2	card 409	TP4 possible linear slot (409)	1:20	06/10/2017	KC
Plan 3	card 411	TP8, slab 411 and layer (407)	1:20	06/10/2017	JWom
Plan 4	card 408	Plan of sheep burial, T2	1:20	05/10/2017	MP
Plan 5	card 313	Plan of human burial, T2	1:20	07/10/2017	MP
70215-2B					
S1	1	S-facing section of excavation trench	1:20	06/10/2017	SB
S2	1	W-facing section of baulk in trench	1:20	06/10/2017	SB
S3	3	E-facing section of excavation trench	1:20	06/10/2017	SB
Plan 1	2	Surface of midden (204), mid-excavation, west side of trench	1:20	06/10/2017	SB
Plan 2	3, 4	Post-excavation plan of trench, at various levels	1:20	06/10/2017	SB

Appendix 7 List of Photographs: Site 70215-2A

Photo No.	Area	Context No.	Description	Direction Facing	Date	Initials
174	T1	302	Post-removal of (300), showing the top of (302) in Trench 1	WNW	03/10/2017	MP
175	T1	302	Post-removal of (300), showing the top of (302) in Trench 1	WNW	03/10/2017	MP
176	T2	302	Post-removal of (300), showing the top of (302) in Trench 2	WNW	03/10/2017	MP
177	T2	302	Post-removal of (300), showing the top of (302) in Trench 2	WNW	03/10/2017	MP
178	T2	302	Post-removal of (300), showing the top of (302) in Trench 2	WNW	03/10/2017	MP
179	T2	-	Pre-excavation of mammal burial in Trench 2	SW	03/10/2017	MP
180	T2	-	Pre-excavation of mammal burial in Trench 2	WNW	03/10/2017	MP
181	T2	306, 307, 308	Post-removal of (301) in Trench 2, showing the top of (306), (307), (308)	WNW	03/10/2017	MP
182	T2	-	Post-removal of (301) in Trench 2	ESE	03/10/2017	MP
183	T2	306	Trench 2 showing the top of (306)	WNW	03/10/2017	MP
184	T2	-	Pre-excavation of mammal burial in Trench 2	-	03/10/2017	MP
185	T1	304	Post-excavation of (302) in Trench 1, showing the top of (304)	WNW	03/10/2017	MP
186	TP3	-	SE-facing section of TP3	NW	04/10/2017	MP
187	TP3	-	SE-facing section of TP3	NW	04/10/2017	MP
188	TP3	-	SW-facing section of TP3	NE	04/10/2017	MP
189	TP3	-	Post-excavation of TP3 showing natural	NW	04/10/2017	MP
190	TP5	-	SE-facing section of TP5	NW	04/10/2017	MP
191	TP5	402	Post-excavation of TP5 showing natural, with (402) in front	NW	04/10/2017	MP
192	TP6	-	SE-facing section of TP6	NW	04/10/2017	MP
193	TP6	402	Post-excavation of TP6 showing natural at the top and (402) in front	NW	04/10/2017	MP
194	TP7	-	SE-facing section of TP7	NW	04/10/2017	MP
195	TP7	-	Post-excavation of TP7 showing natural at the top and (402) in front	NW	04/10/2017	MP
196	-	-	Working shot, site 2a	-	04/10/2017	MP
197	-	-	Working shot, site 2a	-	04/10/2017	MP
198	-	-	Working shot, site 2a	-	04/10/2017	MP
199	-	-	Working shot, site 2a	-	04/10/2017	MP
200	-	-	Working shot, site 2a	-	04/10/2017	MP
201	T1	304	Showing the top of midden (304) in Trench 1	WNW	04/10/2017	MP
202	T1	304	Showing the top of midden (304) in Trench 1	SW	04/10/2017	MP
203	T1	304	Showing the top of midden (304) in Trench 1	NNW	04/10/2017	MP
204	T1	SF411	Plough tip, SF411	-	04/10/2017	MP
205	T2	308, 311	Animal burial (308)	SSW	04/10/2017	MP

Photo No.	Area	Context No.	Description	Direction Facing	Date	Initials
206	T2	307, 308	Showing the location of animal burial (308) and the surface of (307)	NNW	04/10/2017	MP
207	T2	308, 311	Location of animal burial (308)	SSW	04/10/2017	MP
208	T2	308, 311	Location of animal burial (308)	SSW	04/10/2017	MP
209	TP4	406	Showing the top of (406)	NNE	04/10/2017	MP
210	TP4	406	Showing the top of (406)	SSW	04/10/2017	MP
211	TP8	407	Showing the top of (407) in TP8, showing the slab	NNE	04/10/2017	MP
212	TP8	407	Showing the top of (407) in TP8, showing the slab	SSW	04/10/2017	MP
213	T2	307	Showing the surface of (307)	SSE	05/10/2017	JM
214	T2	307	Showing the surface of (307)	WNW	05/10/2017	JM
215	T2	307	Showing the surface of (307)	NNE	05/10/2017	JM
216	TP8	411	Pre-excavation of extended area across the slab (411)	NNE	05/10/2017	JW
217	T2	307	Mid-excavation of (307)	NNE	05/10/2017	JM
218	T2	307	Mid-excavation of (307)	WNW	05/10/2017	JM
219	T2	308	Mid-excavation of sheep burial (308)	SSW	05/10/2017	JM
220	T2	308	Post-excavation of sheep burial (308)	SSE	05/10/2017	JM
221	T2	308	Post-excavation of sheep burial (308)	SSE	05/10/2017	JM
222	TP8	411	Test pit 8, showing large slab 411	SE	05/10/2017	JW
223	TP8	411	Test pit 8, showing large slab 411	SE	05/10/2017	JW
224	T2	-	Pre-excavation of skeleton	SW	05/10/2017	JW
226	TP4	-	SW-facing section of TP4	NE	06/10/2017	MP
227	TP4	-	NE-facing section of TP4	SW	06/10/2017	MP
228	TP4	-	NW-facing section of TP4	SE	06/10/2017	MP
229	TP4	406	Top of (406) in TP4 showing possible ditch	NE	06/10/2017	MP
230	TP4	406	Top of (406) in TP4 showing possible ditch	WNW	06/10/2017	MP
231	TP8	-	Working shot	-	06/10/2017	MP
232	TP8	-	Working shot	-	06/10/2017	MP
233	TP8	-	Working shot	-	06/10/2017	MP
234	T2	312	Mid-excavation of (312)	WNW	06/10/2017	JW
235	T1	304	Working shot, showing the top of (304)	WNW	06/10/2017	KB
236	T1	304	Working shot, showing the top of (304)	WNW	06/10/2017	KB
237	T1	304, 305	Working shot, showing (304) in front and (305) in back	WNW	06/10/2017	KB
238	T1	305, 310	Working shot, showing the top of (305) and (310)	WNW	06/10/2017	KB
239	T1	305, 310	Working shot, showing the top of (305) and (310)	WNW	06/10/2017	KB
240	T1	304	Top of shell midden (304)	WNW	06/10/2017	MP
241	T1	304	Top of shell midden (304)	SE	06/10/2017	MP
242	T1	304	Top of shell midden (304)	WSW	06/10/2017	MP
243	T2	312	Base of (312)	WNW	06/10/2017	MP
244	T2	-	Working shot	SE	06/10/2017	MP
245	T2	-	Post-excavation of (312)	WNW	06/10/2017	JW
246	T2	-	General view of trench	W	06/10/2017	JW

Photo No.	Area	Context No.	Description	Direction Facing	Date	Initials
247	T2	-	General view of trench	WNW	06/10/2017	JW
248	T2	-	General view of trench	WNW	06/10/2017	JW
249	T2	-	General view of trench	E	06/10/2017	JW
250	T2	-	Post-excavation of (407) and (408) in TP8	SE	06/10/2017	JW
251	T2	-	Post-excavation of (407) and (408) in TP8	WNW	06/10/2017	JW
252	T2a	-	Post-excavation of section S end	WNW	06/10/2017	JW
253	T2a	-	Post-excavation of section S end	WNW	06/10/2017	JW
254	T2	-	Working shot	-	06/10/2017	JW
255	T2	-	NNE-facing section, E end of T2	WNW	06/10/2017	JW
256	T2	-	General view of T2	SSW	06/10/2017	JW
257	TP1-4	-	General view over test pits	NW	06/10/2017	JW
258	TP1-4	-	General view over test pits	E	06/10/2017	JW
259	TP1-4	-	General view over test pits	S	06/10/2017	JW
260	T2	-	NNE-facing section	SW	07/10/2017	MP
261	T2	-	NNE-facing section	SSW	07/10/2017	MP
262 stitch	T2	-	NNE-facing section, stitched image	SSW	07/10/2017	MP
262-264	T2	-	NNE-facing section	SSW	07/10/2017	MP
265	T2	-	NNE-facing section	SE	07/10/2017	MP
266-267	T2	-	NNE-facing section	SSW	07/10/2017	MP
268	T2	-	NNE-facing section	SE	07/10/2017	MP
269	T2	-	Post-excavation	WNW	07/10/2017	MP
270	T2	-	Post-excavation	WNW	07/10/2017	MP
271	T2	-	SSW-facing section	NE	07/10/2017	MP
272	T2	-	Post-excavation	NE	07/10/2017	MP
273	T2	-	SSW-facing section	NE	07/10/2017	MP
274	T2	-	Post-excavation	NE	07/10/2017	MP
275	T2	314	Burial pit (314)	WSW	07/10/2017	MP
276	T2	314	Burial pit (314)	WSW	07/10/2017	MP
277	T2	-	View over Trench 2	ESE	07/10/2017	MP
278	T2	-	View over Trench 2	ESE	07/10/2017	MP
279	T2	-	View over Trench 2	ESE	07/10/2017	MP
280	T2	-	Location shot	E	07/10/2017	MP
281	TP8	-	Struck stone core from TP8	-	07/10/2017	MP
282	TP4	-	E-facing section of TP4	W	07/10/2017	KC
283	TP4	-	S-facing section of TP4	N	07/10/2017	KC
284	TP8	-	Post-excavation of (407) and (408) in TP8	N	07/10/2017	JW
285	TP8	-	Post-sectioning of 3 stake holes	W	07/10/2017	JW
286	T1	-	SSW-facing section of T1	E	07/10/2017	MP
287	T1	-	SSW-facing section of T1	NNW	07/10/2017	MP

Photo No.	Area	Context No.	Description	Direction Facing	Date	Initials
288	T1	-	SSW-facing section of T1	E	07/10/2017	MP
289	T1	-	SSW-facing section of T1	E	07/10/2017	MP
290-293	T1	-	SSW-facing section of T1	NNE	07/10/2017	MP
294	T1	-	Post-excavation of T1	WNW	07/10/2017	MP
295	T1	-	ESE-facing baulk in centre of T1	WNW	07/10/2017	MP
296	T1	-	ESE-facing baulk in centre of T1	WNW	07/10/2017	MP
297	T1	-	ESE-facing baulk in W end of T1	WNW	07/10/2017	MP
311	-	-	SF413, worked stone core from Test Pit 8	-	08/10/2017	MP
3142	-	-	Recording in progress	-	06/10/2017	KC

Appendix 8 List of Photographs: Site 70215-2B

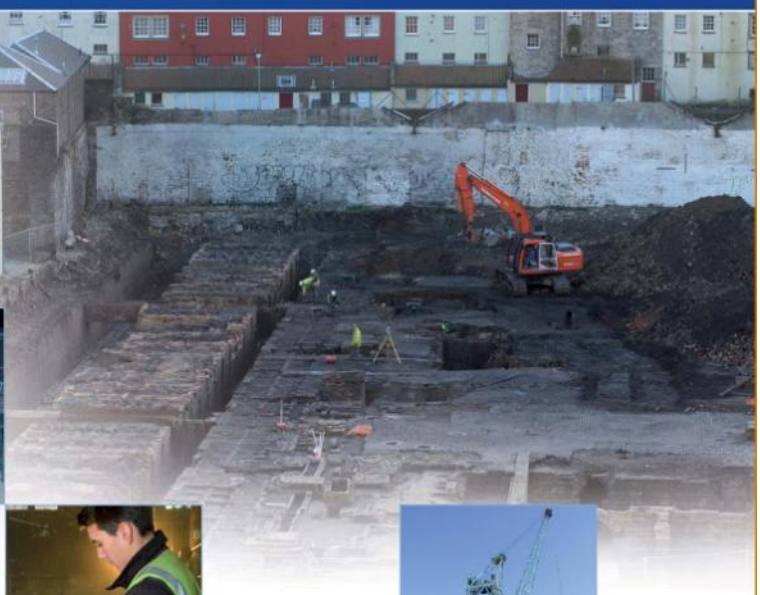
Site Name	Photo No.	Grid	Context No.	Description	Direction Facing	Date	Initials
70215-2B	**116-117**	-	-	SF203 - antler pick	N	30/09/2017	SB
70215-2B	**118-119**	-	-	SF203 - antler pick	NW	30/09/2017	SB
70215-2B	**120**	-	-	Location of antler pick SF 203	NE	30/09/2017	SB
70215-2B	**121-123**	-	-	Location of antler pick SF 203	W	30/09/2017	SB
70215-2B	**124-125**	-	-	Location of antler pick SF 203	W	30/09/2017	SB
70215-2B	**126**	-	-	SF203 - antler pick	S	30/09/2017	SB
70215-2B	**127**	-	-	SF203 - antler pick	E	30/09/2017	SB
70215-2B	**128-130**	-	-	SF203 - antler pick	NE	30/09/2017	SB
70215-2B	**131**	-	-	SF203 - antler pick	N	30/09/2017	SB
70215-2B	**132-133**	-	-	SF203 - antler pick	S	30/09/2017	SB
70215-2B	**134**	-	-	SF203 - antler pick	SE	30/09/2017	SB
70215-2B	**135-160**	-	-	Photos of antler pick SF203 for photogrammetry	-	30/09/2017	SB
70215-2B	**161-164**	-	-	SF203 - antler pick	-	30/09/2017	SB
70215-2B	**165**	-	-	Site tour	-	30/09/2017	SB
70215-2B	**166**	-	-	Troweling in progress	-	30/09/2017	SB
70215-2B	**167**	-	202	SF205-6 antler finds in situ	NW	30/09/2017	SB
70215-2B	**168-170**	-	202	SF205-6 antler finds in situ	N	30/09/2017	SB
70215-2B	**171**	-	202	SF205-6 antler finds in situ	W	30/09/2017	SB
70215-2B	**172**	-	202	SF205-6 antler finds in situ	N	30/09/2017	SB
70215-2B	**173**	-	202	SF205-6 antler after excavation	-	30/09/2017	SB
70215-2B	**298**	-	-	Harpoon SF227	-	08/10/2017	MP
70215-2B	**299**	-	-	Harpoon SF227	-	08/10/2017	MP
70215-2B	**300**	-	-	Harpoon SF227	-	08/10/2017	MP
70215-2B	**301**	-	-	Harpoon SF227	-	08/10/2017	MP
70215-2B	**302**	-	-	Harpoon SF227	-	08/10/2017	MP
70215-2B	**303**	-	-	Harpoon SF227	-	08/10/2017	MP
70215-2B	**304**	-	-	Harpoon SF227	-	08/10/2017	MP
70215-2B	**305**	-	-	Harpoon SF227	-	08/10/2017	MP

Site Name	Photo No.	Grid	Context No.	Description	Direction Facing	Date	Initials
70215-2B	**306**	-	-	Harpoon SF227	-	08/10/2017	MP
70215-2B	**307**	-	-	Looking over excavation	SE	08/10/2017	MP
70215-2B	**308**	-	-	Looking over excavation	SE	08/10/2017	MP
70215-2B	**309**	-	-	Looking over excavation	SE	08/10/2017	MP
70215-2B	**648**	-	202	SF203 - antler pick	-	30/09/2017	MS
70215-2B	**649**	-	202	SF203 - antler pick	-	30/09/2017	MS
70215-2B	**650**	-	202	SF203 - antler pick	-	30/09/2017	MS
70215-2B	**670**	-	202	SF205-6 antler finds in situ	-	30/09/2017	MS
70215-2B	**673**	-	202	SF205-6 antler finds in situ	-	30/09/2017	MS
70215-2B	**674**	-	202	SF205-6 antler finds in situ	-	30/09/2017	MS
70215-2B	**675**	-	202	SF205-6 antler finds in situ	-	30/09/2017	MS
70215-2B	**693**	West side	204	Mid-excavation image, surface midden (204)	E	04/10/2017	MS
70215-2B	**694**	West side	204	Mid-excavation image, surface midden (204)	E	04/10/2017	MS
70215-2B	**695**	West side	204	Mid-excavation image, surface midden (204)	E	04/10/2017	MS
70215-2B	**696**	West side	204	Mid-excavation image, surface midden (204)	N	04/10/2017	MS
70215-2B	**697**	West side	204	Mid-excavation image, surface midden (204)	S	04/10/2017	MS
70215-2B	**698**	West side	204	S-facing section	N	04/10/2017	MS
70215-2B	**699**	East side	205	West facing section silt deposit 205	E	04/10/2017	MS
70215-2B	**700**	East side	205	Central area (205)	S	04/10/2017	MS
70215-2B	**701**	East side	205	Central area (205)	S	04/10/2017	MS
70215-2B	**718**	46	204	SF 232 - Antler base in [46] in situ	N	06/10/2017	MS
70215-2B	**719**	46	204	SF 232 - Antler base in [46] in situ	NNE	06/10/2017	MS
70215-2B	**720**	46	204	SF 232 - Antler base in [46] in situ	SW	06/10/2017	MS
70215-2B	**729-731**	12, 13	204	Surface context (204) (spit 2 / spit 3) in [12] and [3] showing mixed midden deposits	E	06/10/2017	MS
70215-2B	**732**	46		Antler base in situ [46]	N	06/10/2017	MS
70215-2B	**734**	13	204	(204) at 0.1m depth, upright oysters	NNE	06/10/2017	MS
70215-2B	**735-736**	13	204	(204) at 0.1m depth, upright oysters	NE	06/10/2017	MS
70215-2B	**737**	13-16	204	(204) at 0.1m depth, upright oysters	N	06/10/2017	MS

Site Name	Photo No.	Grid	Context No.	Description	Direction Facing	Date	Initials
70215-2B	**753 stitch**	West side	-	West facing section stitched image	E	08/10/2017	MS
70215-2B	**753-760**	West side	-	West facing section (8 overlapping photos)	E	08/10/2017	MS
70215-2B	**761**	East side	207, 205	Hollow with cut (207) showing (205)	-	08/10/2017	MS
70215-2B	**762**	-	204	Underlying midden (204) (762 detail South end)	E	08/10/2017	MS
70215-2B	**765 stitch**	West side	-	E facing section of W trench	W	08/10/2017	MS
70215-2B	**765-769**	West side	-	E facing section of W trench	W	08/10/2017	MS
70215-2B	**770 stitch**	West side	-	S-facing section of W trench	N	08/10/2017	MS
70215-2B	**770-771**	West side	-	S-facing section of W trench	N	08/10/2017	MS
70215-2B	**772 stitch**	West side	-	S facing end of west trench	N	08/10/2017	MS
70215-2B	**772-776**	West side	-	S facing end of west trench	N	08/10/2017	MS
70215-2B	**777**	East side	-	Stone settings	N	08/10/2017	MS
70215-2B	**778**	East side	-	Stone settings	W	08/10/2017	MS
70215-2B	**779**	East side	216	Stone settings (216)	W	08/10/2017	MS
70215-2B	**780**	East side	217	Stone settings (217)	SW	08/10/2017	MS
70215-2B	**781**	East side	217	Stone settings (217)	NE	08/10/2017	MS
70215-2B	**782**	East side	-	Stone settings SW corner of east side of trench	N	08/10/2017	MS
70215-2B	**783**	East side	-	Stone settings SW corner of east side of trench	N	08/10/2017	MS
70215-2B	**784**	East side	-	Stone settings SW corner of east side of trench	N	08/10/2017	MS
70215-2B	**785**	West side	219	Stone setting (219)	N	08/10/2017	MS
70215-2B	**3597-8**	-	-	Overall trench images - E side	W	07/10/2017	MS
70215-2B	**3600**	-	-	Overall trench images - E side	N	07/10/2017	MS
70215-2B	**3603**	-	-	Overall trench images	N	07/10/2017	MS
70215-2B	**3605**	-	-	Overall trench images	N	07/10/2017	MS
70215-2B	**3607**	-	-	Overall trench images	N	07/10/2017	MS
70215-2B	**1716**	-	-	Location of the excavation	S	28/09/2017	CM
70215-2B	**1740**	-	-	Working shot, site tour	NE	30/09/2017	CM
70215-2B	**1744**	-	-	Working shot of excavation	W	30/09/2017	CM
70215-2B	**1746**	-	-	Photography of antler SF 205-6	-	30/09/2017	CM
70215-2B	**3167**	-	-	SF 267, bone point	-	30/09/2017	CM







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