

Cabot Highlands  
Championship Golf Course,  
Castle Stuart, Dalcross,  
Inverness, Highland

Archaeological Mitigation Project  
2023: Mitigation Area PS5 & WB  
Kiln 1

DATA STRUCTURE REPORT (DSR)

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For  
Cabot Highlands LLP

Andrew Young BA (Hons) MCIfA  
& Donna Young MA

February 2024  
(Projects CHPS5M23 and CH23WBKiln1)

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Avon Archaeology (Highland) Limited  
Professional Archaeological Services





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Professional Archaeological Services

## Cabot Highlands - Castle Stuart Golf Championship Course development, Dalcross, Inverness

Archaeological Mitigation Project – Mitigation Area PS5  
excavation and Watching Brief Kiln 1 excavation:

### Data Structure Report

Report No.	CHM23PS5 and CH23WBKiln1
Site Code	CHM23
Client	Cabot Highlands LLP
Planning References	15/03626/FUL and 19/01446/PAN
OS Grid Ref	NH 7374 4898 and NH 7365 4900
Fieldwork Date	May to June 2023
Report Date	February 2024
Author	Andrew Young MCI(A) & Donna Young MA

### Executive Summary

*Two archaeological 'strip & record' mitigation excavations (CHM23PS5 and CH23WBKiln1) have been undertaken on behalf of Cabot Highlands LLP and in accordance with the requirements of Highland Council planning consents 15/03626/FUL and 19/01446/PAN, in advance of preliminary development works for a new Championship Golf Course at Castle Stuart, Dalcross near Inverness. The mitigation-stage fieldwork was designed to fully characterise and record significant buried archaeological deposits, features and finds located in two specific parts of the development area, the first, designated Mitigation Area PS5, identified during a preceding stage of evaluation trenching (AAH 2022) and the second, designated Kiln 1, identified during the watching brief stage monitoring of development earthmoving.*



Mitigation excavation in Area PS5 targeted the location of a postulated prehistoric ring-ditch recorded on the Highland Council HER and identified from aerial photographs.

Excavation revealed the truncated but surprisingly well-preserved remains of a complex and possibly multi-period Palisade Enclosure, provisionally dated to the Bronze Age/Iron Age periods, which included the postulated remains of a contemporary or later Iron Age cart-burial. These remains are considered to represent important new evidence of prehistoric ritual/funerary activity in the north of Scotland. Evidence for a later phase of medieval settlement related and agricultural activity was also recorded, which is deemed to be of local importance.

The remains of a large and previously unrecorded kiln structure (Kiln 1), destroyed by fire, was identified during development monitoring and subsequently investigated and recorded. The structure remains undated but produced large quantities of thoroughly charred structural wood and other charred residues, which have significant future research potential.

The evidence recorded in Mitigation Area PS5, specifically the remains of a prehistoric palisade enclosure and the probable remains of an Iron Age cart burial, is deemed (by the writer) to be of **national importance** and to have substantial future research potential in that context. Accordingly, a further comprehensive stage of PERD stage post-site analysis and reporting is recommended, the proposed priorities of which include independent scientific dating and specialist examination and reporting of the suggested Iron Age cart-burial remains.

The evidence recorded at Kiln 1 as part of watching brief monitoring is considered to be **of local and possibly regional importance** and to have significant further research potential that can be expected to add to current understanding of the chronology and character of settlement-related and agricultural activity in Highland region. Accordingly, a further stage of selective post excavation analysis and reporting is recommended to firmly date and fully characterise the construction and operation of the kiln structure, the proposed priorities of which include independent scientific dating and the examination and reporting of charred remains.



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## *Legislation and Policy*

The common principles underlying international conventions, national legislation and local authority planning policies are that cultural heritage assets should be identified in advance of development and safeguarded where practicable; if disturbance is unavoidable appropriate recording of features and recovery of portable artefacts should take place. These have been set out in international and European Union agreements, and UK and Scottish legislation, as well as national and local planning policies<sup>1</sup>. Professional standards maintained throughout the present project adhered to the Codes of Conduct and Approved Practice and Standards of the Chartered Institute for Archaeologists<sup>2</sup>.

## *Acknowledgements*

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<sup>1</sup> A summary of relevant international, EU, UK and Scottish legislation and policies is available from the AAH office on request.

<sup>2</sup> Chartered Institute for Archaeology (CIfA) Standards and Guidelines. <https://www.archaeologists.net/codes/cifa>



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No omissions are intended and all errors herein are unintentional and the responsibility of the principal writer.

## Part 1 - Introduction & Background

Cabot Highlands, formerly Castle Stuart Golf Links, has received planning consents (05/00316/FULIN, 15/03626/FUL and 19/01446/PAN) from Highland Council for the development of a new 18-hole Championship Golf Course and associated development at Castle Stuart near Inverness (Figures 1 and 2).

The planning consents included Conditions that required an intrusive archaeological evaluation of all areas of proposed development for the new course, in advance of development and landscaping works, in order to establish the presence or absence of significant buried archaeological remains. The evaluation programme involved three principal stages of trial trenching, the final stage of which was completed in May 2023. The initial stage of trenching work undertaken between September and November 2022 (Avon Archaeology Highland 2022) identified significant buried archaeological remains in specified parts of the development area, which were designated Mitigation Area PS5 (Figure 2 below), the designation prefix (PS) indicating that at that time, it was expected that features in this area would be preserved in-situ and remain unaffected by course development works. In the event, the buried archaeological deposits and features identified in Mitigation Area PS5 could not be preserved in-situ through design due to changes in the course layout and as a consequence a subsequent stage of archaeological mitigation involving strip and record excavation was undertaken in advance of development earthmoving, the preliminary results of which are set out below.

A localised group of archaeological deposits interpreted to represent the remains of a sunken kiln or oven structure were identified during construction-phase earthmoving and subsequently fully investigated and recorded as part of archaeological monitoring. The remains of the structure were located approximately 50m NW of Mitigation Area PS5 and equidistant between earlier evaluation trenches 106, 107 and 155.

The mitigation excavations were each undertaken in accordance with a Written Scheme of Investigation (Avon Archaeology (Highland) 2023) approved by Highland Council.

The following Data Structure Report sets out the principal and preliminary results of the strip and record excavations in Mitigation Areas PS5 and Kiln 1. As such the evidence presented below is selective and does not seek to provide a comprehensive narrative of the fieldwork context records, which are appended at the rear of the report as Appendices 1 and 2.



## Location

The site for the proposed Cabot Highlands Championship Golf Course is located on the south side of the Moray Firth between Inverness and Nairn. The site is bounded by the B9039 to the SE, the Moray Firth coastline and the existing Castle Stuart Golf Links to the N and NW and open farmland to the SW. The area of development for the new course has a footprint of approximately 65 hectares, centred at Ordnance Survey grid reference NGR NH 740 494 and lies at an elevation of between c 7m and 22m aOD. At the time of the archaeological mitigation fieldwork Areas PS5 and Kiln 1 (Figures 2 and 3 below) were both located in an area where preliminary development earthmoving was underway, in what was formerly open agricultural land.



Figure 1 - General Site Location (not to scale)

## Archaeological & Historical Background

Recorded heritage assets located in the vicinity of the mitigation areas and relevant documentary, cartographic and geophysical survey data were reviewed in detail for the Cabot Highland Championship Course Evaluation WSI documents (Avon Archaeology 2022) and the results of that research are not reproduced here.

The sources consulted for the WSI documents included historic mapping held by the National Library of Scotland, the Highland Council Historic Environment Record (HER), Historic Scotland Canmore database, the Old and New Statistical Accounts, Ordnance Survey Name Books, LiDAR survey data and aerial photographs held by NCAP.



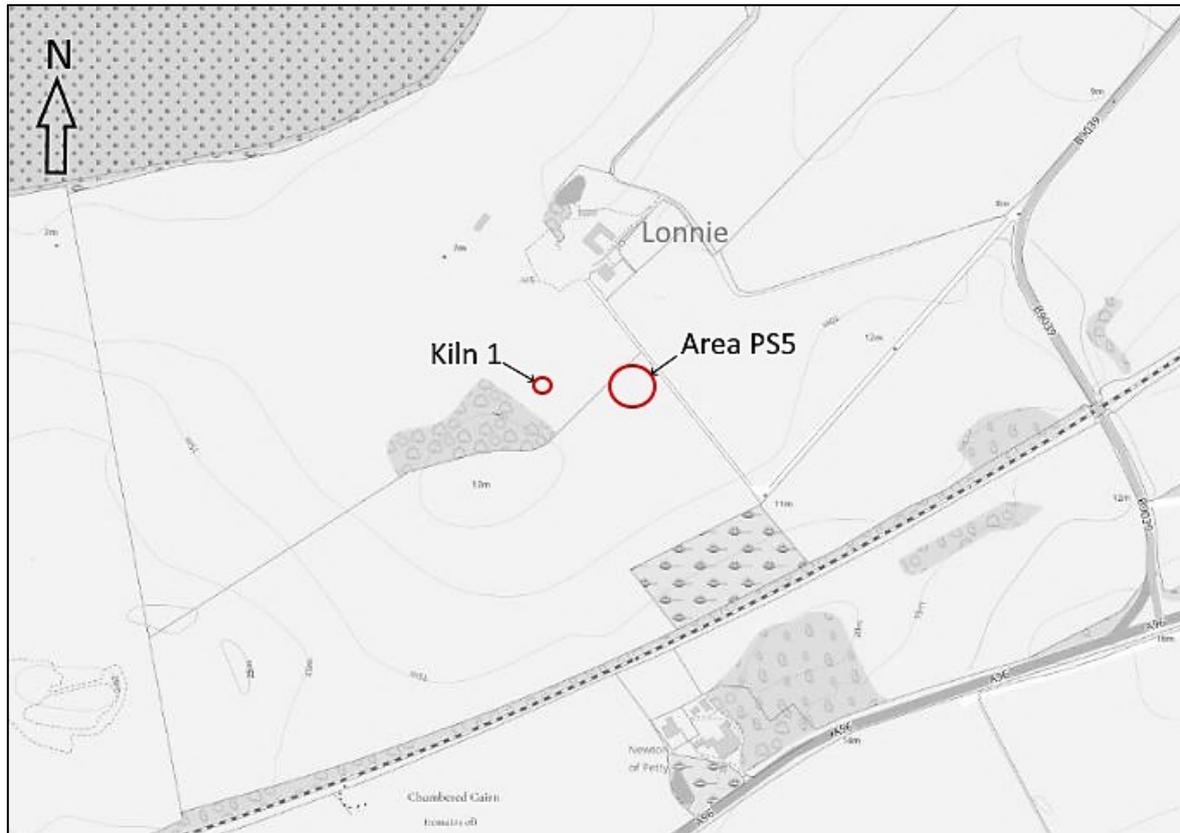


Figure 2 - General location of Mitigation Area PS5 and Watching Brief Kiln 1. Grid scale in kms

The British Geological Survey indicates that the study area is variously underlain by Raised Marine Beach deposits, principally sands and gravels, of Holocene Age formed towards the end of the Quaternary Period that are interspersed with localised peat and alluvial deposits of Holocene date. These in turn overlie a basement geology dominated by the Hillhead Sandstone Formation of the Devonian period<sup>3</sup>.

### ***Mitigation Area PS5***

Negative archaeological features and deposits were revealed in 2022 Evaluation Trenches 105 and 146 (Figure 4 below), which were positioned to evaluate the location of a purported ring-ditch recorded on the HER (MHG427) and identified from aerial photographs taken in 1986 (Figure 3 below).

<sup>3</sup> BGS online viewer consulted February 2024



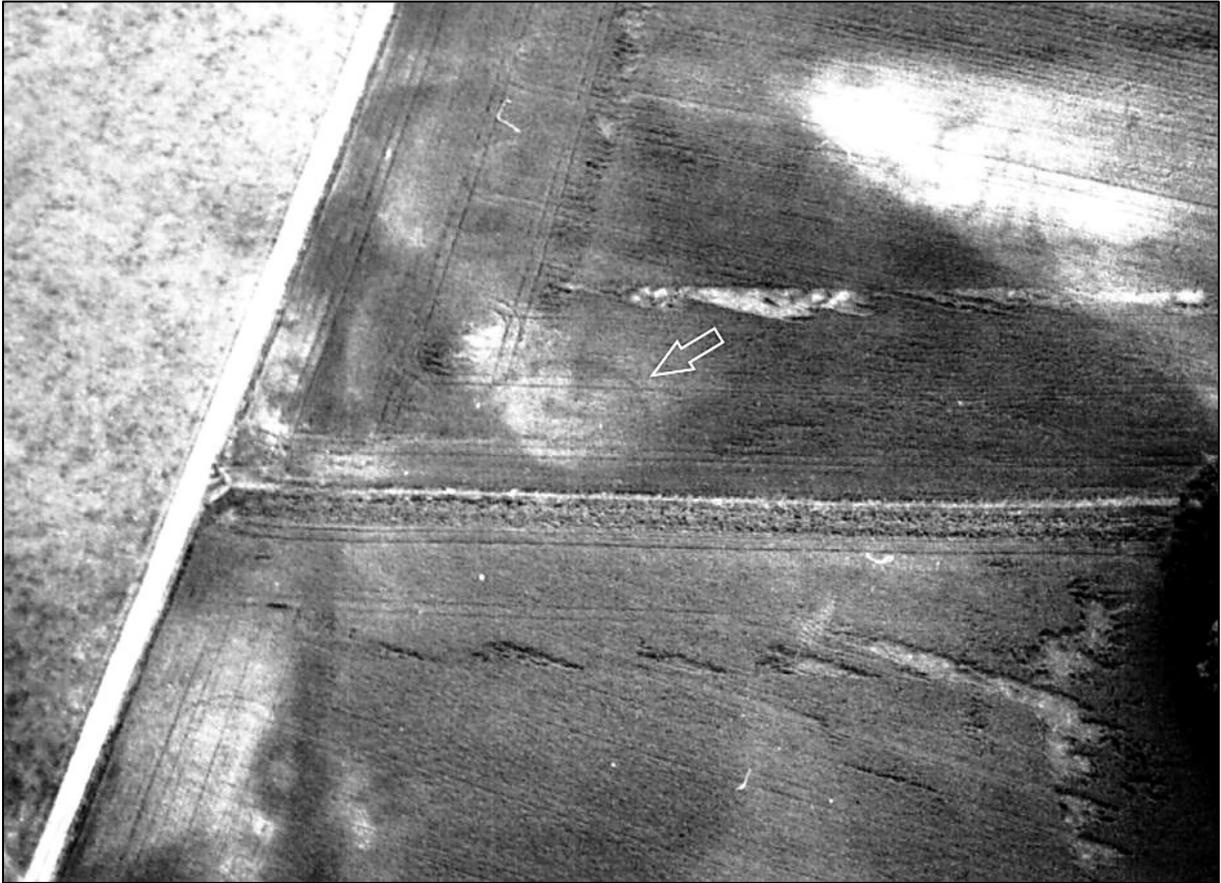


Figure 3 - Oblique aerial photograph dated 1986 showing ring-ditch MHG427. Facing S. With annotation by the writer. Reproduced courtesy of Highland Council HER

Buried deposits and features revealed in Evaluation Trenches 105 and 146 are fully described in the 2022 evaluation report (Avon Archaeology 2022). They included a shell-midden deposit and an extensive spread of dark soil containing charcoal and abundant sandstone fragments, which appeared to be bounded by a shallow ditch or gully. However, the deposits and features recorded in the trenches did not readily correspond with the aerial photographic evidence for a ring-ditch and did not produce any stratified dating evidence. Nonetheless, the recorded features were considered to represent significant buried archaeology that was provisionally dated to the prehistoric or medieval periods.



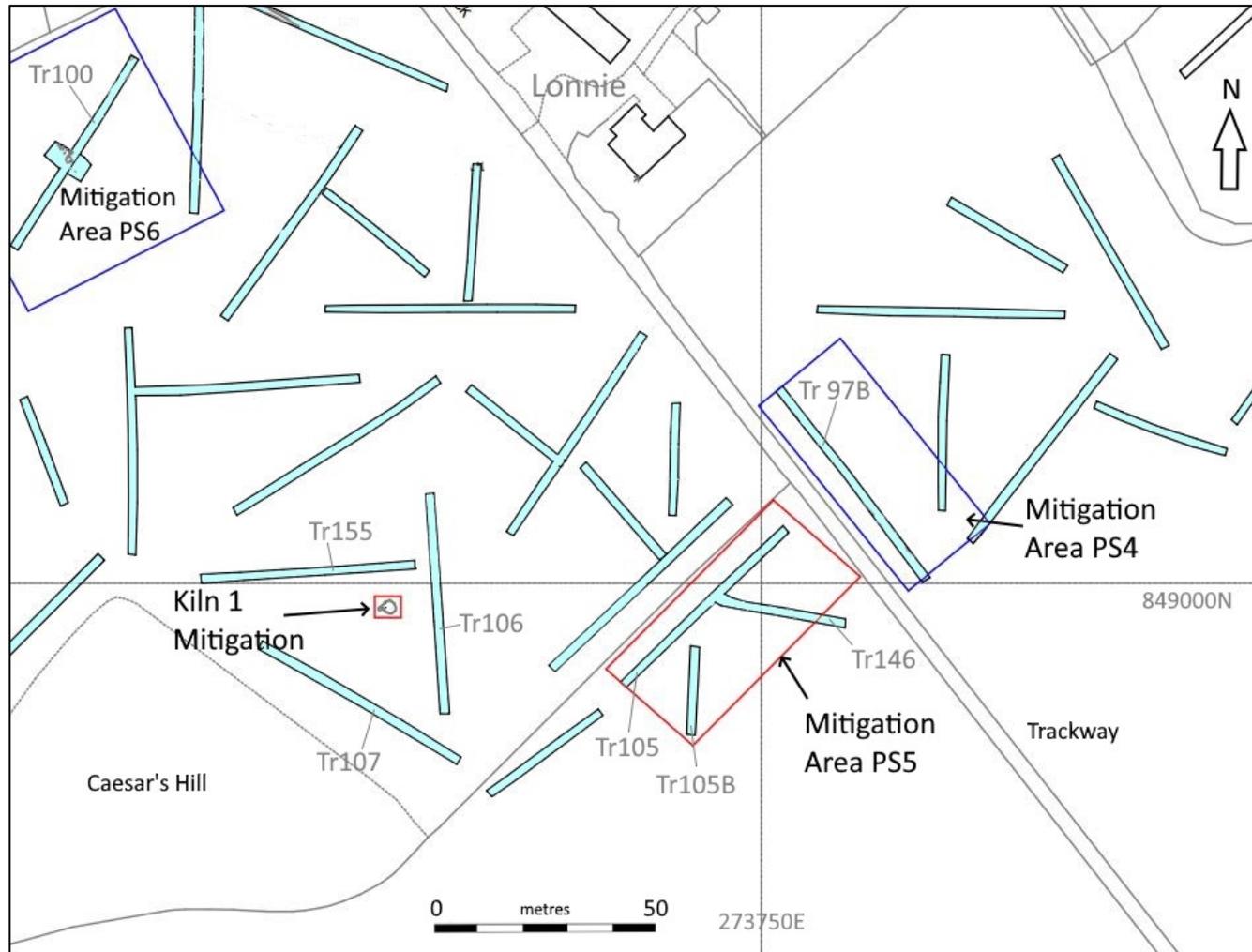


Figure 4 - Location and extent of Archaeology Mitigation Areas PS5 and WB Kiln 1 in relation to 2022 evaluation trenches. Scale shown



## Mitigation Excavation and Watching Brief Recording Methodology

Mitigation Area PS5 (Figures 2 and 4 above) was stripped of topsoil using a slow-tracked machine equipped with a toothless grading bucket directed by a senior AAH archaeologist to the level of the natural substrate or potential archaeological deposits, whichever was encountered first.

Buried soil features and deposits recorded as Kiln 1 (Figures 2 and 4 above) were identified during monitoring of preliminary development earthmoving and not during the 2022 evaluation trenching (see Figure 4 above).

Features and deposits of potential archaeological significance in each area were thereafter cleaned, inspected and excavated by hand as necessary and recorded using standard context-based records. Detailed survey was undertaken to record archaeological features and deposits during the mitigation excavation in Area PS5 and subsequent watching brief recording of Kiln 1 using a Topcon GPS unit capable of cm accuracy.

## Part 2 - Area PS5 Mitigation Excavation

In accordance with proposals for post-evaluation mitigation set out in the project WSI document (*AAH ibid*), buried archaeological deposits preserved in site Area PS5 (Figure 3 and 4 above) were fully exposed archaeologically and fully recorded in advance of their destruction by means of 'strip and record' excavation.

The principal objective of mitigation work in Area PS5, an area where it was originally envisaged that archaeological deposits identified during the 2022 evaluation stage would be preserved in-situ by design but where subsequent modifications to the course design made this impossible, was to further investigate and fully characterise a series of truncated soil features and deposits identified in evaluation trenches 105, 146 and 105B (Figures 3 and 4 above), which were provisionally interpreted to reflect significant archaeological deposits potentially associated with an enclosure (MHG427) recorded on the Highland Council HER.

### Mitigation Methodology

An area centred on evaluation trenches 105, 105B and 146 (Figure 4) and measuring approximately 50m by 28m in plan was stripped of topsoil by machine under archaeological direction and all archaeological features subsequently revealed were investigated and recorded as set out in the Mitigation WSI (*ibid*).

Machine clearance of between 500mm and 700mm of largely stone-free plough soil and subsoil revealed the upper surface of the natural sand and gravelly sand substrate (103)



and a range of archaeological features and deposits, foremost of which was a large penannular enclosure defined by two concentric ditches and an entrance opening to the SE (Figures 5 to 10 below), which broadly corresponded with the ring-ditch identified from aerial photographs in the 1980s and recorded on the Highland HER as MHG 427 (Figure 3 above).

In addition to the circular enclosure and features associated with it, the mitigation area also revealed a broad linear spread of dark stony soil (Figure 6, Deposit 119), aligned NW to SE, which contained significant amounts of charred material. This deposit in turn was cut by a series of shallow parallel ditches (Figure 6, Ditches 130, 150 and 152), which produced stratified medieval pottery sherds.

## The Palisade Enclosure

Figures 5 to 10 below

The palisade enclosure was fully exposed and consisted of a deep narrow penannular outer palisade trench (104) of approximately 20m diameter, which was broken by a SE facing entrance that incorporated a pair of large post-pits (124 and 126), and a broadly concentric inner trench or gully that was separated into three principal segments (Gullies 106/168, 120 and 132). The inner gully also appeared to be punctuated by or respect two oval pits (Pits 108 and 117) with a third pit (172) situated between the outer palisade trench and the inner gully on the SW side. In terms of its general size, form and SE-facing entrance, the enclosure defined by the palisade trench was consistent with the enclosure identified from aerial photographs and recorded as MHG427 on the Highland Council HER.

The area inside the inner concentric gullies contained relatively few archaeological features, foremost of which was an oval pit (Pit 115, see below) surrounded by a group of three postholes, which were offset from the centre of the palisade, and a further group of three or four postholes (Features 122, 210 and 211) located immediately inside the SE facing entrance gap. Other features inside the inner enclosure gully were restricted to a small isolated pit (113) and a possible posthole (111), both of which were archaeologically sterile.

Traces of two further linear soil features (Features 174 and 192) were revealed in the interior of the enclosure which, in combination with feature 214 located immediately outside and to the south, were provisionally interpreted to reflect the barest vestiges of an earlier (but undated) curved enclosure ditch.





Figure 5 - Oblique drone photograph showing Area PS5 after the completion of topsoil stripping and with cleaning and excavation underway. Facing W



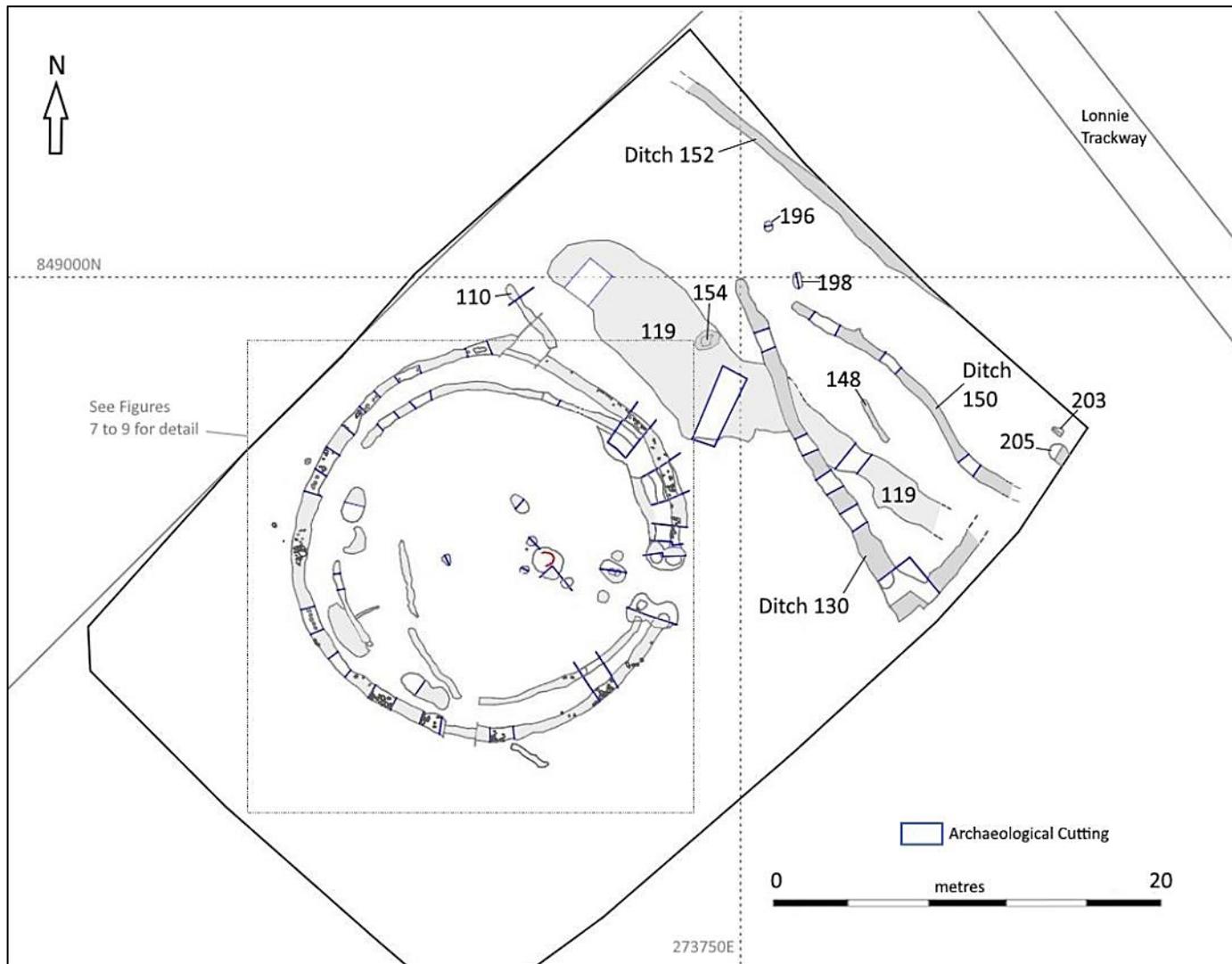


Figure 6 - Plan showing the overall distribution of principal archaeological features and deposits in Mitigation Area PS5. Scale shown



Figure 7 - Oblique photograph showing Area PS5 Palisade Enclosure with excavation work in progress. Facing NW

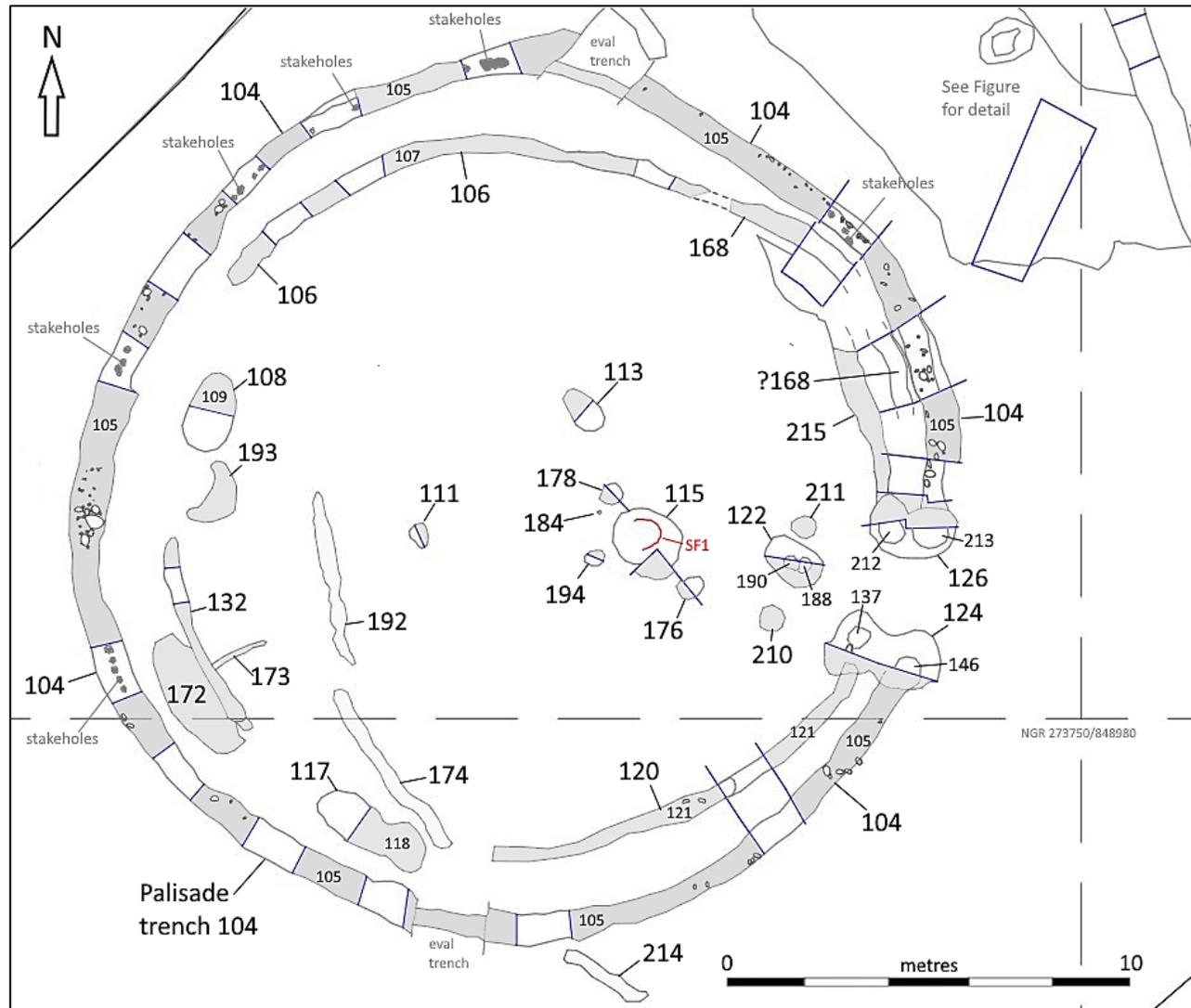


Figure 8 - Plan showing PS5 Palisade Enclosure as excavated with principal features and context numbers. Scale shown

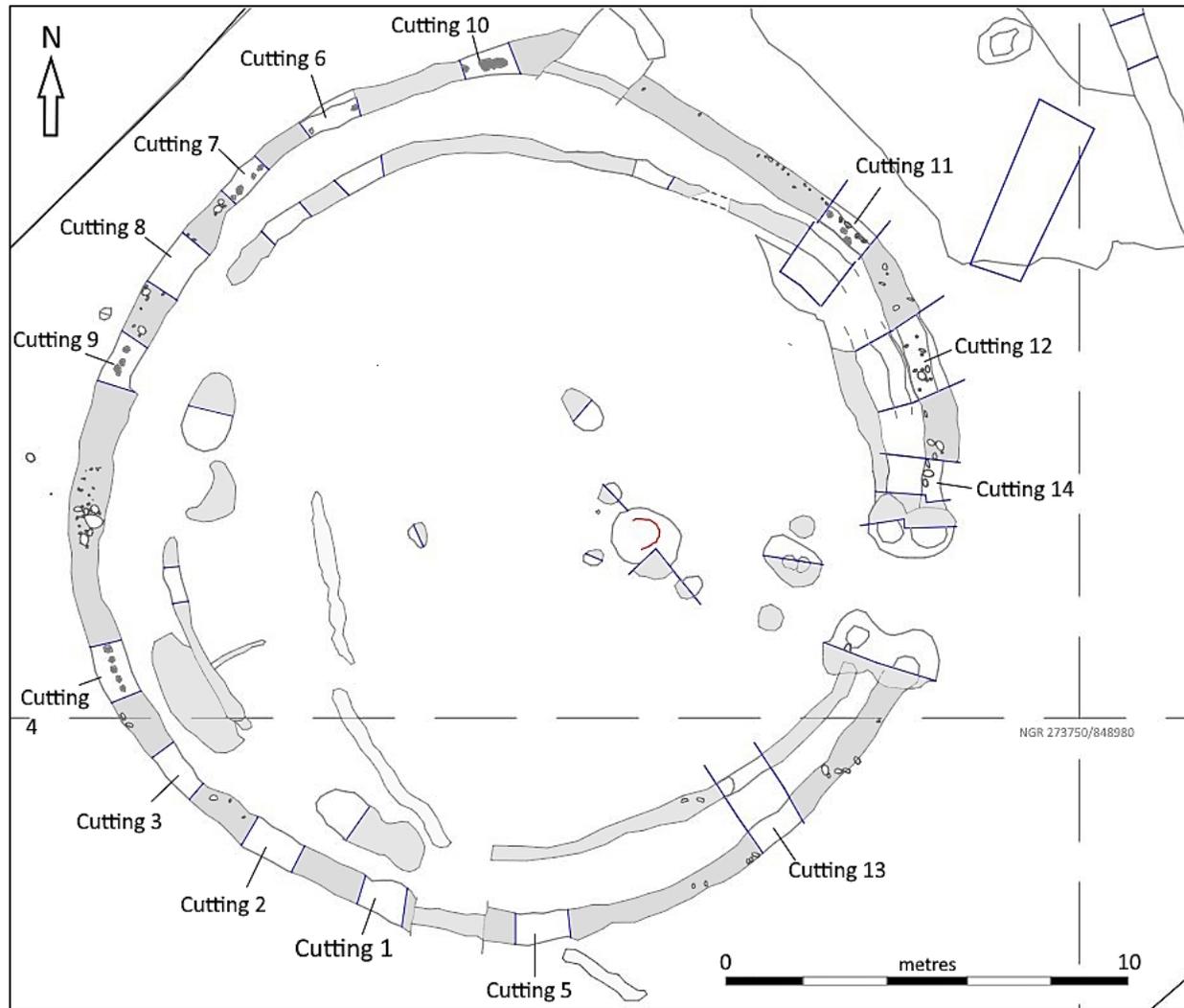


Figure 9 - Plan showing the location of archaeological cuttings excavated in Palisade Enclosure Trench 104 with enumeration. Scale shown



Figure 10 - Vertical photograph showing the Palisade Enclosure as excavated. Scale shown below

0m  20m

## The Palisade Enclosure Trench

After machine clearance the outer palisade trench (Figure 8, Feature 104) was initially defined by a narrow circular band of darker sandy silt that in places contained sparse to abundant concentrations of small to medium-sized cobble stones. The feature was excavated and recorded in fourteen separate archaeological cuttings (Figures 8, 9 and 10) where the character of the trench varied in detail but was broadly consistent throughout, with a fairly straight-sided U-shaped profile between 500mm and 800mm wide and between 600mm to 750mm deep (Figure 34 below for section drawings).

In most, but not all, of the excavated cuttings the fairly uniform fill (105) of the trench contained common to abundant numbers of small to medium sized cobble stones (see Figures 11 to 14) although in Cuttings 3 and 4 the fill contained only occasional smaller cobbles. In addition, the bottom of the trench in Cuttings 4, 7, 9 and 10 revealed dark subrounded sand stains that were interpreted to represent the traces of individual palisade stakes, which in Cutting 4 showed five closely set and fairly evenly spaced stakes between c 100mm and 200mm in diameter (Figure 13a and b).

Very few of the cuttings excavated in the palisade trench produced any substantial amounts of charred material with charcoal often present but principally restricted to small flecks and fragments that could easily have been residual in that context. Where excavated the majority of the palisade trench fill failed to produce any artefacts whatsoever, the only exception being in Cutting 7 where the uppermost portion of the fill (105) produced an amorphous iron-rich concretion (SF2 - see Finds below) provisionally interpreted to represent an iron and slag cake from a bloomery furnace. Elsewhere none of the cuttings opened in the palisade trench produced any stratified artefacts or dating evidence. Despite this the palisade enclosure is provisionally dated to the later prehistoric period.





Figure 11 - Oblique wide-angle photograph of the Palisade Enclosure as excavated. Facing SE. Scales 2m and 1m





Figure 12a and b - Palisade Trench Cuttings 1-3 as excavated and Cutting 2 detail. Facing S. Scales 1m and 500mm



Figure 13 a and b - Palisade Trench 104 Cutting 4 showing stake hole scars after the removal of stone packing. Facing NW and vertical. Scales 1m, 500mm and 200mm





Figure 14a and b - Palisade Trench Cuttings 6-8 as excavated and detail of Cutting 8 showing remnant cobble post-packing



Figure 15a and b - Palisade Trench 104, Cuttings 6, 7 and 8 showing internal Ditch 106 after cleaning and as excavated in Cutting 1. Facing SW and W. Scales 1m and 500mm





Figure 16a and b - a) Palisade entrance post-pits 137/146 as excavated and b) entrance post-pits 212/213 as excavated. Facing SW and N. Scales 1m and 500mm

## The Enclosure Entrance

The entrance to the palisade enclosure was defined by a 2m wide opening that faced towards the SE (Figure 17 below) that was flanked by two opposing pairs of post-pits (Figures 8 and 16, Pits 124 and 126), each of which incorporated two deeper post-sockets (Figure 8, 137/146 and 212/213).





Figure 17 - The Palisade enclosure entrance showing paired post-pits as excavated. Facing NW. Scales 2m, 1m

The posthole sockets on the northern side of the entrance (Figure 8, 212 and 213 and Figure 18) were directly adjacent and each approximately 600mm deep with a steep-sided symmetrical profile and a flat base (Figure 35 section). The soil deposits (127/129 and 144/145) filling both of the post-pits were very similar, each containing sparse small stones with variable charcoal inclusions but no indication of any post-packing. The sockets would have been capable of holding timber posts in the round of 800mm and 600mm diameter.

The posthole sockets on the southern side of the entrance (Figure 8, 137 and 146 and Figure 19) were separated by a ridge of natural sand but set inside a broader overall figure-of-8 shaped cut (124). The socket on the west side (146) was subrounded in plan c 500mm deep with a steep-sided symmetrical profile and a flat base (Figure 35 section). The socket (146) on the east side of the pair was less well defined but cut to a similar depth, c 500mm, with a tapering V-shaped profile (Figure 35 section). The deposits filling the post-pit (124) overall were texturally very similar, each containing sparse small stones with variable charcoal inclusions. The fill of Socket 137 contained a single large cobble boulder set end-on interpreted to reflect a remnant of post-packing. The sockets would have been capable of holding timber posts of approximately 500-600 mm diameter.





Figure 18 - Entrance post-pit sockets 212 and 213 as excavated. Facing N. Scales 2m and 500mm



Figure 19 - Entrance post-pit sockets 137 and 146 as excavated. Facing S. Scales 2m and 500mm



## The inner enclosure ditch/gully

Figure 8

The inner enclosure ditch or gully was neither precisely concentric with the outer palisade trench (104), varying between 500mm and 1.3m from the inner edge of the trench, nor continuous, being separated into three principal segments (Figure 8, Features 120, 132 and 106/168/205), each of which was shallow, mostly little more than 100mm deep and between 450 mm and 600 mm wide (Figures 15a and b, 20 and Figure 34). The fill of each gully segment was also very similar, consisting of mainly stone-free sandy silt that contained rare charred flecks but, where excavated, produced no finds of any kind.



Figure 20a and b - a) Interior Ditch/Gully segment 132 as excavated and b) Palisade Trench 104 Cutting 13 and Ditch/Gully segment 120 as excavated. Facing S and SW. Scales 1m, 500mm and 200mm

In excavated Cutting 13 (see Figure 9 above) part of ditch/gully segment 120 was somewhat deeper than in other segments, up to 300mm (see Figure 20b), and coincided with a small group of cobbles that could have represented remnant packing for a small post. Otherwise, no evidence was identified to indicate whether any of the ditch/gully segments were originally open or provided a foundation for some type of timber partition.

Excavated cuttings 11 and 12 (Figure 9 above) revealed a confusing arrangement of shallow gullies (Figure 8, Gullies 168 and 215) that appeared to represent two differing gully alignments; one (168) that appeared to run up the inner edge of trench 104 and fade out and a second (215), which clearly extended from entrance posthole 212 to the



north before it too faded out. Excavation failed to satisfactorily determine which of the two gullies represented the later although the evidence suggests that the internal gully was present but seemingly realigned or altered in this area.

## Postholes 122, 210 and 211

Figure 8

This group of three postholes formed a line immediately inside the entrance to the enclosure (Figure 8). The larger central feature (Deposit 122) was excavated to reveal two separate but intercut postholes (Figure 21, Postholes 188 and 190 and Figure 35), one of which contained remnant stone packing.



Figure 21- Deposit 122 as excavated showing Postholes 188 and 190. Facing SSW. Scales 500mm and 200mm

Features 210 and 211 were interpreted to represent the traces of two further postholes although they were not excavated as preliminary cleaning suggested neither had any substantial preservation. In addition, a decision had been reached by that stage to preserve the remains of the palisade enclosure in-situ following excavation work.

As a group these three adjacent features were very provisionally interpreted to represent postholes, which could conceivably have supported a short screen located immediately inside the entrance to the palisade enclosure.



## Pit 115 and associated features

This group of associated cut soil features was revealed inside the palisade enclosure and located between its centre point and the SE facing entrance gap (see Figure 7 above). The group included a subrounded pit (Pit 115), three adjacent postholes (Features 176, 178 and 194), two of which were excavated in half section (Figure 22 below), and a possible stakehole (184). The overall distribution of the group of features suggested that the pit may have originally been located inside a squared arrangement of postholes, albeit one of which was not attested archaeologically.

The pit (115) measured 1.78m east to west and 1.46m north to south and had a symmetrical U-shaped profile up to 500mm deep (Figure 35) that was filled by a fairly homogeneous dark sandy silt fill (116) containing rare charcoal flecks, rare fragments of cremated and uncremated bone and rare small to medium sized tabular and cobble stones. The lower part of the fill deposit produced two small sherds of plain earthenware pottery (Figure 35, section SFs 4 and 6) provisionally dated to the prehistoric period, which were recovered below a large piece of a curved and flattened iron strap with a slightly convex profile and internal lips (SF1) approximately 1.4m long and 40mm wide (Figure 23, a to d below).

The iron object has been provisionally identified by archaeological conservator Will Murray to represent part of an iron cart wheel rim or tyre. Dating of the object is similarly provisional but it is suggested to be of later prehistoric Iron Age date.



Figure 22 – Pit 115 and PHs 176 and 178 as excavated. Scales 1m and 500mm. Facing S





Figure 23a to d - Pit 115 showing iron object SF1 as excavated and after lifting by specialist conservator Will Murray. Scales 500mm.



The iron object (SF1) was not located in the lowermost part of the pit fill (see Figure 35 for section drawing) and its position, slightly raised on the NW side, indicated that it may have been disturbed and slightly lifted after deposition, possibly by ploughing. If so, it is possible that cultivation also removed the missing half of what was originally a circular iron band or strap.

## Other pits, features and deposits inside the Palisade Enclosure

### Pits 108, 117 and 172

Three further large oval to subrectangular-shaped pits (Figure 8, Pits 108, 117 and 172) were revealed inside the palisade enclosure. Pit 108 was located midway between inner ditch/gully segments 106 and 132 and was centred on the same centre line of arc as the ditch/gully segments (Figure 24). Pit 117 was located midway between inner ditch/gully segments 132 and 120 and also centred on the same centre line of arc as the ditch/gully segments (Figure 24). This symmetry of location appeared to be deliberate and suggested that the pits formed an integral part of the inner ditch/gully arrangement.

Pit 108 (Figure 24a) was broadly oval in shape, measuring 1.9m by 1.1m in plan and up to 290mm deep with a symmetrical bowl-shaped profile and a rounded base (Figure 35). The single silty sand fill deposit (109) was essentially archaeologically sterile and contained only rare charcoal flecks and no trace of any stone post-packing. Pit 117 (Figure 24b) was broadly subrectangular in shape with rounded corners, measuring c 2.4m by 1m in plan and up to 350mm deep with a symmetrical steep-sided U-shaped profile and a flat base (Figure 35). The single silty sand fill deposit (118) was also archaeologically sterile and contained only very rare charcoal flecks with no trace of any stone packing or alike.

Pit 172 was located in the narrow gap separating inner ditch/gully (Figure 8, 132) and the outer palisade trench (104) and appeared to butt the former. It was defined by a subrectangular deposit of yellowish-brown silty sand (see Figures 10 and 25) measuring 3.2m by 1.1m in plan, which was slightly darker than the surrounding natural sand substrate (103). The deposit was not excavated but on cleaning also appeared to be very archaeologically sterile.





Figure 24a and b - Pit 108 and Pit 117 as excavated. Facing N and SE. Scales 1m and 500mm



Figure 25 - Feature 172 after cleaning showing inner ditch/gully 132 and palisade trench 104 with archaeological cuttings covered. Facing SE. Scales 1m and 500mm.



## Pits 111 and 113 and Deposits 173 and 193

Deposits 193 and 173 (Figure 8) were both of uncertain and possibly natural origin, the former a probable tree-throw based upon its crescent-shape in plan alone. Deposit 173 consisted of a short narrow linear spread of greyish-brown gravelly sand that was recorded as a possible archaeological feature due to its 90-degree relationship with inner ditch/gully 132 alone. Neither feature produced any archaeological material on cleaning.

Feature 111 (Figure 26a) was either a very small oval shaped pit or a truncated posthole that measured 600mm by 500mm in plan and was no more than 140mm deep with a deeper rounded socket at the north end and a U-shaped profile (Figure 35). The silty sand fill deposit (112) was archaeologically sterile. Pit 113 was oval in plan, measuring 1.2m by 700mm with a symmetrical bowl-shaped profile up to 300mm deep (Figure 35). The single fill was essentially archaeologically sterile and contained just a few flecks of charcoal.

Neither feature bore any obvious spatial relationship to other features recorded inside the palisade enclosure although the sterile fill of Pit 113 was closely similar to deposits filling Pits 108 and 117 (above).



Figure 26a and b - Feature 111 and Pit 113 as excavated. Scales 500mm, 200mm and 400mm



## Features 174, 192 and 214

The arrangement of these three narrow linear soil features (see Figures 8 and 10 above) appeared to define the arc of a curved or circular ditch-feature that either pre-or post-dated the palisade enclosure.

Cleaning over each of the deposits confirmed that all three represented extremely shallow, almost trace, deposits of slightly darker yellowish-brown sandy silt, which were no more than 20mm deep and in places less. In view of this the features were not investigated further but preserved in-situ on the reburial of the excavation area (see discussion below).

## Features and deposits located outside the Palisade Enclosure

### Deposit 119

This irregular linear soil spread crossed the excavation area from NW to SE just to the east of the Palisade Enclosure (see Figures 8, 27 and 28), where it was cut by a later ditch (Ditch 130). The deposit consisted of a charcoal-rich very dark grey to black sandy silt that contained frequent stony/gravelly patches and some lenses of redeposited natural sand. Where excavated (Cuttings 1 and 2) the deposit was no more than 130mm deep and appeared to fill a shallow scour in the surface of the natural sand as opposed to a true cut (see Figure 36). The deposit did not produce any dating evidence or finds but was provisionally considered to be of possible prehistoric origin.

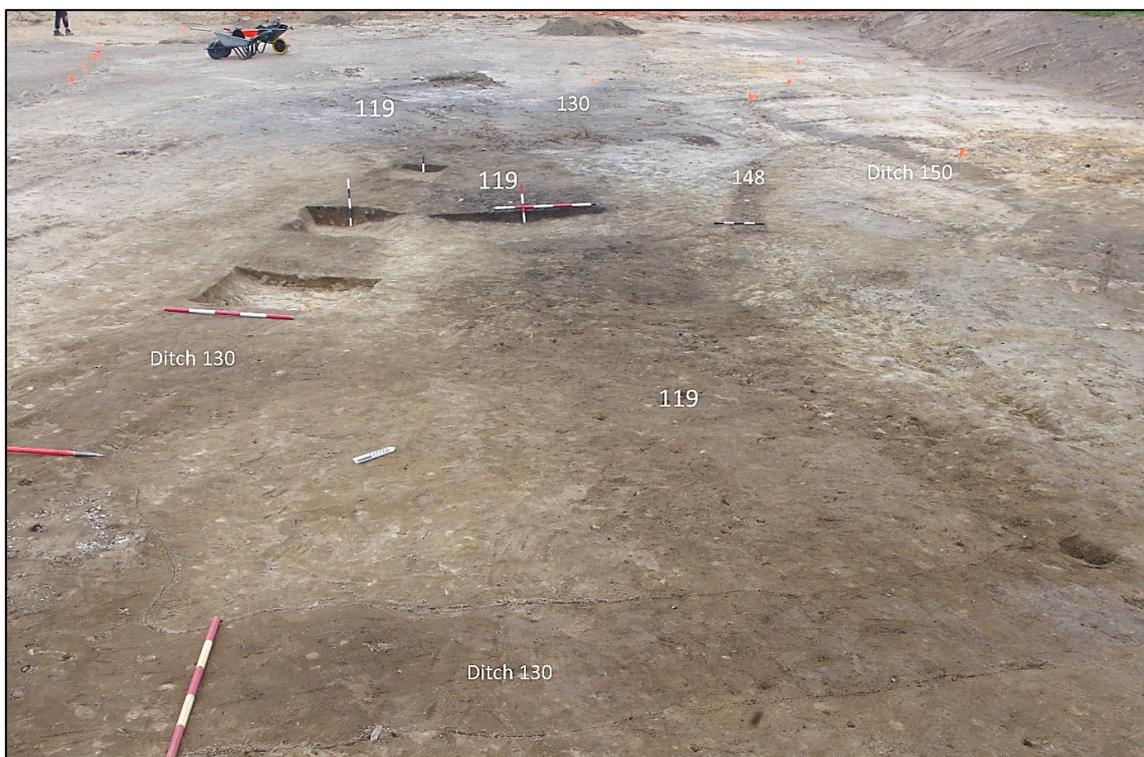


Figure 27 - Linear deposit 119 after cleaning and under excavation showing later Ditch 130. Facing NW. Scales 1m, 500mm and 400mm



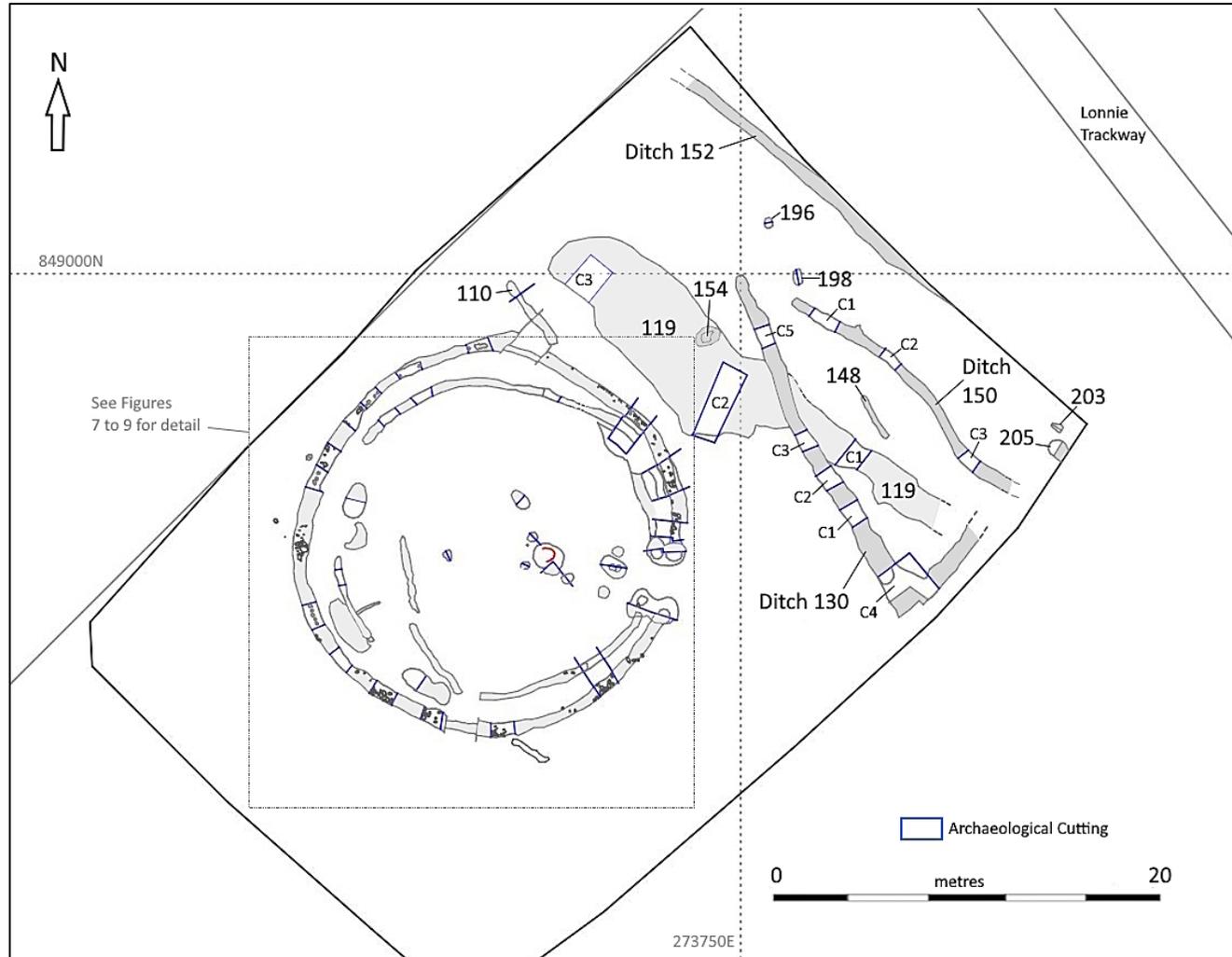


Figure 28 - Area PS5 showing principal archaeological features and excavated cuttings. Scale shown



### Ditches 130, 150 and 152

These three narrow ditches were each of similar size and crossed the excavation area on a NW to SE and NNW to SSE alignment (see Figure 8). Ditch 130 cut linear soil deposit 119 (Figure 27 above).



Figure 29 - Ditch 130 (right) showing Cuttings 1 to 3 as excavated. Facing SE. Scales 1m

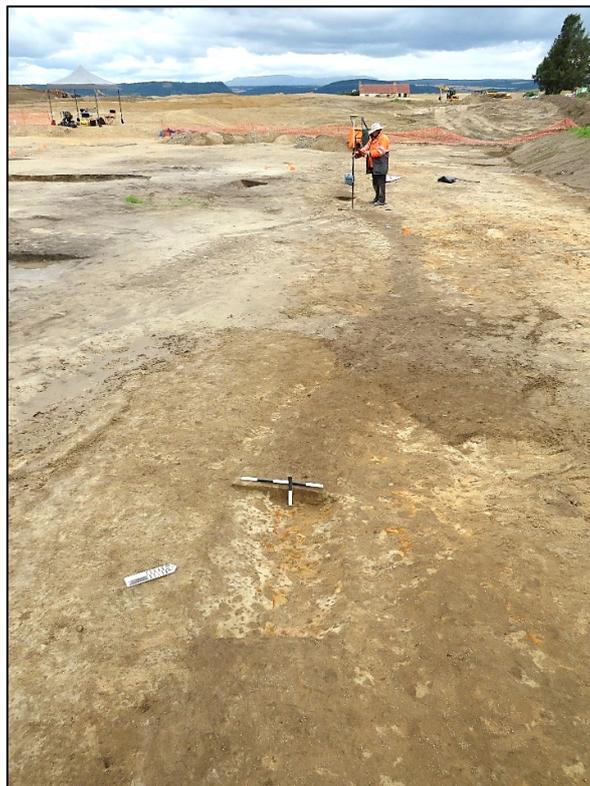


Figure 30 - Ditch 150 showing Cutting 2 as excavated. Facing NW. Scales 500mm and 200mm



Ditch 130 (Figures 28 and 29) was approximately 25m long overall and consisted of two conjoined arms in an L-shaped arrangement that cut stony soil deposit 119 (above). The northern end of the ditch ended in a shallow rounded terminal whilst the SW-NE arm faded out gradually. Five cuttings (Figures 28 and 29) were excavated through the sandy silt ditch fill (131) to reveal a shallow U-shaped profile with a concave to flat base between 100mm and 200mm deep (Figure 36 sections). Cutting 1 produced a small marine shell-midden deposit in the upper part of the fill and a small assemblage of medieval pottery sherds. Cutting 2 revealed a very similar cut profile and also produced a small marine shell-midden deposit. Cutting 3 produced a single stratified sherd of medieval earthenware whilst Cutting 4 confirmed that the L-shaped corner of the ditch had suffered some modern disturbance.

Ditch 150 was sinuous in plan (Figures 28 and 30) and greater than 15m long, appearing to continue beyond the excavated area to the SE. Three cuttings were opened in the fill (Figures 28 and 36, Cuttings 1-3), each of which revealed a shallow fairly symmetrical bowl-shaped cut between 100mm and 150mm deep. No dateable finds were recovered from the ditch fill (151), which did produce a small marine mollusc midden assemblage.

Feature 154 (Figures 28 and 31) overlay stony deposit 119 and appeared to represent the bare remnants of a small, poorly defined, oval hearth measuring c 1.2m by 900mm in plan. The soil fill contained significant amounts of charcoal but was texturally no different to the overlying topsoil. No finds were recovered from the fill deposit.



Figure 31 - Feature 154 as excavated. Facing NNE. Scales 500mm



Pit 205 was located close to the SE corner of the excavation area, just to the east of Ditch 150 (Figure 28), and appeared to extend beyond the baulk to the SE. The cut had a broad and symmetrical U-shaped profile up to 260mm deep that was filled with a single deposit (Figure 32, fill 206) that contained a substantial mixed marine shell-midden but produced no other dateable finds.



Figure 32 – Feature 205 as excavated showing marine-shell fill 206. Facing SE. Scales 500mm and 200mm

## Mitigation Area PS5 – Discussion & Preliminary Conclusions

Mitigation area PS5 revealed a complex of significant buried archaeological deposits and features whose importance is judged to be greater than that envisaged from the evaluation stage evidence. Excavation work confirmed the presence of the suggested ring-ditch recorded on the Highland Council HER, and more.

Of foremost importance is the palisade enclosure, provisionally and very broadly dated to the Bronze Age/Iron Age periods on the basis of its general form alone, which is considered by the writer to represent the remains of a complex prehistoric ritual/funerary monument. The preserved elements and complexity of the features that form the palisade enclosure elevate its significance over and above a straightforward 'ring-ditch', whilst the apparent presence of an Iron Age cart-burial, which, if confirmed, would represent only the second recorded example excavated to date in Scotland, whether an integral part of the original palisade enclosure or perhaps a later reuse of an older monument, enhances the importance and status of the monument. It is for this reason that Cabot Highland



agreed that the unexcavated remains of the enclosure should be carefully protected, buried and preserved in-situ with the position and size of the enclosure subsequently indicated by sympathetic shaping and landscaping of the new course.

The investigation and recording of the remains of the palisade enclosure in Area PS5 has produced an important body of new archaeological information that relates to a common type of prehistoric monument in Highland Scotland, which are often identified solely from crop marks on aerial photographs and equally often categorised together under the catch-all term 'ring-ditch'.

Even at this early stage, with the evidence solely as excavated and in advance of any analysis work or firm dating, the remains of the Lonnie palisade enclosure indicate it was a monument of careful design and significant complexity which incorporated some original elements, for example the timber entrance structure(s), that hint at monumentality. This too, despite being sited at a location with a very long history of plough cultivation.

A synthesis of the information gathered by excavation and any subsequent informed interpretation of the monument must wait until post-site analyses are completed but, in advance of such, it is interesting to frame forthcoming work in the context of a series of initial questions that arise from the evidence gathered to date. Foremost of these (at least to the writer) are illustrated in Figure 33 below and concern the following:

- The original arrangement of the entrance structures and the possible presence of a deliberate screen immediately inside the enclosure.
- Whether the palisade was designed to restrict view and demarcate the interior as a special place?
- Whether the cart-burial pit (115) and associated postholes are indeed of Iron Age date and represent an integral part of the palisade enclosure or a later addition and the reuse of an older monument? Was the enclosure built simply to house a cart-burial?
- Whether the larger, archaeologically sterile, oval pits, which appear in part to separate the segments of the inner ditch/gully, could have held monumental boulders or menhirs.
- The apparent axial symmetry of the principal elements of the enclosure.
- The overall chronology of the monument and its relationship with the nearby Newton of Petty Chambered Cairn and Stone Circle (SM3745) - is the palisade enclosure part of a wider restricted prehistoric ritual landscape or did it form part of a closely integrated landscape that included both settlement-related structures (a group of at least five roundhouses were most recently excavated less than 50m to the west) and special, non-domestic places?

Suffice to say that the monument raises a number of interesting questions.



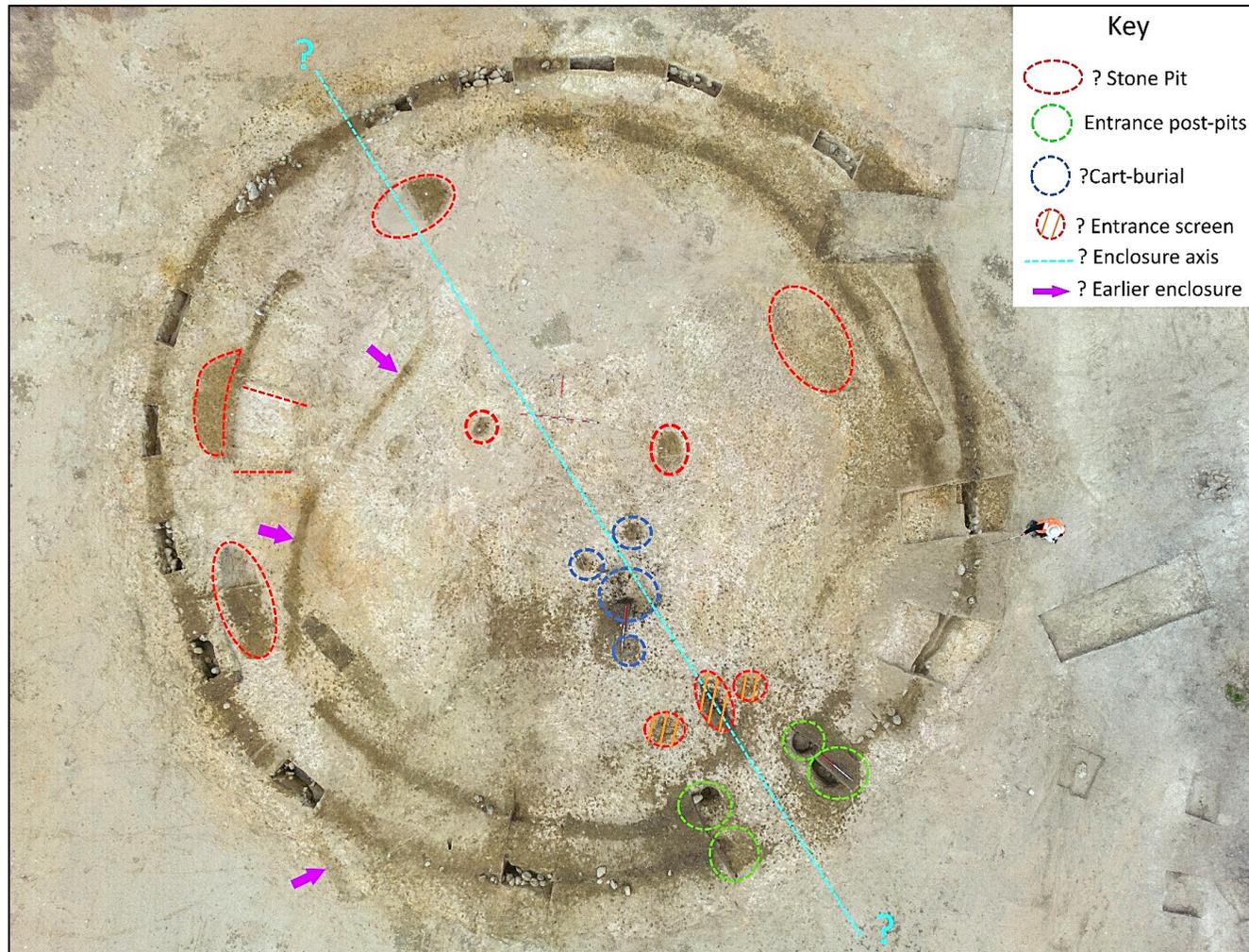


Figure 33 - A preliminary interpretation of the Palisade Enclosure features



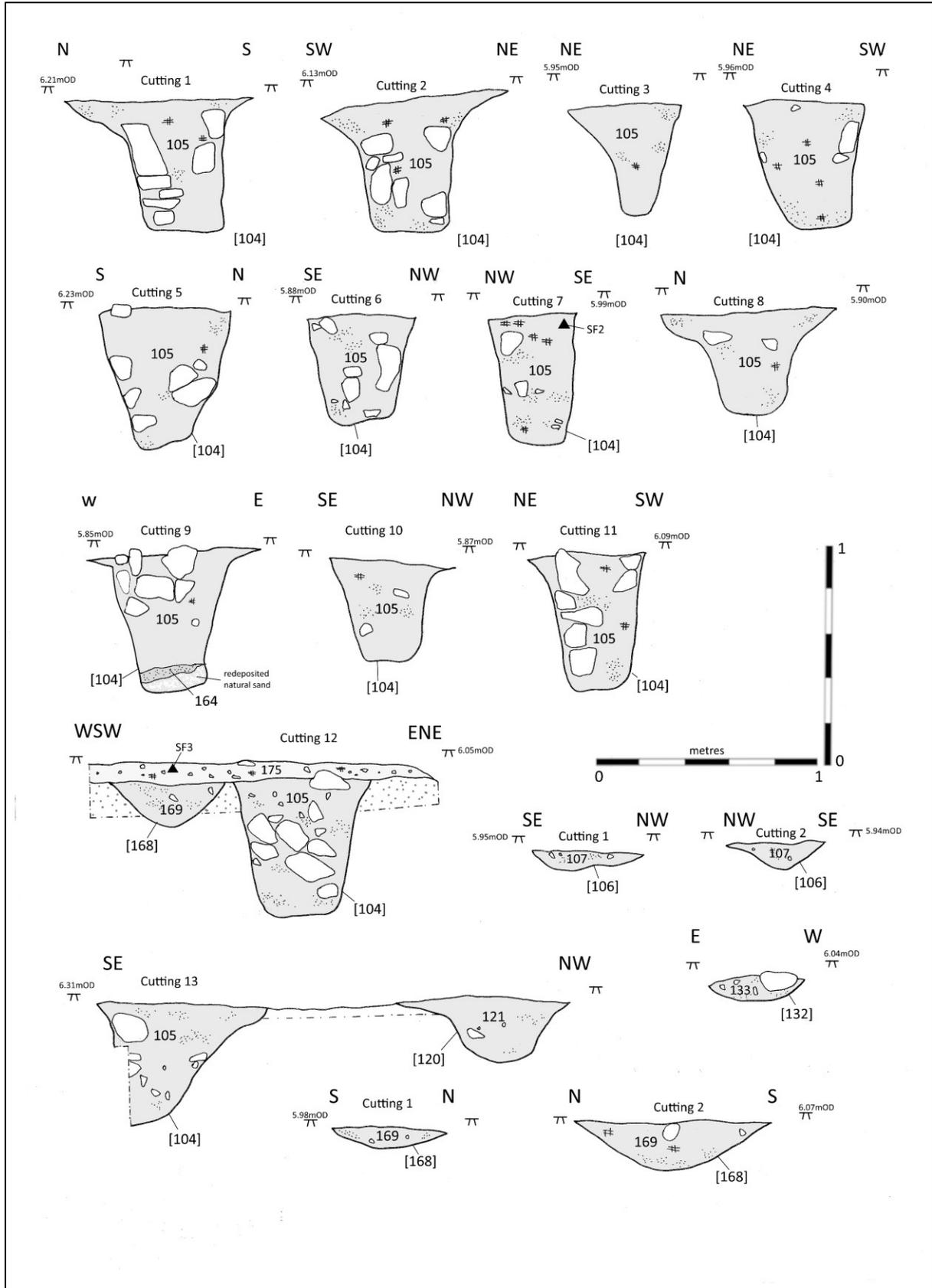


Figure 34 - Area PS5 palisade enclosure section drawings. Scale shown



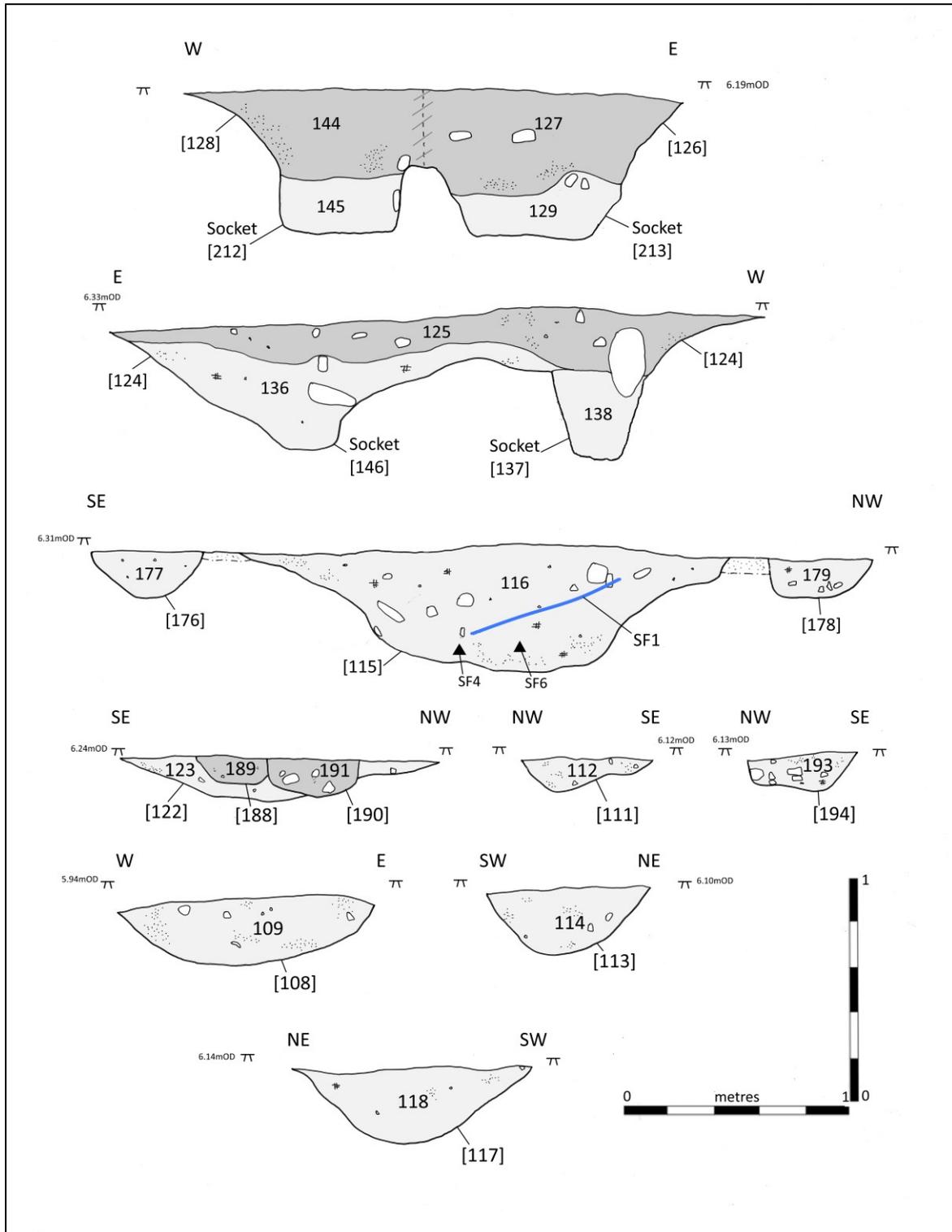
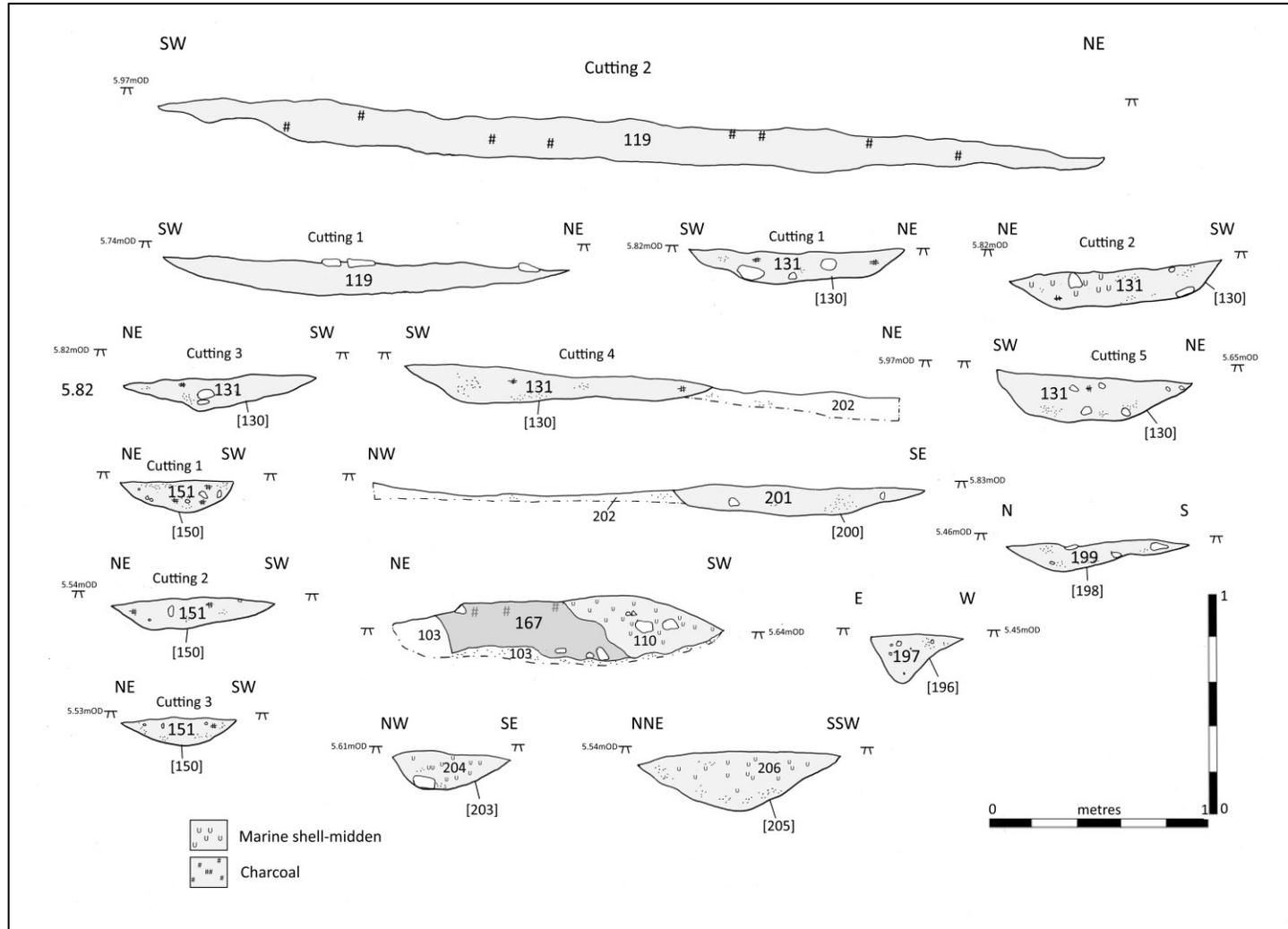


Figure 35 - Area PS5 palisade enclosure section drawings. Scale shown





## Part 3 – Watching Brief Kiln 1 -Mitigation Excavation

Figures 2 and 3 above and Figures 37 to 45 below

A large comma-shaped deposit of pale sands, heat-affected clay and dark charcoal-rich soils was unexpectedly revealed during earthmoving for the new course approximately 50m to the NW of Mitigation Area PS5. In plan and prior to excavation the feature appeared to incorporate a circular pit with a diameter of c 3m and a short rectangular projection to the SW, which was lined with and filled by heat affected-clay (see Figures 37a and b below) and provisionally thought to represent a kiln flue or fire-box.

Excavation by hand of an L-shaped cutting through the central fill deposits (Figure 45, Section 1, Deposits 106, 109, 118, 126 and 111) and the squared projection (Figure 42b, Section 2) revealed a steep-sided and flat-bottomed pit (Figures 41b, 43 and 44, Cut 102) lined with a deposit of heat-affected clay (103/104/124) of variable thickness, which in places contained thoroughly charred remnants of in-situ roundwood wattle (Figures 40 and 41).

The uppermost deposits (Figure 45, 106, 109 and 118) filling the body of the kiln mainly consisted of laminated and possibly windblown sands, the great majority of which were archaeologically sterile. These in turn overlay two thick wedge-shaped deposits (126) of mixed fragments and larger lumps of heat-affected clay along with common fragments and larger chunks of thoroughly charred roundwood. These deposits tapered in section and overlay a thick deposit (111) of heat-affected clay, which included fragments and larger lumps with sparse charcoal inclusions and occasional charred roundwood. The primary deposits filling the kiln chamber consisted of a thin layer of fairly clean wet orange sandy silt (121), which overlay a similarly thin primary fill of dense and mostly fragmentary charcoal (122), which appeared to include some charred cereal grains. The primary kiln fill (122) overlay the kiln lining (124), which consisted of a stiff layer of greyish-brown clay that varied between 30mm and 60mm in thickness.

The deposits (108, 111) filling the possible kiln flue or fire-box were excavated longitudinally in half section (Figure 42 a and b), which revealed a gently sloping cut that was largely filled with a deposit of fragmentary heat-affected clay (111) that overlay a thin primary fill of dense fragmentary charcoal (123). The charcoal in turn directly overlay natural sand and no trace of any clay lining was present. The point at which the flue channel met the main body of the kiln chamber was defined by a projection of heat-affected clay lining that contained in-situ charred roundwood (Figure 41a). The projection appeared to narrow the entrance into the larger chamber by means of a choked flue or tuyere (Figure 43).





Figure 37 - Watching Brief Kiln 1: a) after preliminary shovel clearance and b) after fine cleaning. Facing NE. Scales 1m





Figure 38 - The Kiln 1 structure part excavated. Facing N. Scales 2m, 1m, 500mm and 400mm



Figure 39 - The Kiln 1 structure as excavated. Facing N. Scales 2m, 1m, 500mm and 400mm





Figure 40 - Vertical view showing charred vertical wattle wood in-situ at the side of the kiln structure. Scale 500mm



Figure 41a and b - Details of Kiln 1 as excavated showing in-situ charred horizontal and vertical roundwood wattle set within heat affected kiln lining. Scales 200mm, 1m and 500mm





Figure 42a and b - Photomosaic image showing longitudinal section through the kiln fire-box/flue and b) section drawing. Facing NW. Scales 2m, 1m and 500mm



Figure 43 - The kiln flue as excavated showing projecting kiln lining and the narrowed fire-box flue/tuyere. Facing SW. Scales 2m and 500mm

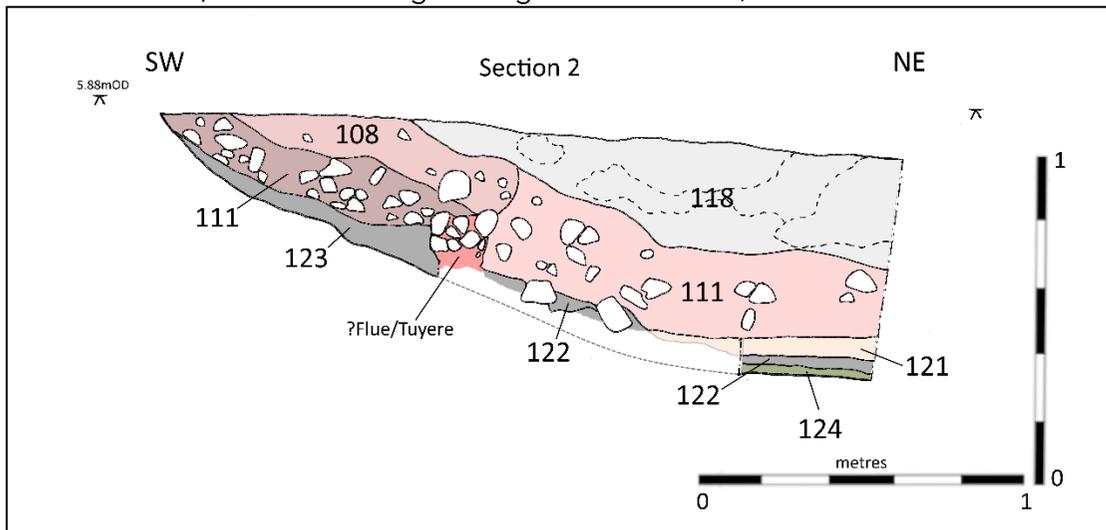




Figure 44 - Kiln 1, Section 1 (part excavated) showing the variation of fill deposits filling the kiln chamber. Facing NE. Scales 500mm and 2m

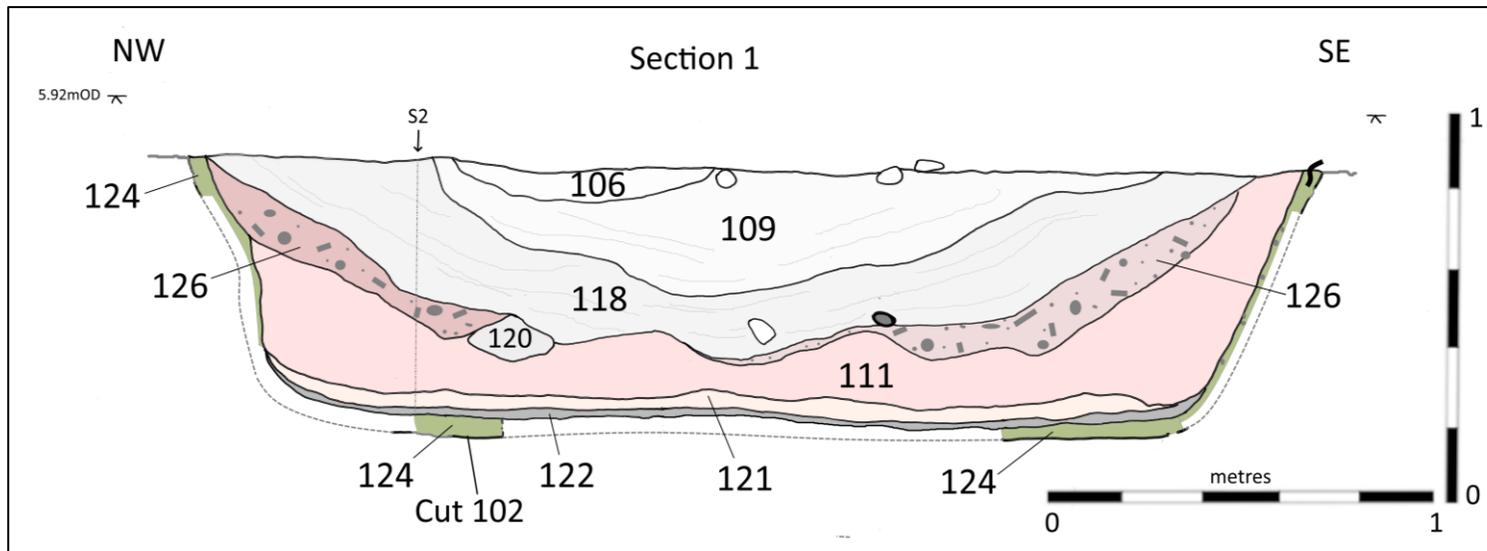


Figure 45 - Kiln 1, Section 1. Section drawing. Scale shown

## Watching Brief Kiln 1 Mitigation Excavation – Discussion & Preliminary Conclusions

The remains of the Kiln 1 structure were well preserved, in part due to its apparent destruction by fire, although excavation failed to provide any conclusive dating evidence or indeed any conclusive evidence to determine what the kiln was used for. Finds were restricted to a single sherd of medieval pottery recovered from upper fill deposit 118, which could easily be residual in that context.

No trace of any associated activity, for example a spread of charcoal, was present outside or adjacent to the kiln structure, suggesting that the remains, whilst still substantial, had been significantly truncated by an extended period of ploughing. That fact, combined with its odd location, isolated in the middle of a large area of modern field, suggests that the structure could conceivably be a good deal earlier than an earlier post medieval date considered most likely by the writer. Accordingly, at present its date and precise function remain uncertain although extensive sampling undertaken during excavation recovered sufficient charred material to provide reliable radiocarbon dates and the identification of any charred grain present. To that end further post-excavation analysis and reporting is considered necessary to confirm the date and precise function of the structure.

With the approval of Cabot Highlands, the unexcavated remains of the kiln were protected and preserved in-situ by careful and sympathetic shaping and landscaping of the new course.

## Finds

The full register of finds recovered from the two mitigation excavations (Area PS5 and Kiln 1) are listed in Appendix 3 below.

Overall, the number of stratified and dateable finds recovered from each area were very few, indeed for Kiln 1 restricted to a single sherd of pottery. The paucity of finds belies the number and range of deposits, features and structures recorded, particularly in Area PS5, where the overwhelming majority of recorded archaeological features and deposits failed to produce finds of any kind. The low numbers of finds recovered generally is suggested to indicate that the activity recorded in Mitigation Area PS5 and Kiln 1 was, in both cases, not principally associated with settlement-related/domestic activity.

Pottery recovered in Area PS5 included a small but very important assemblage of sherds recovered from the lower fill of Pit 115, stratified below the postulated Iron Age cart wheel tyre (SF1). Other pottery sherds include a small but important assemblage of externally glazed sherds recovered from ditches 130 and 150 and midden deposit 110, all of which are provisionally dated to the later medieval period. Notable by their absence were finds of later post medieval and modern date, which were completely absent in both areas.



Marine shell-midden deposits were recovered in Area PS5 from Ditch 130 and Deposit 110. Both are tentatively interpreted to reflect food residues of medieval date.

The large curved iron object (SF1, Figures 23a-d above) recovered from the fill of Pit 115 is provisionally identified as part of an Iron Age cart wheel-rim or tyre although this identification needs to be confirmed through further specialist examination and reporting. The object was lifted by specialist conservator Will Murray of Scottish Conservation Studio and has undergone preliminary conservation and stabilisation in preparation for such. If the preliminary identification is confirmed the object will represent only the second example of an Iron Age cart (chariot) burial excavated in Scotland to date.

Excavation of the palisade trench (104) produced virtually no finds of any kind, the only significant exception was an iron and slag concretion (Figure 46 below) that is provisionally identified as a slag bloom, from the base of an iron bloomery furnace. If confirmed, the object will have important research potential in respect of ancient technology, especially given the presence of the postulated iron cart wheel tyre recovered from Pit 115.



Figure 46 - Iron object SF2 in-situ in the upper fill of palisade trench 104. Scale 200mm

Finally, small fragments of cremated bone, possibly human, were recovered from a number of excavated deposits in Area PS5, including the fill of Pit 115, where it could conceivably represent the residue of an associated cremation burial deposit. However, none of the cremated bone occurred in a sufficient quantity to confidently suggest the presence of an individual cremation deposit. Animal bone was also extremely rare in Area PS5 and absent in Kiln 1. The handful of fragments that were recovered from Area PS5 were again recovered from the fill of Pit 115 and the fill of Ditch 130.



## Preliminary General Conclusions & Recommendations

Two archaeological mitigation excavations (CHM23PS5 and CH23WBKiln1) have been undertaken on behalf of Cabot Highlands LLP and in accordance with the requirements of Highland Council planning consents 15/03626/FUL and 19/01446/PAN, in advance of and during preliminary development works for a new Championship Golf Course at Castle Stuart, Dalcross near Inverness.

The mitigation-stage fieldwork was firstly designed to fully characterise and record significant buried archaeological deposits, features and finds located in a specified part of the development area designated Mitigation Area PS5, during earlier evaluation trenching (AAH 2022). A second smaller area was excavated as part of watching brief monitoring in order to fully investigate and record the remains of a kiln structure, Kiln 1 above, revealed during development earthmoving.

Mitigation excavation in Area PS5 recorded the remains of a complex and possibly multi-period Palisade Enclosure, provisionally broadly dated to the Bronze Age/Iron Age periods, which included the possible remains of a contemporary or later Iron Age cart burial. These are considered (by the writer) to represent important new evidence of prehistoric ritual/funerary activity in the north of Scotland. Evidence for a later phase of medieval settlement related and agricultural activity was also recorded, which is deemed to be of local importance.

The evidence recorded in Mitigation Area PS5, specifically the remains of a prehistoric palisade enclosure and the probable remains of a contemporary or later Iron Age cart burial, is deemed (by the writer) to be of **national importance** and to have substantial future research potential in that context. Accordingly, a further comprehensive stage of PERD stage post-site analysis and reporting is recommended, the outline and priorities of which are set out below.

The evidence recorded at Kiln 1 as part of watching brief monitoring is considered to be **of local and possibly regional importance** and to have significant further research potential that can be expected to add to current understanding of the chronology and character of settlement-related and agricultural activity in the area of Castle Stuart and the wider Highland region. Accordingly, a further stage of selective post excavation analysis and reporting is recommended to firmly date and fully characterise the construction and operation of the kiln structure, the outline and priorities of which are also set out below.

**Note** - Following mitigation excavation fieldwork in Areas PS5 and Kiln 1, and further to discussions with Cabot Highlands LLP, all remaining archaeological deposits and features were protected with geotextile membrane and reburied and each area then sympathetically shaped to preserve the remaining archaeology in-situ as part of the new course design.

### Mitigation Area PS5

If requested by Highland Council a *Post Excavation Research Design* (PERD) will be prepared setting out the justification, aims, tasks, programme and resources for a final stage of post excavation analysis and reporting for evidence recorded in Mitigation Area PS5, for approval by



Cabot Highlands LLP and Highland Council. The proposed PERD would identify a comprehensive programme of tasks designed to firmly date, characterise, understand and report the activity recorded on the site. To that end it is anticipated that the aims of further PERD stage analysis and reporting will focus on:

- Clarifying and refining the chronology of the palisade enclosure and the postulated Cart burial by means of a series of independent scientific radiocarbon dates (Radiocarbon AMS) of selective charred plant remains from selective contexts.
- Full specialist conservation, analysis and reporting of the postulated Iron Age cart-tyre.
- Defining the character of charred plant remains recovered during site sampling and what they tell us about natural setting of the monument and contemporary human activity during the later prehistoric period.
- Specialist identification and reporting of the small assemblage of prehistoric and medieval pottery recovered from excavated features.
- Update the principal contextual and structural evidence recorded during the project in the light of the results of PERD stage work.
- Fully report the overall results of this particular stage of mitigation fieldwork undertaken for Cabot Highlands Championship Golf Course project, in the light of the results of the proposed PERD stage post excavation work, in a fully illustrated **Final Report** for submission to Highland Council.
- Preparation of an **illustrated summary report** setting out the principal results of the work in Area PS5 for submission to the *Proceedings of the Society of Antiquaries of Scotland* for publication.
- Updating the project archive and ADS OASIS entries.
- Submission of reports and data to Highland Council Historic Environment Record.
- Submission of finds to Scottish Treasure Trove.

### Kiln 1 Mitigation Excavation

If requested by Highland Council a *Post Excavation Research Design* (PERD) will be prepared setting out the justification, aims, tasks, programme and resources for a final stage of selective post excavation analysis and reporting for the evidence recorded at the Kiln 1 site. The proposed PERD would identify specific tasks designed to firmly date the construction and operation of the kiln and what the structure was used for. It is anticipated that the aims of further PERD stage analysis and reporting will focus on:

- Clarifying and refining the chronology of the kiln by means of a series of independent scientific radiocarbon dates (Radiocarbon AMS) of selective charred structural remains and charred deposits.
- Defining the character of charred plant remains recovered from the kiln structure and its fill deposits to elucidate how the kiln was constructed and what it was used for.
- Update the principal contextual and structural evidence recorded during the project in the light of the results of PERD stage work.



- Fully report the overall results of this particular stage of mitigation fieldwork undertaken for Cabot Highlands Championship Golf Course project, in the light of the results of the proposed PERD stage post excavation work, in a fully illustrated **Final Report** for submission to Highland Council.
- Update the project archive and ADS OASIS entries.
- Submission of reports and data to Highland Council Historic Environment Record.
- Submission of finds to Scottish Treasure Trove.

*Avon Archaeology Highland 2023a – Cabot Highlands – Castle Stuart Championship Course, Castle Stuart, Dalcross, Highland: Archaeological Mitigation & Reporting Project – Archaeological Mitigation & Reporting Project – Areas PS4, PS5 & PS6 Project Design, Methods Statement & Risks Assessment. July 2023. Unpublished client report submitted to Highland Council*

*Avon Archaeology (Highland) Ltd 2023b. Cabot Highlands – Castle Stuart Championship Course, Castle Stuart, Dalcross, Highland: Archaeological Mitigation & Reporting Project – Areas PS1, PS3 & SR6 Project Design, Methods Statement & Risks Assessment. June 2023. Unpublished client report.*

*Avon Archaeology (Highland) Ltd 2022. Castle Stuart Golf, Dalcross, Inverness – Archaeological Evaluation & Reporting Project. Project Design, Methods Statement & Risks Assessment. Unpublished client report.*

*Canmore database – passim*

*Highland Council Historic Environment Record (HER) – passim*

*Managing Change in the Historic Environment (MCHE): Documents including guidance on the treatment and management of heritage assets including Scheduled Monuments*

*Scotland’s Archaeology Strategy 2016*

Document laying out the importance of archaeology in Scotland

*The Historic Environment Policy for Scotland 2019 (HES 2019):* Historic Environment Scotland’s published revised principles and policies for the management of heritage in Scotland including managing change and sources of further information.



## List of Appendices

*Appendix 1 - Context Register (Mitigation Area PS5)*

*Appendix 2 - Context Register (Kiln 1 Mitigation Area)*

*Appendix 3a and b - Finds Registers*

*Appendix 4 - Photographic Registers*

*Appendix 5a and b - Sample Registers*

*Appendix 6a and b - Drawing Registers*

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