

CALL11/005



## CALLIACHAR WIND FARM, PERTH & KINROSS

*Archaeological excavation at Sites 9a–c and 10*

*for Calliachar Wind Farm Ltd*

07/02617/FUL

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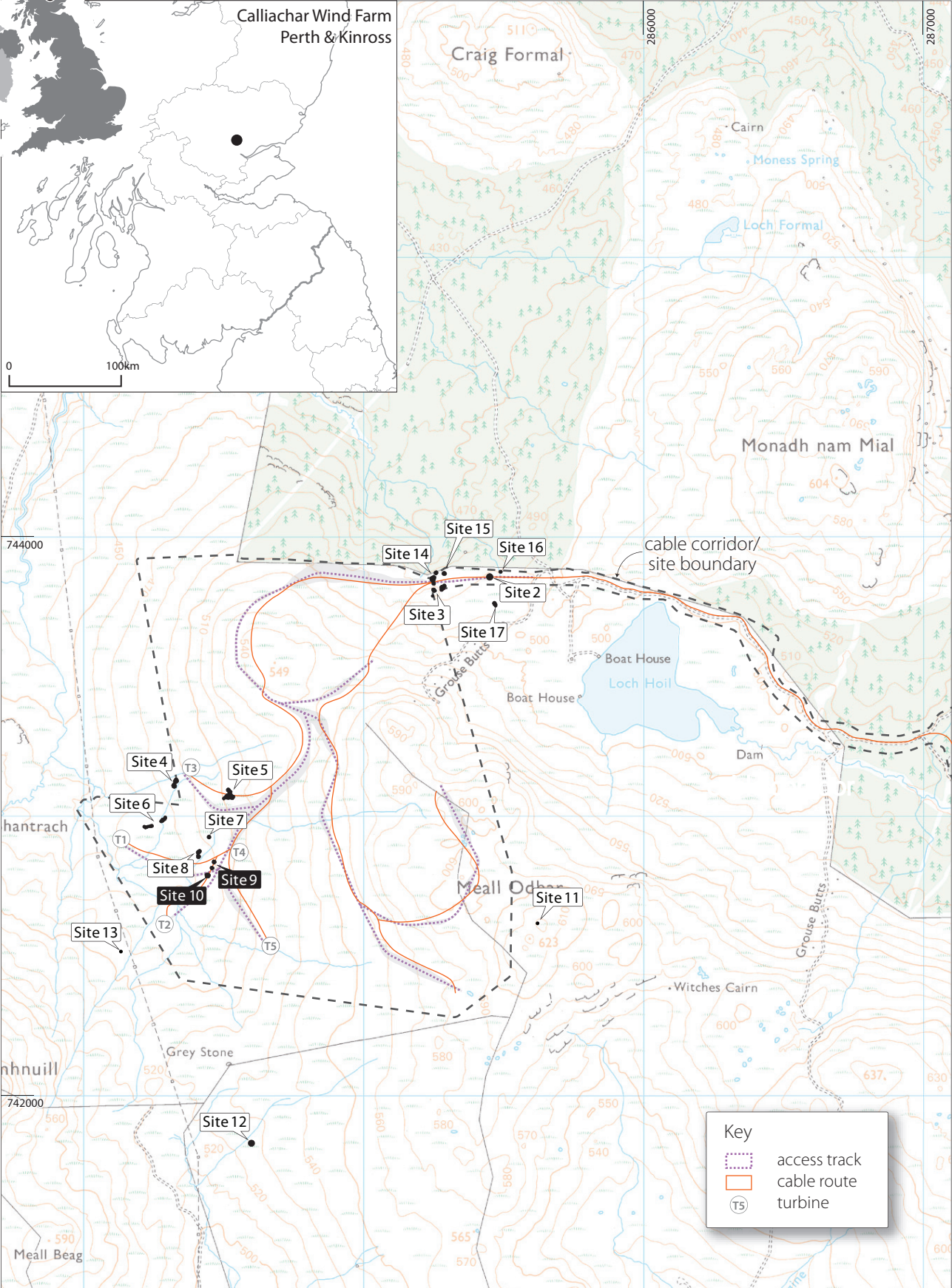
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Calliachar Wind Farm  
Perth & Kinross



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**Illus 1**  
Site location

# CALLIACHAR WIND FARM, PERTH & KINROSS

## Archaeological excavation at Sites 9a–c and 10

Headland Archaeology (UK) Ltd was commissioned by Calliachar Wind Farm Ltd to carry out a series of archaeological works at Calliachar Wind Farm. Thirty-eight features were recorded during the course of a walk-over survey of the access tracks and turbine bases prior to the installation of 14 wind turbines and associated access and cable tracks. Four sites, which comprised a cairn (Site 10), a shieling hut (Site 9b) and two features (Sites 9a and 9c) initially tentatively identified as a shieling hut and hut circle, located on the north-western slopes of Meall Odhar would be directly affected by the development and therefore excavation was required.

Excavation of the sites revealed that there had been activity in the area from the prehistoric period through to the post-medieval period.

Excavation of Site 10 revealed a scooped-out hollow in the natural bedrock and two possible stone short cists, suggesting the site may have been a robbed-out cairn; fragments of flint debitage and carbonised cereal grain were also found at the site.

Sites 9a and 9c were possibly related. Site 9a comprised stone-lined postholes, paving and occupation deposits. Two flint arrowheads were also recovered from the site. Site 9c comprised a large pit, together with evidence of *in situ* burning. Pollen cores were also taken in the area in order to provide further information on the archaeological remains and the associated activities together with providing information on how people may have interacted with this landscape in the past and what impact these interactions had on this environment.

1

## 1. INTRODUCTION

Headland Archaeology (UK) Ltd was commissioned by Calliachar Wind Farm Ltd to carry out a programme of archaeological works in advance of the construction of the Wind Farm located some 6km to the south of Aberfeldy in Perth and Kinross. The scheme involves the installation of 14 turbines together with associated access and cable tracks (*Illus 1*).

Planning permission was granted for the construction of the Calliachar Wind Farm subject to a number of archaeological conditions. In order to meet the terms of the archaeological conditions to the satisfaction of the planning authority, an Archaeological Mitigation Plan (Headland Archaeology 2011) was drawn up to mitigate the impacts of the Wind Farm development on the cultural heritage resource of the development area. As part of this mitigation strategy a walkover survey of the access tracks and turbine bases was carried out. During this survey 18 previously unrecorded sites were identified, some of which lay within the construction footprint of the development (Dalland 2012).

The programme of work reported here relates to the excavation of four sites (Site 9a–9c and Site 10: *Illus 2*) which lay within the construction

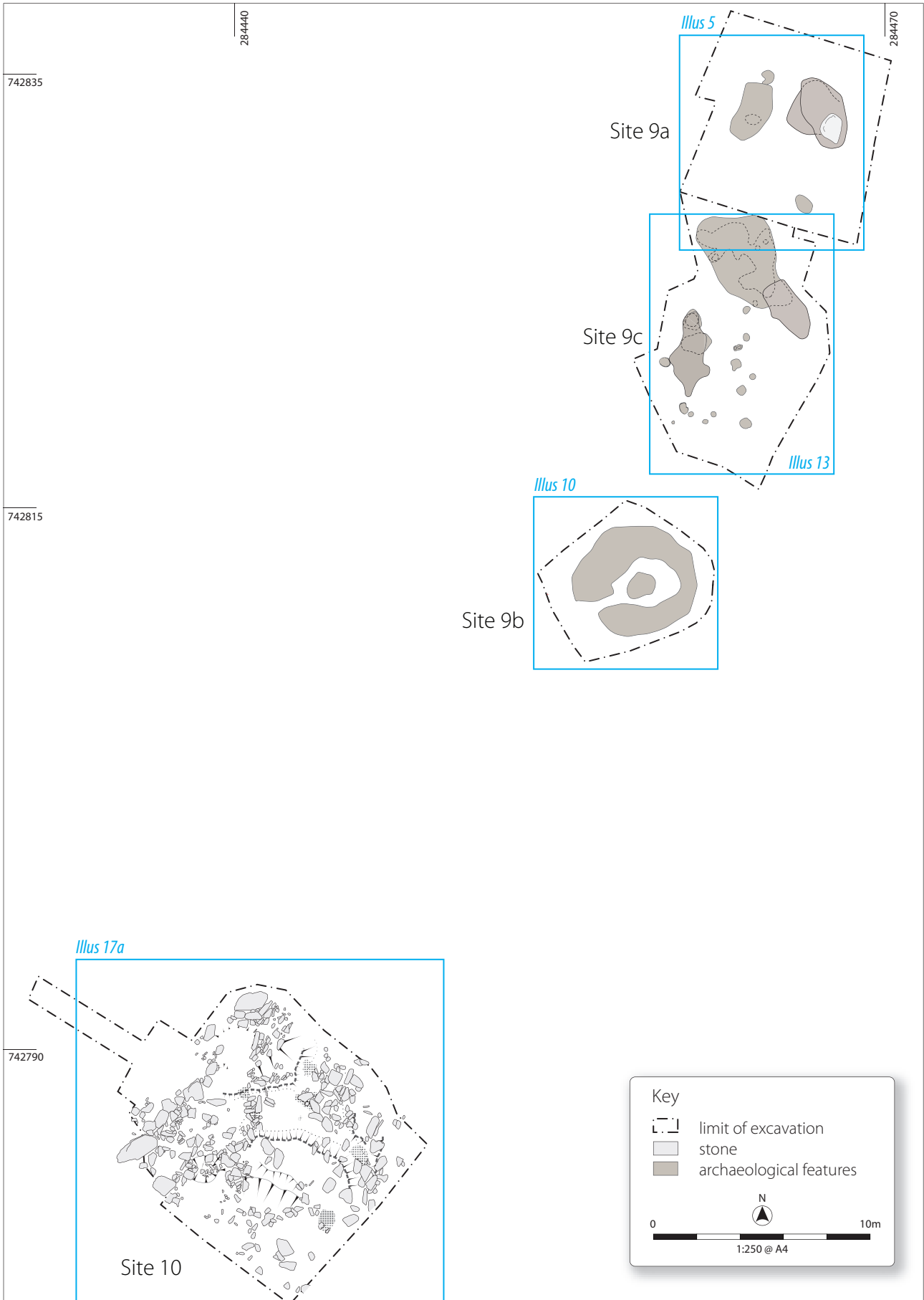
footprint. The work was undertaken in accordance with the terms of a Written Scheme of Investigation (Headland Archaeology 2012) which was agreed with Perth and Kinross Heritage Trust (PKHT), archaeological consultants to the local planning authority.

## 2. ARCHAEOLOGICAL BACKGROUND

None of the excavated sites reported here had been identified in the Environmental Statement (Environ 2007, Vol 2, 88–89). Sites 11, 12 and 13 were previously recorded during earlier survey work and included a shieling hut and two shepherd's cairns. However, these three sites were located outwith the development area.

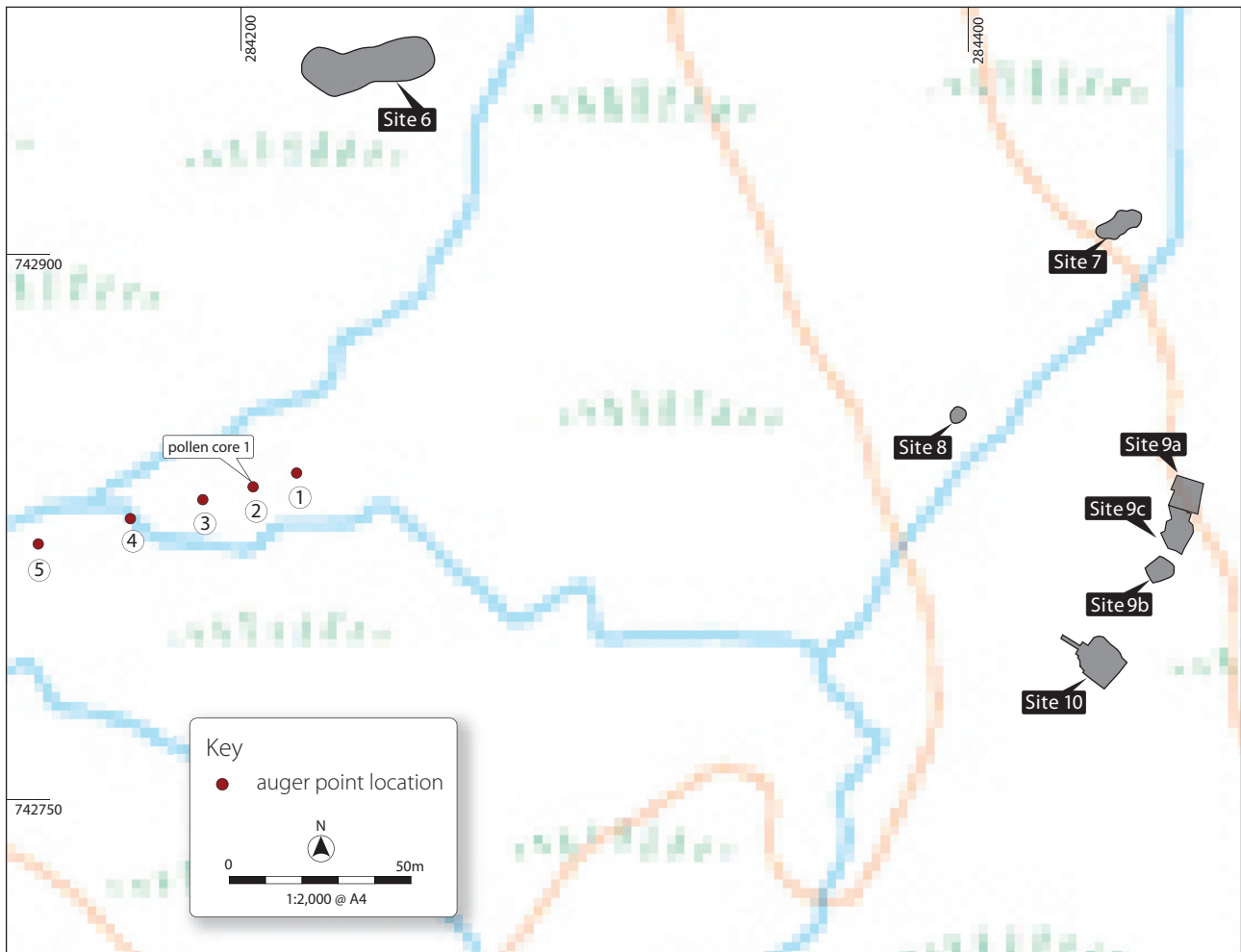
A walkover survey was carried out along the line of the proposed cable route and road corridor. A total of 18 new sites were recorded during the survey (Sites 2–10 and 14–18). These included 19 structures tentatively interpreted as shieling huts (including Sites 9a and 9b described in this report), two shepherd's cairns, two possible hut-circles, two enclosures, two constructed hollow features, a bank, a mound, and a possible prehistoric cairn (Site 10 also in this report) (*Illus 1*). The full results of Headland's survey have been presented elsewhere (Dalland 2012).





2

**Illus 2**  
Sites 9a-c and 10



Illus 3

Location of auger points 1–5 and pollen core

3

### 3. OBJECTIVES

The objectives of the excavation were:

- to preserve by record archaeological remains threatened by the proposed development works;
- to undertake an appropriate level of assessment to inform any subsequent programme of analysis and reporting to meet the requirements of the Planning Authority.

### 4. METHODOLOGY

Turf topsoil and overlying vegetation were removed by hand to fully expose the features. All exposed structural elements and surfaces were hand-cleaned and recorded as normal practise. The shieling walls were sectioned in order to investigate building methods and to clarify the nature of underlying deposits, particularly with the aim of determining whether earlier prehistoric features were present.

All recording was in accordance with the Institute for Archaeologists standards and guidance. All archaeologically relevant deposits and structures were assigned context numbers and described on *pro*

*forma* context sheets (Appendix 1). All stratigraphic relationships were recorded. Sections were drawn at a scale of 1:10 (Appendix 1) and plans were drawn at a scale of 1:20 or 1:50 as appropriate. A photographic record was taken using black and white and digital photographs (Appendix 1). Vertical photographs were also taken, where appropriate, using a digital camera mounted on an extendable pole and linked to a PC. A graduated metric scale was clearly visible in record photographs of context. All photographs were recorded by individual print number alongside information on the context and direction of view.

An overall site plan was recorded digitally using a PC running CAD software linked to a Total Station theodolite and related to the National Grid.

Small finds and environmental samples were given unique numbers and recording was undertaken of *pro forma* record cards that conform to accepted archaeological norms.

Archaeological deposits were sampled systematically in accordance with Headland Archaeology (UK) Ltd standard environmental sampling practises. A minimum sample of 10 litres and a maximum of 30 litres were taken from each deposit as appropriate for wet sieving. The samples are catalogued in the sample register (Appendix 1) and



**Illus 4**

*Site 9a – facing S*

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were assessed by environmental specialists Orla-Peach Power and Scott Timpany (Appendix 2).

Small finds were recorded in a register and plotted using Total Station survey where appropriate. Artefacts that were recovered during the excavations were assessed by finds specialist Julie Lochrie and are catalogued in Appendix 3. These will be subject to standard Treasure Trove procedures.

A gouge auger survey was undertaken by Dr Scott Timpany with the aim of identifying whether suitable deposits exist on site for the preservation of pollen and other environmental material (*Illus 3*). The pollen core was taken in order to help interpret the excavated remains, particularly with reference to the relationship between the prehistoric features in the area and the subsequent re-use of the landscape in the medieval and later period. Preliminary results of the investigation are reported below (Timpany, below).

## 5. RESULTS

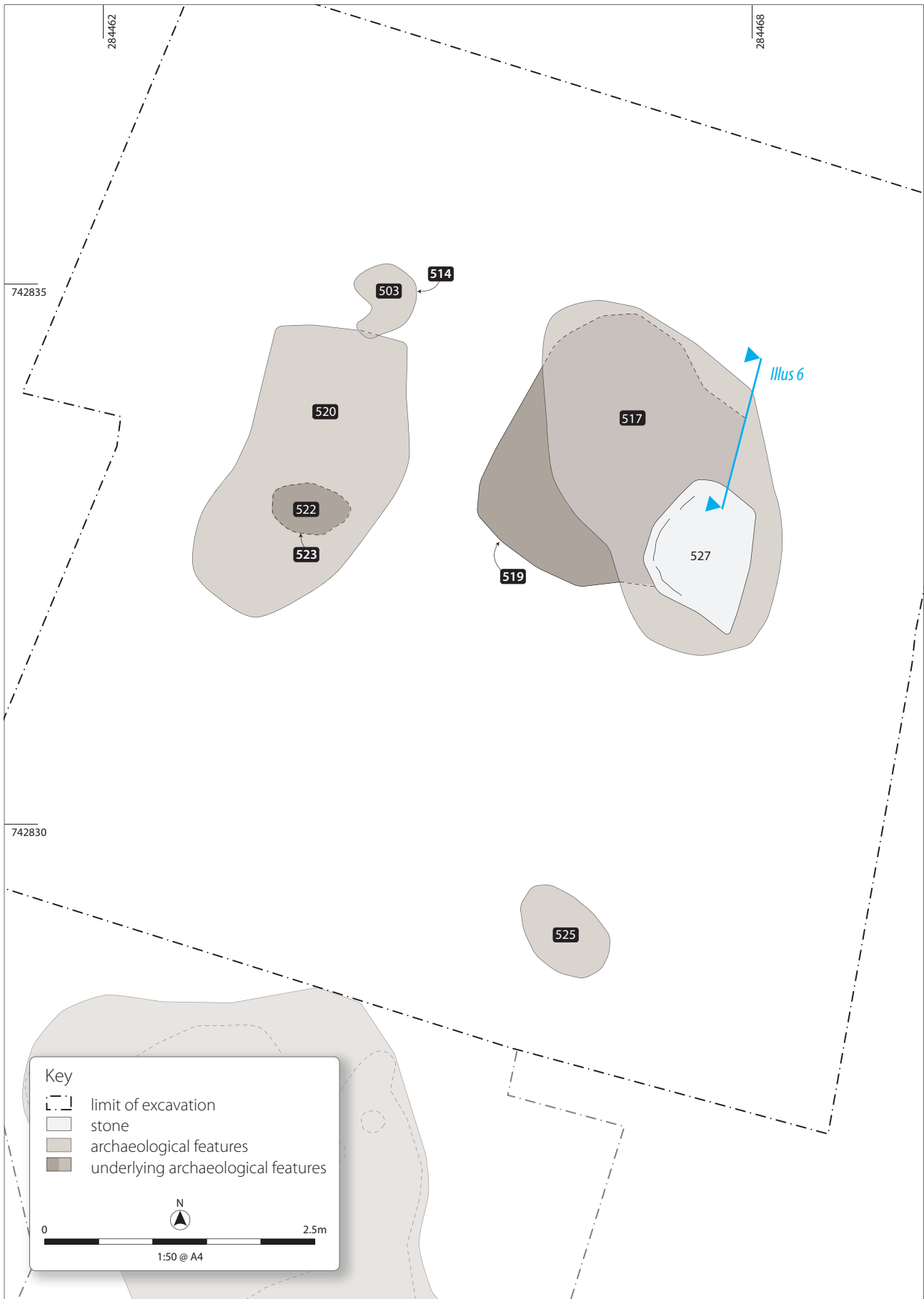
### 5.1 Site 9a

Site 9a was located at the north end of a low ridge, roughly 50m to the south-east of Hut 8b (*Illus 1*; *Illus 2*). Prior to excavation the site was identified as a shieling hut as it appeared as a hollow measuring 2m by 1.5m and 0.15m deep, surrounded by a low but

well-defined bank up to 2m wide. It became apparent following deturfing that the feature was not a shieling and that stones protruding from the natural subsoil gave the appearance of a bank (*Illus 4*). Several features were apparent, cut into the natural subsoil.

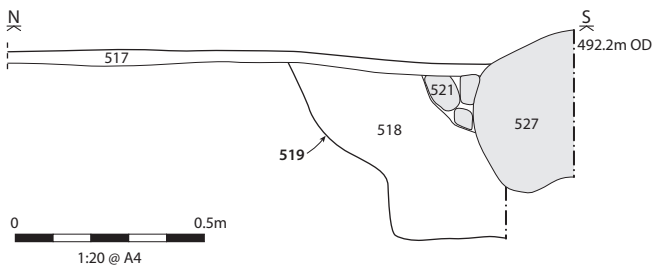
#### 5.1.1 Pit [519]

A large irregular pit [519], measuring 2.4m long, 1.7m wide and 0.6m deep was located in the central area of site (*Illus 5*), cut into natural subsoil, directly to the north of a large boulder (527). The pit was filled with a light bluish-grey, sterile silt deposit (518), with orange mottling (*Illus 6*). Small stones (521) within a mid greyish-brown silty matrix were 'packed' around the boulder (*Illus 7*). Initially it was unclear whether the feature was a naturally formed hollow created by the stone toppling over and therefore the deposit was the result of natural silting processes and mineral washing. However, excavation revealed the uniformity of the cut suggesting that it was indeed a man-made feature. The pit was sealed by a 0.05m thick, mid brownish-grey, sandy clay silt, containing frequent charcoal flecks (517) and a substantial piece of ironworking waste. The waste is a plano-convex hearth cake. It is dense with few voids or inclusions which suggest that it derived from smelting processes. It dates to the Iron Age or later (see Lochrie below).



**Illus 5**  
Site 9a – detail





**Illus 6 & 7**

Site 9a – W facing section through pit [519]



◀ **Illus 8**

Site 9a – section through hearth [523]

### 5.1.2 *In situ* burning (525) and hearth [523]

An isolated deposit (525) of silty clay measuring 0.55m long, 0.42m wide and 0.01m thick and containing frequent charcoal inclusions, was located on the south side of site (Illus 5).

A possible hearth [523], comprising a shallow, sub-rounded cut, aligned east to west and measuring 0.7m long, 0.5m wide and 0.07m deep was located immediately to the west of pit [519] (Illus 5). The hearth was filled with a charcoal rich deposit (522) (Illus 8) and the surrounding natural subsoil, into which it was cut, was oxidised, suggesting *in situ* burning. A small quantity of oat (*Avena* sp.) and emmer wheat (*Triticum dicoccum*) was recovered from the hearth (see Power and Timpany below).

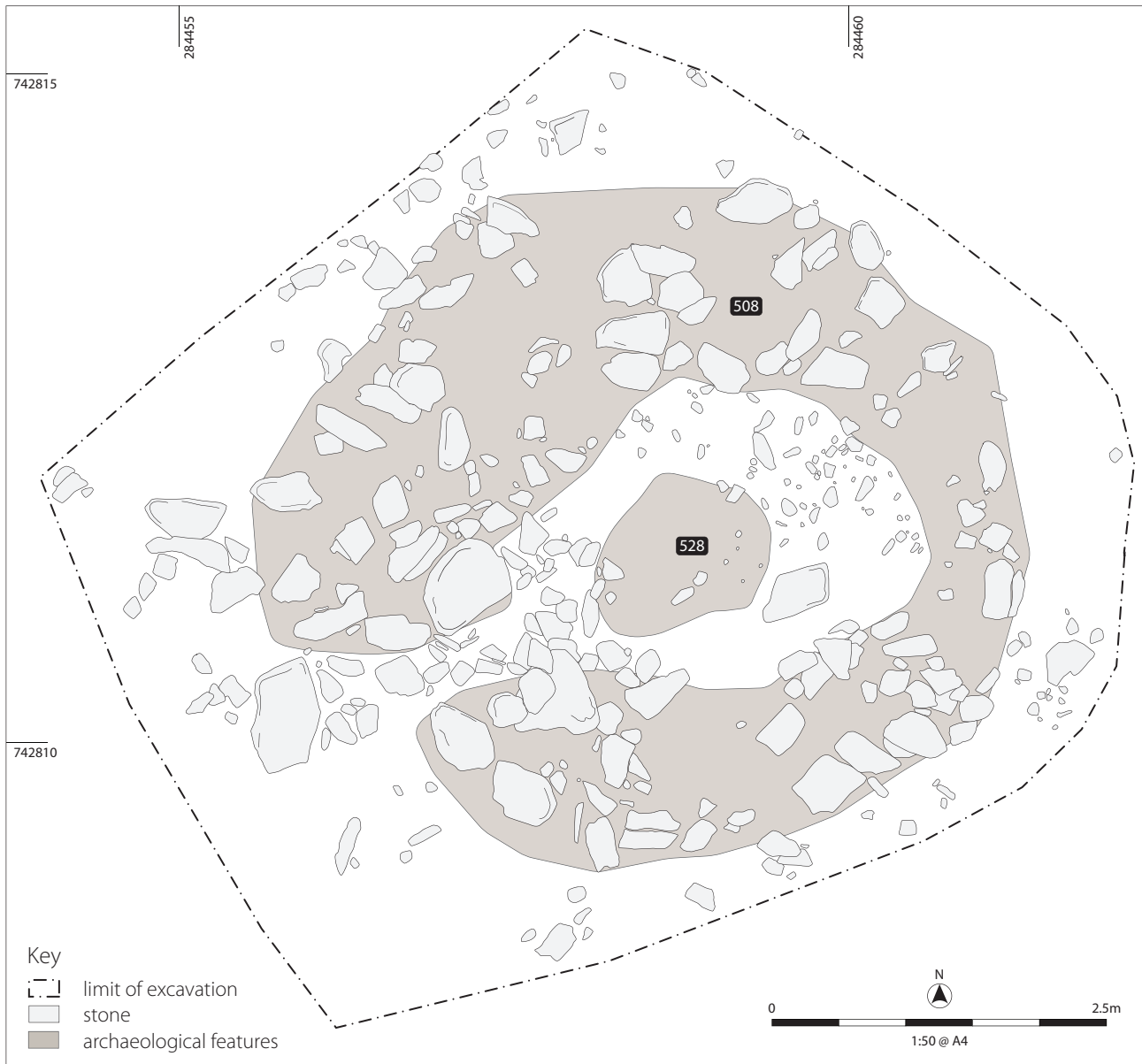
### 5.1.3 Deposit 520

Amid brownish-grey sandy clay silt, containing frequent charcoal fragments (520), occasional burnt stone fragments and slag fragments overlay hearth [523]. The deposit measured 1.5m long, 1.45m wide and 0.1m deep. The large quantity (1.143 kg) of ironworking waste from this feature must date to the Iron Age or later (see Lochrie below). Nutshell was also recovered from a sample (119) taken from this deposit (see Power and Timpany below).

◀ **Illus 9**

Site 9a – pit [514]





7

**Illus 10**

Site 9b – detail

### 5.1.4 Latest activity

The features were sealed by a mid greyish-brown sandy clay deposit (502) containing occasional charcoal fragments similar to deposit 562 in Structure 9c. Although several stones (526) were present within the deposit they formed no cohesive structure. In the northern area of site a circular pit [514], measuring 0.6m in diameter and 0.1m deep cut through the deposit (502), to natural subsoil. The pit was lined with flat, heat-affected, schist stones and contained frequent charcoal fragments (503). The surrounding natural subsoil, into which the pit was cut, was oxidised suggesting *in situ* burning (Illus 9).

## 5.2 Site 9b

Site 9b was a shieling, located between Site 9c, to the north, and Site 10, to the south. The structure was sub-circular in plan and cut into a slope on the northern side. The walls [508] were up

to 0.12m high and up to 1.5m wide and were constructed from turf and several horizontally and vertically placed stones (Illus 10). The entrance was located on the south-west side of the structure. Large vertically arranged schist blocks [510], flanked the entrance, abutting the turf banks (Illus 11).

The interior measured 2.3m by 1.8m. It was filled with a 0.12m thick, moderately compact silty-sand deposit (512), probably the result of slumping from the turf walls. Beneath this lay a silty-clay deposit (528) containing charcoal flecking. The deposit was up to 0.1m thick in the central area and petered out towards the northern edge of the structure. Several flat stones (529) possibly the remains of a surface were pressed in to the deposit, within the centre of the structure.

A 0.11m thick turf and black peaty topsoil (507) covered the structure. The turf was generally thin and only formed in grassy areas and was not present beneath the heather (Illus 12).



◀ **Illus 11**

Site 9b – facing N

▶ **Illus 12**

Site 9b – facing S



was not entirely clear, it appears that the two northern post-holes [575 and 572] were cut through this deposit. A single fragment of flint debitage was recovered from this deposit. The fragment was of inner, hard hammer chip, from light grey flint (see Lochrie below). A similar deposit also covered the southern area of site, where it was recorded as deposit 533; however, the southern deposit only contained small flecks of charcoal.

### 5.3.2 *In situ* burning

Two possible areas of *in situ* burning (558 and 567) were identified. Deposit 558 was located in the central area of site, between pits [554] and [548]; it was sub-circular in plan and measured 0.2m by 0.15m and was 0.02m thick. The second deposit (567) was identified on the western side of site. It comprised a charcoal enriched rich sandy silt deposit measuring 0.3m long, 0.25m wide and 0.02m thick and containing occasional burnt bone fragments. Two fragments of flint debitage were recovered from a sample taken of this deposit. The flint comprised a hinge terminated distal fragment and burnt chip, both from red brown flint and though clearly prehistoric, were not diagnostic of a particular period within this (see Lochrie below). The natural subsoil was also oxidised, most notably, beneath deposit (571) in the northern area, (533), in the southern area and beneath deposit (556) in the western area.

## 5.3 Site 9c

Site 9c was located between Sites 9a, to the north and 9b, to the south. The site was discovered during the removal of heather prior to the excavation of Site 9a. Like site 9a, it also appeared as a circular embanked depression on the surface, but its surface appearance bore no relation to the archaeology beneath. Several features including a total of nine post-holes, four pits, a paved surface and possible occupation deposits, together with charcoal deposits and areas of oxidised natural subsoil, suggestive of *in situ* burning, were encountered (*Illus 13*).

### 5.3.1 Deposit 571

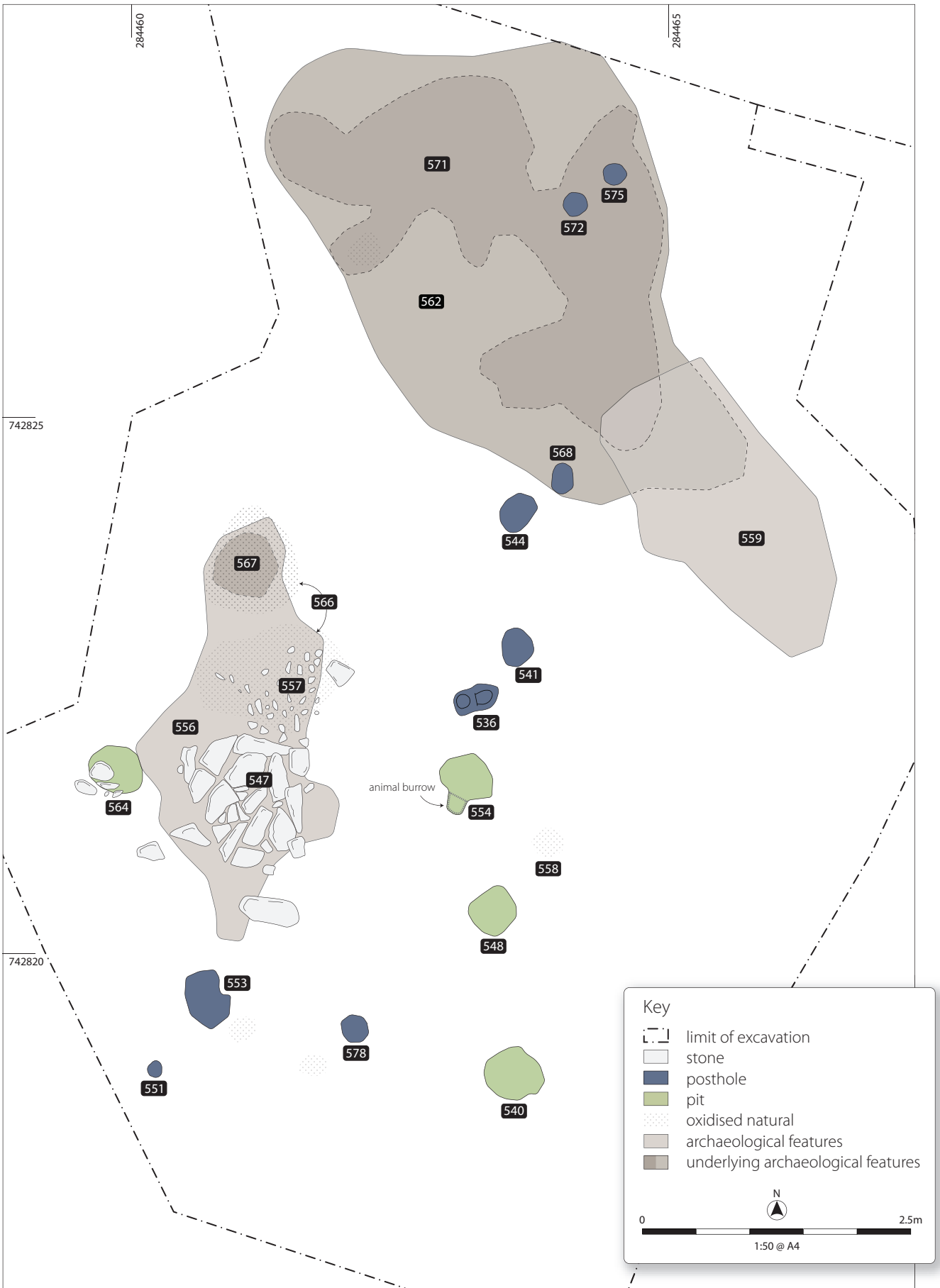
Deposit 571 was concentrated in the northern area of the site; it comprised a mottled reddish-brown fine, sandy silt of medium compaction containing several areas of charcoal and large pieces of carbonised wood, up to 0.04m in size. The deposit was delimited on the southern side by a line of angled, vertical stones protruding from the natural subsoil. Although the relationship

### 5.3.3 Post-holes

Nine post-holes were present on site, cut into natural subsoil (550), seven of these were stone-lined [541, 544, 553, 568, 572, 575 and 578] and one [536] was a 'double' post-hole. Although the post-holes did not appear to form any discernable structure, for the most part, they seemed to be grouped into pairs, in the same, north-east to south-west alignment. Three concentrations of post-holes were visible. Two [575 and 572] were located in the northern area (*Illus 14*), four [568, 544, 541 and 536] in the central area, and three in the south-western area of site [521, 553 and 578].

#### *Northern post-holes [572 and 575]*

The two northern post-holes [572 and 575] were similar in form as both were sub-circular in plan and measured approximately 0.23m in diameter and up to 0.2m deep. Post-hole [575] was located approximately 0.3m to the north-east of [572]. Both were



Illus 13  
Site 9c - detail





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### Illus 14

Site 9c – post-holes and paved area [547]

lined with vertically arranged schist stones (*Illus 15*), although the stone lining [573] in post-hole [572] had partially collapsed. The post-holes were both filled with dark greyish-brown, sandy-silt containing occasional charcoal fragments (574 and 577).

#### *Central post-hole group [568, 544, 541 and 536]*

The northern-most post-hole [568] in the central area was oval in plan and measured 0.28m long, 0.22m wide and 0.23m deep. Several flat, schist stones [569] lined the post-hole. The fill (570) comprised dark greyish-brown sandy silt, containing occasional charcoal fragments.

Post-hole [544] was located 0.2m to the south-west of [568]. It was sub-circular in plan, and measured 0.35m long, 0.28m wide and 0.17m deep. The post-hole was lined with four large, schist stones [545], arranged vertically around the edge of the cut. It was filled with a greyish-brown sandy silt (546) containing charcoal fragments. Following the installation of the post, the cut was backfilled with a deposit of greyish-brown sandy silt containing occasional charcoal fragments.

To the south of post-hole [544], lay post-hole [541]. It measured 0.35m in diameter and was 0.35m deep. The packing was very similar to [545] and similarly consisted of four vertically arranged schist stones, which protruded 0.12m above natural subsoil. The fill (543) consisted of sandy silt containing occasional charcoal flecks.

Lastly, feature [536] lay approximately 0.25m to the south west of post-hole [541]. It comprised two inter-cutting post-holes, aligned north-east to south-west. As a whole, the feature measured 0.49m long, 0.35m wide and up to 0.22m deep. Although recorded as one feature, the western post-hole appeared to cut the eastern. Stone packing was present on the eastern edge of the western post-hole. Both post-holes were filled with mid greyish-brown sandy silt containing occasional charcoal fragments.

#### *South-western post-holes [578, 553 and 551]*

Post-hole [578] was located directly to the south of a bedrock outcrop (*Illus 16*). It was sub-circular in plan and measured 0.31m long, 0.24m wide and 0.22m deep, lined with vertically arranged schist stones, protruding 0.14m above the subsoil. A flat, 0.03m thick stone also lined the base of this feature. The post-hole fill (580) comprised greyish-brown sandy silt containing small charcoal fragments.

Post-hole [553] was located to the west of [578]. It was sub-circular in plan and measured 0.5m long, 0.4m wide and 0.17m deep. A stone setting [563] was located at the base of the feature. The packing comprised four vertical schist stones in a square arrangement. The pit was filled with reddish-black sandy silt (561), containing abundant charcoal fragments. The natural subsoil surrounding the feature was oxidised suggesting that the post may have burned *in situ*.



Post-hole [551] was located to the south-west of post-hole [553]. It measured 0.2m in diameter and was 0.32m deep. It was filled with greyish-brown silty sand (552) and contained occasional small charcoal fragments.

#### 5.3.4 Pits [554, 548, 540 and 564]

Four pits were located in the area. Three [554, 548 and 540] were situated in the centre of site (illus 14), evenly spaced, to the south of, and aligned with, the central group of post-holes. The northern most pit [554] was irregular in plan, measuring 0.53m long, 0.4m wide and up to 0.1m deep. Its western side was defined by a bedrock outcrop. It was filled with reddish-brown sandy silt containing occasional charcoal fragments. The surrounding deposit was oxidised suggesting *in situ* burning.

The central pit [548] was sub-circular in plan, measuring 0.45m long and 0.4m wide. It was filled with a deposit of dark, greyish-brown, sandy clay (549) containing occasional charcoal



**Illus 15**

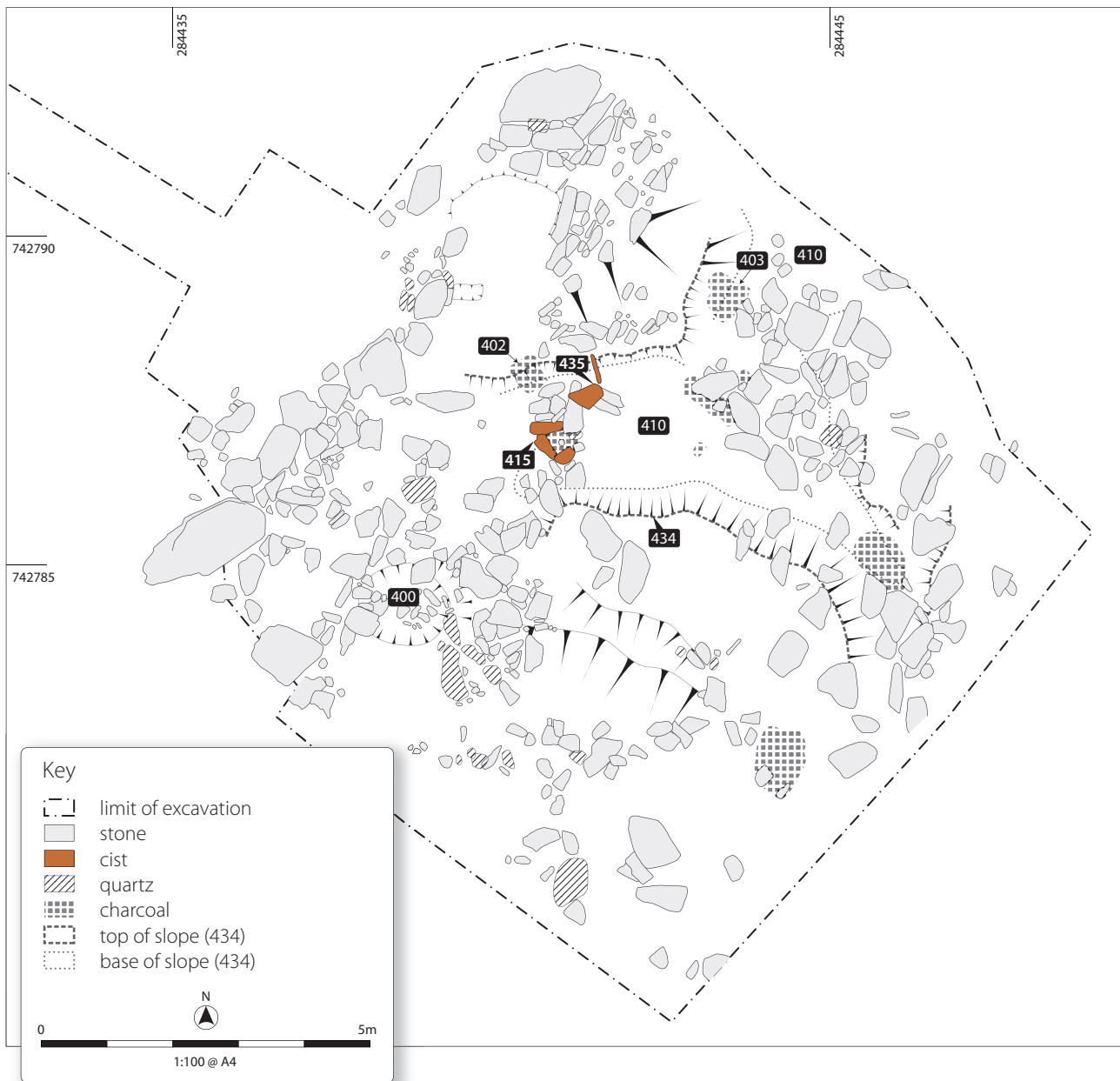
Site 9c – post-hole [575] & [572]



**Illus 16**

Site 9c – southern end of site 9c, looking north





**Illus 17a**

Site 10 – plan

fragments. An emmer wheat grain was found within this deposit (see Power and Timpany below). The deposit was also gleyed, suggesting that the area may have been subjected to intermittent waterlogging.

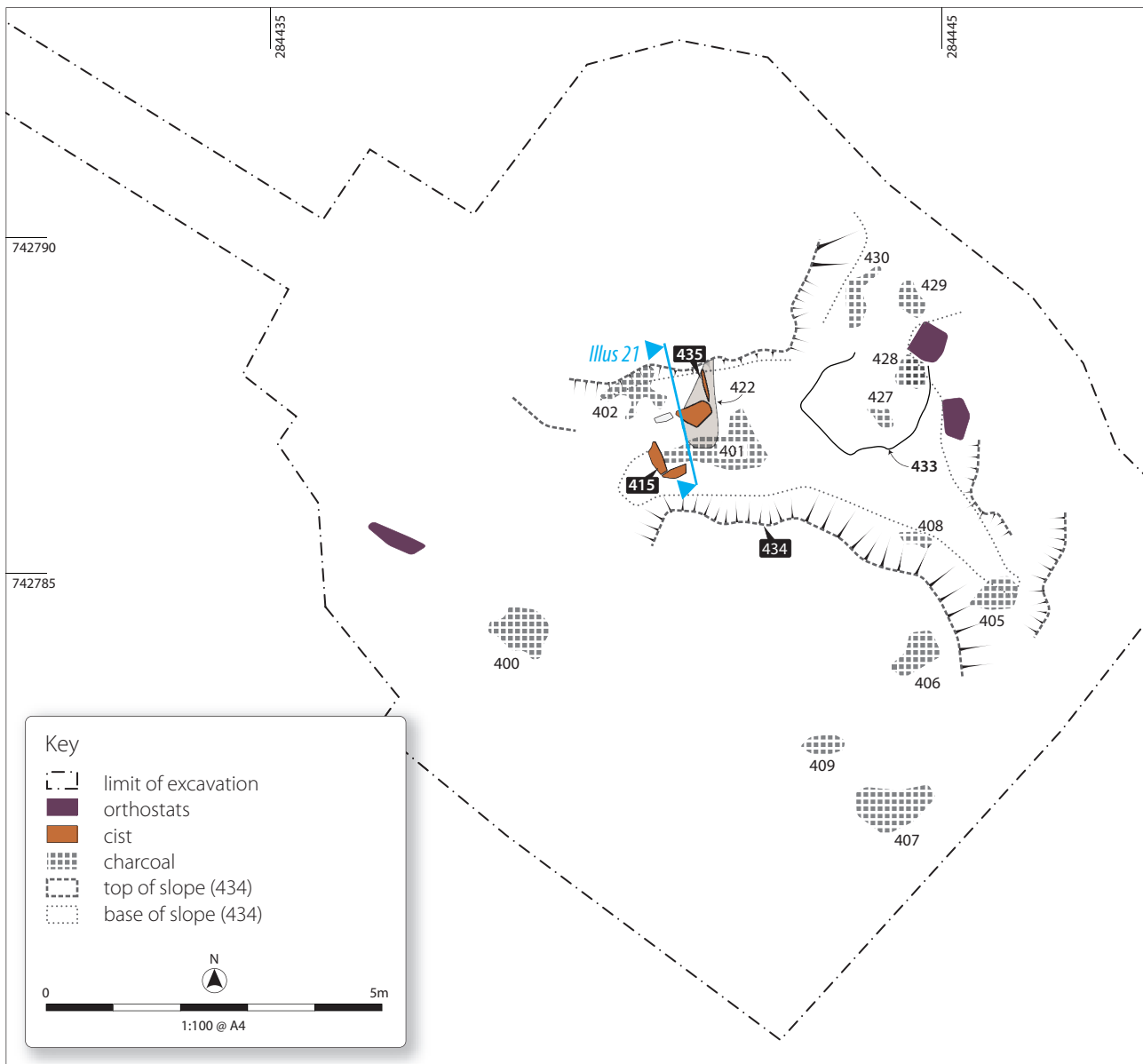
Pit [540] was also sub-circular in plan, and measured 0.54m long, 0.44m wide and 0.15m deep. It was heavily disturbed by animal burrows, which truncated the feature on the northern and eastern sides. It was filled with greyish-brown sandy silt and contained occasional charcoal fragments.

The fourth pit [564] was located on the western area of site, to the west of paved area [547]. It was also sub-circular in plan, and measured 0.48m long, 0.45m wide and 0.06m deep. It was filled with large, flat, schist stones and contained abundant charcoal fragments. The surrounding natural subsoil was oxidised

suggesting that the charcoal was the result of *in situ* burning. Hulled barley grains and hazelnut shell fragments (*Corylus avellana*) were recovered from a sample taken from the pit fill (565) (see Power and Timpany below).

### 5.3.5 Paved area [547] and Surface [557]

Paved area (547) was located in the western area of site (*Illus 14*). It comprised several large schist stones, the largest measuring 0.55m long and 0.45m wide. The paving was generally 0.03m thick and covered an area measuring 1.7m long and 1.25m wide. It overlay deposit (556) and extended to the north, where it was recorded as (557). Deposit (557) comprised a series of small, angular flat stones compressed into the natural, heat affected subsoil. The deposit was 1m long, 0.62m wide and 0.01m thick.



**Illus 17b**

Site 10 – plan

### 5.3.6 Deposit 556

Deposit 556 was located directly beneath the paved area [547]. It comprised dark greyish-brown sandy silt, containing several large charcoal fragments. A hollow based, honey brown, flint arrowhead (SF2) and two fragments of light grey mottled flint debitage deriving from inner hard hammer blade and flake, were recovered from this deposit. The arrowhead dates to the late Neolithic period (see Lochrie below). Fragments of charred hazelnut shell were also recovered from this deposit (see Power and Timpany below).

### 5.3.7 Deposit 562

Deposit (562) was located in the northern area of site, it comprised a uniform, fine silty sand deposit containing lenses of charcoal,

reddish-brown ash and oxidised sand. The charcoal content in this deposit was much less than underlying deposit (571) (see above). It was penetrated by several animal burrows. A single fragment of flint debitage, an inner chip of red brown flint (see Lochrie below), was recovered from a sample (136) taken from this deposit. Oat grains were also recovered from this deposit.

### 5.3.8 Deposit 559

Deposit (559) was only encountered on the north-eastern side of the site. It consisted of a mottled, light grey, fine silty sand. Its position, on the northern side of site, upon a line of stones, may have been incidental as most of the stones appeared to be embedded in natural subsoil. Slag fragments, dating to the Iron Age or later were recovered from this deposit (see Lochrie below).



**Illus 18**

Site 10 – general site shot, facing SW

### 5.3.9 Deposit 530

Directly beneath the topsoil on the southern side of site, was a mid greyish-brown sandy-clay silt, containing occasional charcoal flecks (530). Slag fragments, dating to the Iron Age or later were recovered from the deposit (see Lochrie below).

During deturfing in the northern area of site a medial fragment of leaf-shaped flint arrowhead, dating from the early to middle Neolithic (see Lochrie below), was recovered. Although the location spot of the arrowhead is known, it is not clear from which deposit the arrowhead derived.

## 5.4 Site 10

Site 10 was located approximately 25m to the south-west of Site 9b. Prior to excavation the site appeared as a sub-circular stony mound encircled by a low stony bank located on a rocky knoll.

Removal of topsoil revealed a 'Y' shaped depression [434] (*Illus 17a*), with the main stem running west to east and the two branches north-east to south-west and north-west to south-east respectively, within the centre of the rocky outcrop. The edge was marked by stones along the northern edge and two vertical

orthostats at its eastern extent (*Illus 17b*). Rubble and silt deposits (410 and 412) filled the base of the feature.

### 5.4.1 Cists 415 and 435

Two stone cists ([415] and [435]) were present within the western extent of the depression [434] (*Illus 18*). Cist [415] comprised a square box, constructed from large, vertically arranged schist slabs (*Illus 19*), directly overlying bedrock. The 'box' was 0.7m long, 0.5m wide and 0.3m deep. It was filled with a charcoal rich deposit (401), which also extended to the east. A small number of oats (*Avena* sp.), wheat sp. (*Triticum* sp.), emmer wheat grains (*Triticum dicoccum*) and indeterminate cereals were recovered from a sample (109) taken from this deposit (see Power and Timpany below).

Cist [435] was located to the north-east of [415]. It comprised two schist slabs, arranged vertically, measuring 0.6m long, 0.55m wide and 0.3m deep (*Illus 20*). The base was formed by four schist stones generally measuring 0.26m x 0.13m x 0.03m. The cist was located within a pit [421] (*Illus 21*), which cut through the charcoal rich deposit (401) filling cist [415]. The pit was backfilled with broken schist fragments (422), possibly re-deposited bedrock.



The basal deposit of the cist comprised a loose dark greyish-brown sandy loam (431) containing occasional charcoal fragments. A single fragment of honey brown flint debitage was recovered from the deposit suggesting that the feature dates to the prehistoric period. The upper fill (423) comprised a light yellowish-brown sandy clay. A single plantain (*Plantago* sp.) seed was recovered from a sample (108) taken from this deposit (see Power and Timpany below).

#### 5.4.2 Pit [433]

Pit [433] was cut into the bedrock. It was aligned north-west to south-east and measured 1.3m long, 1.5m wide and 0.25m deep. It was partially filled with deposits of silty clay (425) and overlain by charcoal rich deposits (426) and (420), likely to be the result of *in situ* burning. The southern area had silted over with deposits (419) and (412). Deposit (412) comprised light greyish-brown clay silt, of variable thickness, extending from the east to the south and likely represents 'interactivity' silting. It was very similar in nature to deposits (411) and (400). The deposit contained several lenses of charcoal, the largest of which were recorded separately, these included (427), (428) and (430). The presence of charcoal layers interleaved with the silt deposits suggests that (412) was deposited whilst the site was occupied. Deposit (414) represented the final episode of *in situ* burning during this phase.

#### 5.4.3 Pit [416]

A shallow pit [416] was cut into a silt deposit (419) that had accumulated directly above pit 433. It was 1m long, 0.8m wide and 0.1m deep and filled with a deposit of charcoal (418) interleaved with thin bands of silty clay. A silt deposit (417) overlay this and a second burning episode (403) formed the tertiary fill of the pit. A small number of oats (*Avena* sp.) and naked barley (*Hordeum vulgare*) were recovered from a sample (109) taken from deposit (403).

#### 5.4.4 Deposits (404, 405, 406, 408, 409 and 410)

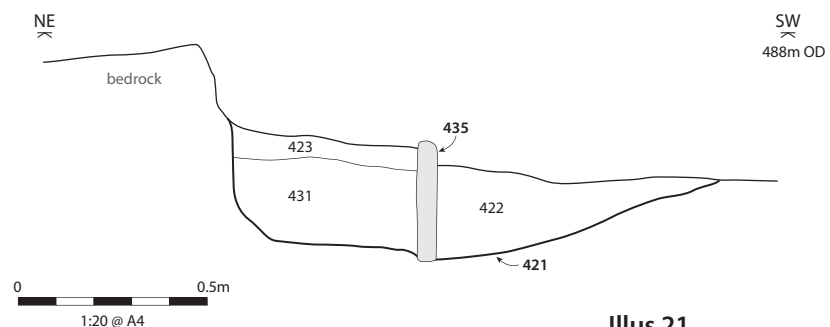
The cists and pits were sealed by a mottled sandy clay loam (410) containing rare charcoal inclusions, predominantly located within the 'bowl' of feature [435], but



Illus 19  
Site 10 – cist [415]



Illus 20  
Site 10 – detail of cist [435]



Illus 21  
Site 10 – NW section through cist [435]



extending towards the south-east and east below the topsoil. The deposit was very mixed and contained occasional charcoal fragments as well as large stones and rubble (413).

Several charcoal deposits, indicative of *in situ* burning, overlay deposit (410). Deposit (404) was located on the northern side of the site, (405) and (406) were located in the east area of site, deposit (409) was located in the south-western area, and deposit (408) was located in the central area. A fragment of flint debitage, a secondary chunk of dull black brown chert was recovered from a sample (104) taken from deposit (404) (see Lochrie below).

## 6. PALAEOENVIRONMENTAL ASSESSMENT

Orla-Peach Power & Scott Timpany

### 6.1 Introduction

During the course of the excavation, bulk soil samples were taken from features in order to retrieve palaeoenvironmental and archaeological materials. Environmental remains recovered from the samples may shed more light on the function of these features, provide dating evidence and tell us more about the activities, which once took place.

This report presents the results of the bulk sample assessment from Sites 9a, 9c and 10. A total of 42 bulk samples were taken across the three sites and 25 were processed for assessment; 4 from Site 9a, 14 from Site 9c and 7 from Site 10. No samples were taken from Site 9b. The aims of the assessment were to:

- Assess the presence, preservation and abundance of any palaeoenvironmental materials within the samples.
- Assess the potential of the material for any indications of the use of these features.
- Assess whether a proxy-date for these features can be provided based on any palaeoenvironmental materials present.

### 6.2 Method

Samples were processed in laboratory conditions using a standard floatation method (*cf* Kenward *et al*, 1980). All plant macrofossil samples were analysed using a stereo-microscope at magnifications of x10 and up to x100 where necessary to aid identification. Identifications were confirmed using modern reference material and seed atlases including Cappers *et al* (2006).

### 6.3 Results

The results of the sample processing are provided in Tables 4 (Retent finds) and 5 (Floatation finds) (Appendix 2). Suitable material for Accelerator Mass Spectrometry (AMS) dating is also identified within each table. All plant remains were preserved through charring.

#### 6.3.1 Charred Plant Remains (CPR)

A low incidence of charred cereal grain was identified in seven (109, 112, 119, 120, 125, 132 and 136) of the samples submitted for assessment; one from Site 9a, three from Site 9c and three from Site 10 (Tables 4 and 5). Grains were generally in a poor state of preservation, showing signs of abrasion and breakage. Oats (*Avena* sp.) were present in four samples (108, 109, 120 and 136), and emmer wheat grains (*Triticum dicoccum*) were also present in four samples (118, 120 and 125) both were present across all three sites. Hulled barley grains (*Hordeum vulgare*) were present in two samples (109 and 132) from Site 9c and 10, while a single grain of naked barley (*Hordeum vulgare* var. *nudum*) was present in one sample (132), from Site 9c. A small quantity of wheat sp. (*Triticum* sp.) was also found in one sample (119) from Site 10. Cereal grains, too poorly preserved to enable identification to family or species level, have been recorded as indeterminate cereals (*Cerealia* indet.), and were present in two samples (112 and 119) at Site 10.

Fragments of charred hazel (*Corylus avellana*) nutshell were identified in small quantities in three of the assessed samples (119, 132 and 133), from Site 9a and Site 9c. A single plantain (*Plantago* sp.) seed was recovered from sample 108 at Site 10.

Wood charcoal fragments were present in abundant quantities in all but two samples (121 and 141), with fragment size ranging from 3mm to 26mm (Table 4 and 5). Wood charcoal fragments of suitable size and condition for identification/dating purposes have been identified in all but one sample (127) (Tables 4 and 5). Visual inspection of charcoal fragments suggests the assemblage consists of predominantly non-oak species.

#### 6.3.2 Other finds

Together with the charred plant remains a small amount of other materials were also recovered from the samples (Table 4). Indeterminate burnt mammal bone fragments were recovered from Sample 134 at Site 9c. Lithics were retrieved from six samples (104, 107, 133, 134, 136 and 139) (see Finds catalogue, Appendix 3).

### 6.4 Discussion

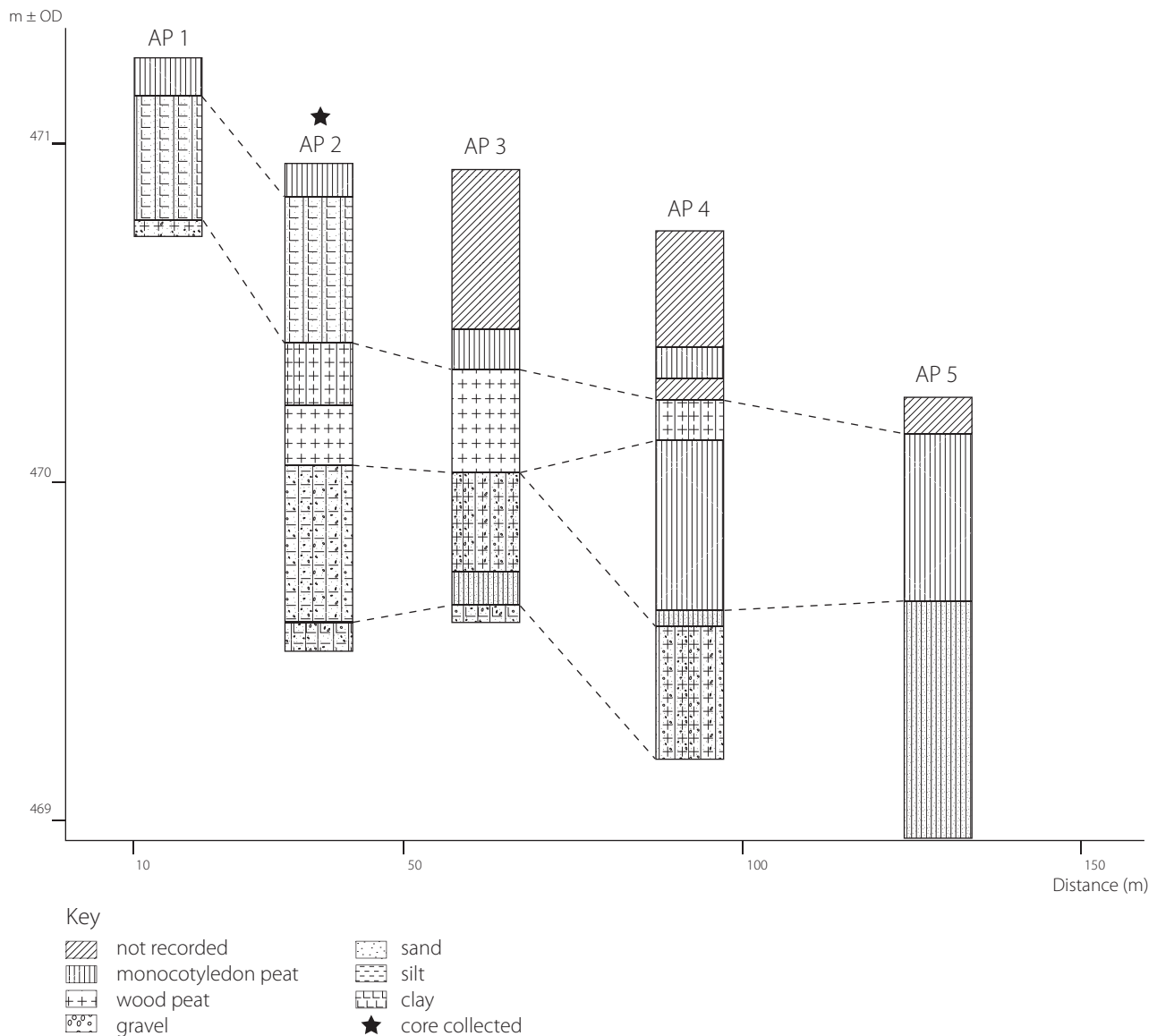
The samples are discussed below by site

#### 6.4.1 Site 9a

The CPR assemblage from Site 9a is dominated by charcoal fragments; visually identified as non-oak taxa. The charcoal is inferred as relating to the ironworking activity at Site 9a evidenced by the recovery of a plano-convex hearth cake, found to overlie pit [519] and indicates Iron Age date at the earliest for this activity (see Lochrie, below). The visual identification of the charcoal fragments as non-oak is surprising given the potential evidence for smithing activity, where oak fuel is usually favoured. The absence of oak fuel in the charcoal assemblage may reflect an absence of oak trees in the landscape and thus a reduced availability of this timber for fuel.

A small number of charred cereal grains were recovered from





**Illus 22**

*Auger transect drawing for AP1-5*

Site 9a (Tables 4, Appendix 2). The assemblage consists of oat and emmer wheat grain both present within *in situ* burning layer (522) within possible hearth [523]. The presence of charred grain within the hearth deposit would suggest probable food waste. The presence of oat within the assemblage would again suggest an earliest Iron Age date for this activity. Further probable food waste is present with the recovery of charred hazel nutshell from burnt patch [523].

**6.4.2 Site 9c**

The charred grain assemblage from Site 9c indicates two separate phases of activity. The presence of naked barley grain from within pit [564] is suggestive of Neolithic to Middle Bronze Age date activity, while emmer wheat found within pit [548] could relate to prehistoric or later activity. Charred hazel nutshell fragments within the assemblage could similarly relate to prehistoric or later use of the site. The prehistoric activity indicated by the presence of naked

barley could be contemporary with the Neolithic arrowheads found at Site 9c (see Lochrie, below). Later activity is indicated by the occurrence of oat and hulled barley in the grain assemblage. This small assemblage of oat and hulled barley grains would be in character with crops grown from the Iron Age period onwards.

Wood charcoal fragments represent the greatest abundance of CPR recovered from the site. The charcoal fragments have been identified visually as non-oak taxa, suggesting they may represent a range of species. The charcoal fragments present are likely to relate to more than one phase of activity given the different periods of site occupation suggested by the grain assemblage. Therefore, it is likely the charcoal may represent a range of activities such as industrial activity, potential construction materials subject to a conflagration event and cooking. Burnt mammal bone recovered from Site 9c is also likely to relate to food preparation and consumption at the site.



### 6.4.3 Site 10

The possible burial cairn, Site 10, also produced a small charred cereal grain assemblage with oat, hulled barley, wheat sp. and indeterminate cereal. It is possible that these grains are associated with the surrounding sites rather than the cairn itself as grains of oat and hulled barley were recovered from sites 9a and 9c (see above). It is possible given the small quantities of these cereals and their poor preservation that they have been transported to this area by mechanisms such as wind blow. Emmer wheat was also present amongst the assemblage, which may relate to prehistoric activity associated with a cairn. However, emmer wheat has also been grown into modern times and thus could belong to a later period.

Abundant charcoal fragments were recovered from all the samples processed from Site 10. The fragments were observed visually to be mainly non-oak timbers, although it is unclear how they relate to the cairn feature.

## 6.5 Conclusion

- Charcoal fragments of non-oak taxa were the main CPR recovered from the processed samples.
- Charcoal fragments are likely to represent a mixture of domestic fuel sources (Sites 9a, 9c and 10) and possible iron working waste (Site 10).
- There is some evidence for the consumption of foods given the presence of charred cereal grain and burnt bone fragments.
- The presence of naked barley, emmer wheat and hazel nutshell suggests possible prehistoric activity at these sites.

## 6.6 Statement of potential

Features from across all sites (9a, 9c and 10) contain charcoal fragments suitable for analysis. The observation of the fragments to be mainly non-oak in the assemblages indicates a range of taxa may have been resourced for fuel wood and that this resource may have been managed. Analysis of these charcoal assemblages has the potential to inform on woodland management, former woodland composition and fuel wood resources. Investigating how rural settlement impacted on the environment has recently been put forward as a research priority by the medieval ScARF panel (Hall and Price 2012). Analysis of the charcoal would aid in gaining more information on woodland resourcing and signs of management during this period.

The presence of abundant charcoal fragments together with charred hazel nutshell and charred grain provides suitable dating material across all sites. The widespread availability of materials for radiocarbon dating means there is good potential to build a chronology for the shieling and possible prehistoric activities across these sites.

## 7. SHORT REPORT ON THE PALAEOENVIRONMENTAL POTENTIAL OF TWO CORES

*Scott Timpany*

### 7.1 Introduction

The presence of blanket peats in the Development Area (DA) provides the potential for palaeoenvironmental work through pollen and plant macrofossils to provide further information on the archaeological remains and the associated activities. Palaeoenvironmental work can also provide information on landscape change in these areas as well as how people may have interacted with this landscape in the past and what impact these interactions had on this environment (eg woodland clearance, mire burning).

The aims of this investigation are:

- Establish the depth and nature of the peats in two areas at Calliachar.
- Produce a chronology for peat accretion through radiocarbon dating the top and bottom of the peat deposits.
- Assess the palaeoenvironmental potential of the peats and how this may inform on the activities present in the archaeological record.

### 7.2 Method

#### 7.2.1 Fieldwork

Two cores were collected from the development area, the first (Core 1) from an area to the west of Site 2 and the second (Core 2) from an area to the north-east of Sites 4–10 (Illus 3). Core 1 was taken from a known location of deep peat in the area, which was observed during excavation. The location for Core 2 was chosen through undertaking an auger transect through the area of deepest peat and then choosing a sequence with the best chance of recovery of the basal peats in order to see when peat began accruing.

A total of five auger points were undertaken across the area blanket peat using a manual gouge auger. The sedimentary sequence was recorded in detail at each location. The location of the auger points was recorded using a Total Station (running CAD Software) to record their position and the OD heights of the current peat surface. The cores in each location (Auger Point (AP) 02 (Core 2) of the auger transect and Core 1) were collected using a Russian Corer (cf Jowsey 1966) so that peat from the basal and upper parts of the sequences could be sampled for radiocarbon dating in order to provide a chronology for peat deposition. Core 1 measured 1.55m and Core 2 measured 1.44m. The retrieved cores have been stored at Headland Archaeology Ltd in view of any further study.

## 7.3 Results

### 7.3.1 Radiocarbon dates

The dated peat sequences from Cores 1 and 2 indicate that peat began to form at Calliachar during the Early Holocene (Table 1). The earliest dated peat was from Core 2, which showed peat development occurred in this area at 9139-8759 cal BC (SUERC-40793; 9545±40 BP), whereas in the location of Core 1 it occurred over a thousand years later at 7610-7526 cal BC (SUERC-40791; 8555±40 BP). The upper peat sample from Core 1 provided a post-medieval date of cal AD 1440-1632 (SUERC-40790; 390±35 BP), while the upper peat sample from Core 2 produced a modern date (SUERC-40792; 1.2117±0.0051 BP).

| Core | Sample depth (cm) | Dating material   | Date BP         | Date calibrated (2σ) | <sup>14</sup> C deter. |
|------|-------------------|-------------------|-----------------|----------------------|------------------------|
| 1    | 10–11             | Peat – humic acid | 390 ± 35        | cal AD 1440–1632     |                        |
| 1    | 152–153           | Peat – humic acid | 8555 ± 40       | 7610–7526 cal BC     |                        |
| 2    | 14–15             | Peat – humic acid | 1.2117 ± 0.0051 | –                    | –                      |
| 2    | 128–129           | Peat – humic acid | 9545 ± 40       | 9139–8759 cal BC     |                        |

**Table 1**

*Radiocarbon dating results from Core 1 & 2 samples*

The dated peat sequences indicate that peat has been slowly accumulating in both areas from the Early Holocene through to post-medieval and modern times. The differences in the upper peat dates between the two core locations suggests that some peat cutting activity may have occurred in the location of Core 1 during the post-medieval period. This may tie into the occupation of the shielings in this area (see below). The dates also suggest the two cores contain continuous peat sequences from the Early Holocene through to post-medieval and modern times.

### 7.3.2 Sedimentary sequence

Two main lithostratigraphic units were encountered at the site (Tables 2 and 3); blanket peat (Unit II) and a silty, coarse sand layer with angular gravels (Unit I), which is likely to represent glacial till. This till layer (Unit I) was recorded in two AP locations (AP2 and 3) and within Core 1, the remainder of the AP's were bottomed by stone. The light brown silty coarse sands and sandy silts of the till layer are likely to represent glacial till derived material, which is also signalled by the presence of sub-angular to angular gravels within this layer, indicative of frost-shattered materials.

| Unit | Sediment description   | Date BP                      | Depth (cm) |
|------|--|------------------------------|------------|
| II   | Dark brown peat with monocotyledon plant fragments with abundant wood fragments near the base. | Top: 390±35<br>Base: 8555±40 | 0-153      |
| I    | Light brown sandy silty with angular gravels   | –                            | 153-155+   |

**Table 2**

*Idealized sequence for Core 1*

Blanket peat (Unit II) then began to develop over this till during the Early Holocene period. In the location of Core 2 this peat is recorded as beginning to accrue at 9139-8759 cal BC (SUERC-40793; 9545±40 BP). In the area of Core 1 to the west the peat began to accrue at 7610-7526 cal BC (SUERC-40791; 8555±40 BP) and suggests the spread of blanket bog across the DA may have started in the locale of Core 2.

| Unit | Sediment description  | Date BP                             | Depth (cm) |
|------|---|-------------------------------------|------------|
| II   | Dark brown peat with monocotyledon plant fragments and wood fragments | Top: 1.2117±0.0051<br>Base: 9545±40 | 0-137      |
| I    | Grey clayey silty sand with sub-angular gravels                       | –                                   | 137-145+   |

**Table 3**

*Idealized sequence for Core 2*

Blanket peat is then recorded as forming continuously in both locations up to the post-medieval period in Core 1 where the upper layer was dated to cal AD 1440–1632 (SUERC-40790; 390±35 BP) and up to the present day in Core 2 (Tables 1–3). The auger transect across the valley floor to the north-east of Sites 4–10 showed that peat depth varied from 0.53m (AP1) to 1.57m (AP4) in depth (illus 22).

The blanket peat was observed to change in nature from the base to the top. At the bottom of this layer the peat is recorded as predominantly being a monocotyledon peat with wood fragments observed in AP3–4. The monocotyledon plant fragments within the peat show the former growth of plants such as grasses, likely to represent species such as cottongrass (*Eriophorum* sp.), purple moor grass (*Molinia caerulea*) and sedges (*Carex* sp.) growing on the peat surface, indicative of wet heathland communities. Above this principally monocotyledon peat layer the peat changes into a wood peat in AP2-4. The wood fragments are likely to signal the development of open heath woodland across this area and thus are likely to represent trees such as birch (*Betula* sp.) and hazel (*Corylus avellana*). There is then a retrogressive change back to a monocotyledon peat present in all auger points above the wood layer, which signals the decline of the woodland and a shift back to open heathland communities.





## 7.4 Discussion

The sedimentary sequence from Calliachar shows the development of blanket peat (Unit II) overlying a basal till deposit (Unit I). Radiocarbon dating has shown this peat developed during the Early Holocene period between c 9000-7500 cal bc. Following the accumulation of peat, herbaceous plants (monocotyledon plant fragments) established themselves on the peat surface. Later there is a period of woodland colonization signalled by the development of a wood peat layer in AP2-4. As the peat continued to accrete there is a retrogressive change from wood peat to a monocotyledon peat, indicating a change from open woodland to heathland. This change may have been driven by climatic mechanisms although its timing is currently unknown based on the available dates and the slow accumulation of the peat.

The post-medieval date for the top of the peat sequence from Core 1 suggests the upper part of this sequence may be missing. This could be a result of peat cutting activity at the site. Although not apparent in the field, there is some evidence for the burning of peat as fuel in the plant macrofossil record from Shieling 14b, with the presence of heather charcoal fragments. Thus this activity may have occurred in the post-medieval period when the shielings across this area are likely to have been in use. Despite this possible loss of the top of the peat in Core 1, the sediment sequence would still span almost the entire Holocene period. No such sediment loss was found at Core 2, where the upper peat produced a modern date.

monocotyledon plant fragments and wood fragments have been observed within the peat. The presence of such well preserved vegetational material suggests that microfossils, such as pollen and non-pollen palynomorphs (fungal spores) will also be present in the peats.

## 7.6 Conclusion

Two cores were taken and assessed for their potential to contain palaeoenvironmental and palaeopollution data that could add to the archaeological data attained during the excavation of sites at Calliachar.

The dates show that peat began forming at Calliachar from approximately 9000-7500 cal bc and continued up to the post-medieval period at cal AD 1440-1632 in the area of Core 1 and into the present day at Core 2.

The presence of prehistoric artefacts and cereals indicate people were active in this area during the Neolithic. Shieling huts excavated at the site indicate more recent activity.

The good preservation of microfossils in the peats indicated by the presence of well preserved macrofossils observed during augering shows good potential for palaeoenvironmental study of the peat.

The above would be of particular interest in relation to investigating the footprint of prehistoric people's presence and activities in the landscape, through to those activities associated with the metalworking and shieling huts.

## 8. FINDS ASSESSMENT

*Julie Lochrie*

### 8.1 Introduction

Three sites (Sites 9a, 9c and 10) from this phase of work yielded artefacts. The finds include hand collected finds and those retrieved from samples. The assemblage numbered 10 lithics and 2129g of ironworking waste. The finds range from the Neolithic period to the Iron Age or later.

#### 8.1.1 Lithics

The lithics include two arrowheads, both from Site 9c, and eight pieces of debitage, from Site 9c and Site 10. The earlier of the two arrowheads (SF3) is a medial fragment from a leaf shaped arrowhead dating between the early and middle Neolithic. The other (SF2) is a hollow based arrowhead dating to the late Neolithic.

The assemblage does not support tool or blank production. The small number and small size of the pieces and the chronological disparity of the arrowheads point towards chance loss or discard. The flint occurs in colours of honey brown, red brown and light grey. Red and yellow brown flint dominates Scottish secondary

## 7.5 Palaeoenvironmental potential

The Early Holocene dates for the initiation of peat at Calliachar indicates that they have good potential to contain the palaeoenvironmental record for much of the Holocene. Archaeological finds of prehistoric date, including two Neolithic arrowheads (Site 9c), have been recovered during excavation (see Lochrie below). Potentially prehistoric cereals of naked barley and emmer wheat present in the charred plant assemblage from Sites 9a and 9c suggest agricultural activity may have taken place near the area of Core 2 (see Power and Timpany above). Similarly there is some evidence for metalworking from the presence of metal working debris (*eg* Site 9a) but the scale of this activity and the date is again unknown. Lastly the shielings present (*eg* Sites 3a-c, 9b) would have had associated activities such as pastoral farming and possible heathland management but little evidence of these have been recovered during excavation or bulk sample processing (Scott and Tuffin 2012; Power and Timpany 2012; see Power and Timpany above).

The peats from these areas then have good potential to contain an environmental footprint of these people in the landscape through the vegetational record and their interaction with the environment (*eg* cultivation, woodland clearance, pastoral activity). The dates of the sequence indicate that through pollen studies, activity from the prehistoric period onwards can be investigated for these areas. The cores also have the potential to inform on metal working activities in these areas through the use of magnetic residue analysis in order to pick up peaks in metals associated with such activities. Visible macrofossils of

sources but light grey flint is not common and may be imported from Den of Boddam, Aberdeenshire.

### 8.1.2 Industrial waste

The industrial waste is all related to ironworking. It includes a plano-convex hearth cake, which is small, heavy and with few voids or fuel inclusions suggesting it derives from smithing processes. The slag is obviously Iron Age or later in date, but cannot be dated any closer.

### 8.1.3 Discussion

Eight of the lithic artefacts, including both arrowheads were found at Site 9c. Arrowhead SF2 and four pieces of debitage were found in possible occupation deposits (556) and (567), suggesting a later Neolithic date for these layers. The earlier deposit (567) contained a burnt flint fragment, in keeping with the burnt bone and evidence for *in situ* burning also found in this context. The other arrowhead (SF3) was unfortunately unstratified, discovered during de-turfing.

The Site 10 lithics from were undiagnostic debitage. The chip sealed within the primary fill (431) of possible cist [435] does at least suggest a prehistoric date for this feature. It is possible, though by no means certain, that this could be contemporary with activity at Site 9c.

The ironworking waste was concentrated at Site 9a (1821g), with a smaller quantity (308g), possibly redeposited at Site 9c. It is likely that they represent the same period of metalworking activity.

## 9. DISCUSSION

Excavation of the sites showed that the land on the lower west-facing slopes of Meall Odhar was used, perhaps intensively, for many purposes from the prehistoric through to the post-medieval period. The excavation provided evidence of prehistoric activity at Sites 9c and 10, and possibly at Site 9a and later activity at Sites 9a, 9b and 9c. Evidence of post-medieval activity was recorded in the form of shielings within the wider area at Sites 8a and b and 5a-e.

### 9.1 Site 10 – Possible prehistoric chambered cairn with later activity

The greater part of Site 10 was formed from a natural schist outcrop, possibly the result of glacial activity. Excavation revealed that several phases of activity had occurred at Site 10. It was unclear whether the 'Y' shaped 'scoop' in the central area of the cairn was a natural depression, formed following the degradation of bedrock material, or whether the schist bedrock had been deliberately quarried. However, the location of several vertical orthostats delineating the hollow, suggests that they may have been deliberately placed and that the excavation into the mound top was deliberate, possibly to accommodate the cists.

The first phase of activity on site appears to be the construction

of the cists. Although the stone boxes were described as 'cists' no human remains were recovered from them and the upper fill from the latest cist was very loose and sterile, apart from the recovery of a single plantain seed, suggesting that it may have been disturbed and possibly back filled at some point in antiquity. However, a fragment of flint debitage recovered from the basal fill of one cist suggests a prehistoric date for the feature. A mixed assemblage of charred plant remains, comprising oat, emmer wheat, wheat and indeterminate cereal grain, suggesting a possible prehistoric assemblage was recovered from deposit [401], which partially filled cist [415]. However, radiocarbon dating of charcoal recovered from the sites should clarify the date of these features.

Two pits were also located within the centre of the site. The pits were separated by a silt deposit. Both were filled with further silt deposits interleaved with charcoal suggesting that there was a break in activity at the site prior to each burning episode. Activity within the second pit potentially represents a re-use of the area following initial abandonment. A thick deposit of silt covered the entire area and several burning episodes were apparent on top of it. The deposit lay directly beneath the topsoil and was very similar in character to the overlying silt deposits in Site 3a. It is likely that the deposit represents silting within the depression but also possible that it may be associated with the decomposition of organic building materials.

The feature may have been funerary in nature and robbed out during antiquity. This would explain the lack of finds within the cists and concentration of stones around the edges of site, but not within the central area. Several deposits of silting occurred following this and burning episodes took place latterly, again suggesting that several phases of activity may have occurred on site. The small charred cereal grain assemblage containing oat, hulled barley, wheat and indeterminate cereal and flint debitage, recovered from the site suggest that other activities may have been taking place. However, it is possible that these grains are associated with the surrounding sites rather than the cairn itself as grains of oat and hulled barley were recovered from Sites 9a and 9c (see above). Given the small quantities of these cereals and their poor preservation, it is possible that they have been transported to this area by mechanisms such as wind blow.

### 9.2 Site 9c – Neolithic activity, with structural remains and ironworking

Although the function of Site 9c is unclear the presence of the post-holes, albeit not within any discernable configuration, suggest that there may have been a superstructure present. The upper deposit on the northern side of the feature may have been the remains of a turf bank, overlying a possible occupation deposit or collapsed turf walls or roof. The underlying deposit contained several large fragments of carbonised wood, possibly the remains of a burnt down superstructure. However, no banks were apparent during excavation of the southern side of the site. The well-constructed post-holes, with stone lined sides and, in some cases, bases, together with the presence of a flagstone floor is also interesting as it suggests that there was permanency to the occupation or activity in this area. The presence of several



hearths and burnt bone within one of these suggests that the site may have been domestic in nature. Similarly, the recovery of cereal grains and hazelnut shell from various deposits also suggests that foodstuffs were being consumed on site. The presence of oxidised subsoil beneath the paved surface suggests that there may also have been two phases of activity in this area. Dating of the structural remains is problematic at present. The flint finds clearly indicate activity in the area during the Neolithic period, but these were all found in lower deposits which can be shown to predate the paved area [547] and two of the post-holes [572 and 575] but have no stratigraphic relationship to the remaining pits and post-holes. The ironworking debris clearly indicates activity at a later period, probably the same activity represented at Site 9a, but this is found in upper deposits, which again either post-date the structural features or have no relationship to them. Thus many of the features have no dating evidence and even assuming all are contemporary they can only be placed somewhere between the Neolithic and post-medieval periods. Radiocarbon dating of charcoal recovered from various features should enable the features and deposits to be dated and phased accordingly.

### 9.3 Site 9a – Ironworking site

At least two phases of activity occurred on Site 9a, the first phase was evidence by the presence of a pit and hearth. The pit was sealed by a deposit containing slag and charcoal. Similarly, a deposit containing slag and charcoal was also located in the western area of site, covering a hearth. The site was then sealed by a silty deposit, and a hearth [514] was cut through this deposit, an episode of *in situ* burning was also apparent on the southern side of site.

The purpose and function of Site 9a are unclear at present as there were no structural remains or obvious features relating to the finds recovered. The ironworking waste clearly indicates that ironworking was undertaken on or near the site. This could have been as early as the Iron Age and is unlikely to be later than the post-medieval period, but otherwise it cannot be closely dated. It is hoped that Pollen Core 1 will provide palaeo-pollution data which could provide a signal for any metalworking activity taking place in the wider area. The recovery of nutshell, emmer wheat and oat suggests that the consumption of foodstuffs was taking place at the site and that perhaps accidental charring of cereal remains may have occurred during food preparation and consumption.

### 9.4 Site 9b – Post-medieval Shieling

The shieling, at Site 9b, possibly represents the latest phase of activity in the immediate area. It may have been related to nearby shieling huts at Sites 8a and 8b (Dalland 2012) and together were probably part of a shieling settlement. Shielings were historically used as part of a pattern of transhumance which involved the movement of stock to an area of higher ground during the summer months. In this way animals were kept away from growing crops and the ground used over winter allowed to recover. The relationship of the shielings to nearby townships has not yet been substantiated, although typically shieling

settlements are found 1-2 miles from the main settlement or township (Fairhurst 1967-68; Boyle 2003).

The shieling was located on the side of a natural, free draining mound. It was relatively well constructed with vertical stone slabs lining the entrance and its banks were constructed from turf and stone. The shieling was comparatively similar in form to others observed in the area at Sites 15, and also to that at Site 3c (Scott & Tuffin 2012). However, excavations have shown that although there were similarities in the form of shielings, there was little homogeneity in plan.

Several kinds of building material were used in the construction of shielings, however, building materials and style were dictated by local availability and supplies and also by the idiosyncrasies of landowners (Bil 1990). Prior to the eighteenth century turf was a ubiquitous housing material, often used to plaster timber frames. Turf houses largely died out in the Perthshire highlands and their margins in the eighteenth century and stone became a commoner medium of housing material (Bil 1990).

The low level of the banks in the shieling suggests that it was more likely to be post abandonment slump than any deliberate design on the part of the builders. No phasing was evident in the banks of the structure or in the interior, suggesting that the structure did not undergo any alterations and therefore may only have been used for a relatively short period of time. The central area of the shieling was small and no formal hearth was visible within the structure, although the deposit within the centre of the structure contained several charcoal fragments, suggesting that burning may have taken place.

No features or finds were encountered within the shieling. However, excavation of the shielings at Sites 3a–b and 14b (Scott and Tuffin 2012) show that this is not unusual as the living accommodation was generally simple and austere and as much time as possible was spent outdoors, therefore, this would account for the minimum amount of space, furnishings (Bil 1990) and finds.

## 10. REFERENCES

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## 11. APPENDICES

### Appendix 1 Site registers

#### Appendix 1.1 Context register

| Context Area | Description   |
|--------------|---|
| 400          | Site 10 Very dark brown sandy clay loam with stone and charcoal inclusions, located in the eastern extent of excavation within a depression. Deposit 0.7m diameter, 0.2–0.25m thick. Potential natural sediment accumulation.   |
| 401          | Site 10 Charcoal deposit located in the northern half of the central depression [434]. Deposit 1.1m long, 0.5m wide, 0.04m thick. Potentially a primary burning deposit.  |
| 402          | Site 10 Dark greyish black silty loam with charcoal inclusions, located within the depression [434], to the north of 'cist' [415]. Deposit 0.03m thick. May represent <i>in situ</i> burning.   |
| 403          | Site 10 Charcoal deposit located within [416], in depression [434]. Deposit 0.9m long, 0.4m wide, 0.03m thick. Potentially represents final phase of activity in the area, possibly associated with other patches of burning (414), (427)–(430).  |
| 404          | Site 10 Dark brownish black sandy clay loam with frequent charcoal inclusions, located within depression [434]. Deposit 0.52m long, 0.35m wide, 0.02m thick. Likely represents <i>in situ</i> burning.  |
| 405          | Site 10 Dark brownish black sandy clay with abundant charcoal inclusions, located in the south east extent of the site. Deposit 0.63m long, 0.4m wide, 0.03m thick. Likely represents <i>in situ</i> burning.   |
| 406          | Site 10 Dark brownish black sandy clay loam with frequent charcoal inclusions, located in the south extent of the site. Deposit 0.63m long, 0.5m wide, 0.03m thick. Likely represents <i>in situ</i> burning.   |
| 407          | Site 10 Dark brownish black sandy clay loam with frequent/abundant charcoal inclusions, located in the south extent of the site. Deposit 0.55m long, 0.4m wide, 0.05m thick. Surrounding natural soil is heat-affected, the deposit likely representing <i>in situ</i> burning.   |
| 408          | Site 10 Dark brownish black sandy clay loam with frequent/abundant charcoal inclusions, located in the south extent of the site. The deposit likely representing <i>in situ</i> burning.  |
| 409          | Site 10 Dark brownish black sandy clay loam with frequent/abundant charcoal inclusions, located in the south extent of the site. The deposit likely representing <i>in situ</i> burning.  |
| 410          | Site 10 Mottled (brown/reddy brown/grey/orange) sandy clay loam with rare charcoal inclusions, located within the bowl of the central depression [434] and to the south-east and east. Deposit 4.1m long, 3.4m wide, 0.05–0.1m thick. Located below the topsoil layer and isolated lenses of charcoal (404), overlay charcoal (403) and (414). Large stones were removed from throughout (410). Deposit probably represents silting within the depression [434], though may be associated with decomposition of organic building materials. |
| 411          | Site 10 Light greyish brown clay silt with occasional charcoal inclusions, located above 'cist' [415]. Deposit 0.74m long, 0.43m wide, 0.05m thick. Very similar to (412), which is located at the same level and is interpreted as being an accumulation of silt.  |

| Context Area | Description   |
|--------------|---|
| 412          | Site 10 Light greyish brown clay silt with charcoal inclusions, located across the central depression [434]. Deposit 5m long, 4.7m wide, 0.05–0.1m thick. Situated directly below (410) and similar to (411) and (400). Overlies a number of charcoal deposits toward its eastern extent. Also overlies 'pit' [433] and its associated deposits ((420), (425), (426)), though was below similar 'pit' deposits (403), (417) and (418). (412) is thought to represent a post-disturbance silt accumulation within depression [434], though burning activity does appear to have been carried out after its deposition. |
| 413          | Site 10 Large stones located within depression [434]. Possibly remnants of the cairn or 'cist'.   |
| 414          | Site 10 Dark brownish black sandy clay loam containing abundant charcoal inclusions, located on the southern side of site. The deposit likely represents <i>in situ</i> burning.  |
| 415          | Site 10 Square box constructed from vertically-placed stone slabs, located in the western extent of depression [434], to the south-west of a similarly-formed feature [435]. Box is aligned E-W, 0.7m long, 0.5m wide, 0.3m deep, the stones being generally 0.7m long and 0.2m wide. Contained charcoal-rich deposit (401). Interpreted as being a 'cist', though no human remains encountered.  |
| 416          | Site 10 Very shallow, sub-linear 'cut' with gently-sloping sides, located within depression [434], 1m long, 0.8m wide, 0.1m deep. Contained deposits (403), (417) and (418). Cut is very indistinct and may instead be a shallow scoop into the silt (412). Potentially represents a re-use of the area for burning activity after initial abandonment.   |
| 417          | Site 10 Brown clay silt with charcoal and quartzite inclusions, located within [416]. Deposit 0.8m long, 0.6m wide, 0.01–0.02m thick. Likely to represent an episode of silting between charcoal (403) and (418).   |
| 418          | Site 10 Mottled (black/mid brown) clay silt with charcoal lenses, located within [416]. Deposit 0.8m long, 0.6m wide, 0.05m thick. Potentially an episode of burning associated with re-use of area.  |
| 419          | Site 10 Very light grey silty clay with occasional charcoal inclusions, located within [416] is 0.6m long, 0.5m wide and 0.02 thick. Deposit likely represents inter-activity silting, associated with (412).   |
| 420          | Site 10 Mottled (reddy brown/orange) silty clay with charcoal flecking, located within area of [433]. Deposit 0.25m long, 0.45m wide, 0.005m thick. Probably <i>in situ</i> burning associated with first phase use.  |
| 421          | Site 10 Sub-oval cut with gently-sloping sides, located in western extent of [434]. Deposit 1.19m long, 0.77m wide, 0.31m deep. Cut had been made through charcoal deposit (401) and degraded bedrock, the cut backfilled with (422) which was packed around 'cist' [435]. Cut [421] was probably made to accommodate 'cist' [435], truncating 'cist' deposit (401) in the process.   |
| 422          | Site 10 Very loose deposit of redeposited bedrock to the south of cut [421] and packed around 'cist' [435]. Interpreted as backfill packed around cist.   |
| 423          | Site 10 Light yellowish brown sandy clay, located within area defined by [435] upright stones. Deposit 0.15m thick. Situated below (411) and above primary fill of [435]. Cist fill.  |

| Context Area | Description   |
|--------------|---|
| 424 Site 10  | Light grey very stony sandy clay located within area defined by [435] upright stones. Deposit 2.2m long, 0.5m wide, 0.15m thick. Directly overlies bedrock and potentially forms cist's primary deposit.  |
| 425 Site 10  | Dark brown stony clay silt with charcoal inclusions and lenses, located within depression [433]. Deposit 0.9m long, 0.5m wide, 0.01–0.04m thick. Potentially associated with infill of [433], associated with (426) and (420).  |
| 426 Site 10  | Mottled (black/reddy brown) clay silt with abundant charcoal inclusions, located within depression [433]. Situated above (425) and possibly represents an episode of burning associated with initial use of the area.   |
| 427 Site 10  | Charcoal deposit located in the upper layers of silt (412). Potentially associated with (403), (428)–(430).   |
| 428 Site 10  | Charcoal deposit located in the upper layers of silt (412). Potentially associated with (403), (427), (429)–(430).  |
| 429 Site 10  | Charcoal deposit located in the upper layers of silt (412). Potentially associated with (403), (427)–(428), (430).  |
| 430 Site 10  | Charcoal deposit located in the upper layers of silt (412). Potentially associated with (403), (427)–(429).   |
| 431 Site 10  | Dark greyish brown sandy loam with occasional charcoal inclusions, located at the base of the area defined by [435] upright stones, 0.3m thick. Primary backfill of 'cist'.   |
| 432 Site 10  | Charcoal deposit located in the basal layer of silt (412). Potentially associated with burning in depression [433], (426).  |
| 433 Site 10  | Sub-linear cut with gently-sloping sides and flat base, located within depression [434], 1.3m long, 1.5m wide, 0.2–0.25m deep. Shallow depression, so potentially not an actual cut. In part filled by burning activity (425)/(426) and overlain by (412).  |
| 434 Site 10  | Sub-linear cut with gently/steeply-sloping sides and rounded/flat base, located in the centre of the excavated mound, 6.5m long, 5.5m wide, 0.5m deep. Forms a 'Y'-shaped depression in the centre top of the mound, its base was filled with silts ((410), (412)), the edge of the depression marked by possible placed stones (two orthostats at its east extent, stones along the north edge). The 'cists' [415] and [435] and 'pits' [416] and [433] were located within the depression. It is potentially an excavation of a natural mound to accommodate the placement of cists and a possible covering cairn. Cairn and cists were disturbed by later robbing. |
| 435 Site 10  | Two vertical stone slabs aligned E-W, located in a small hollow within larger depression [434], 0.6m long, 0.5m wide, 0.3m deep. Uprights rested upon natural bedrock, the base formed from four flat stones. The space around the uprights has been filled with (422), the centre of the feature filled with (431) and (423). Probable stone-lined cist.   |
|              | Context numbers 436 to 499 not used.  |
| 500 Site 9A  | Dark brown grey turf and clay silt topsoil with stone inclusions.   |
| 501 Site 9A  | Light orange brown stony sandy silt. Natural.   |
| 502 Site 9A  | Mid grey brown sandy clay silt with occasional stone and frequent charcoal inclusions, located around centre and western extents of site. Possible occupation deposit.  |

| Context Area | Description   |
|--------------|---|
| 503 Site 9A  | Mottled (black/orangey pink) charcoal and sandy clay silt, located within pit [514]. Deposit 0.6m diameter, 0.1m thick. Pit fill.   |
| 504 Site 9A  | Mid brown grey sandy clay silt with stone and charcoal inclusions, situated around large boulder in eastern extent of site. Deposit 2.4m long, 1.7m wide, 0.005m thick. Possible industrial waste deposit.  |
| 505 Site 9A  | Charcoal and silty sand, located in western extent of site. Deposit 0.55m long, 0.42m wide, 0.01m thick. Patch of <i>in situ</i> burning.   |
| 506 Site 9A  | Mottled (light blue grey/orange) sandy clay silt, located across eastern extent of site. Deposit 9m long, 2–3m wide, 0.1–0.2m thick.  |
| 507 Site 9B  | Turf and black peaty topsoil. The turf is generally thin and only formed in grassy areas, it is not present beneath the heather.  |
| 508 Site 9B  | Greyish brown sandy clay with occasional large stones. Forms the embankment of the structure, 6m long, 1.1m wide, 0.12–0.55m high. A number of upright stones are embedded in the deposit, with a 0.55m gap between two large stones [510] in the western extent marking a potential entrance.  |
| 509 Site 9B  | Dark brown stony sandy silt, located east of the structure. Deposit 1.05m long, 0.5m wide, 0.05m high. Potentially rubble related to the deterioration of the structure.  |
| 510 Site 9B  | Large stones marking potential western entrance to the structure.   |
| 511 Site 9B  | Orangey brown stony sandy silt. Natural.  |
| 512 Site 9B  | Light/dark grey silty sand with occasional stone inclusions, located in the interior of the structure. Deposit 0.05–0.12m thick. Potentially represents natural formation in combination with slumping from structure's earth embankment. Contains roots and is cut by numerous animal burrows. |
| 513 Site 9B  | Stones located in the interior of structure, sitting in and on (512). Predominantly situated along eastern wall of the structure and may be slumped walling elements.   |
| 514 Site 9A  | Sub-rounded cut with gently-sloping sides, located in north-western area of site, measured 0.6m diameter, 0.1m deep. Pit lined with burnt stones and filled by (503).   |
| 515 Site 9A  | Feature interpreted as oval cut, possibly lined with medium-sized angular stones. Measured 1.9m long, 1.78m wide, 0.03m deep. Feature is very shallow and described as dubious!   |
| 516 Site 9A  | Mottled (grey/greyish brown/orange/yellow) silty sand with occasional stone inclusions. Deposit 1.9m long, 1.78m wide, 0.03m thick.   |
| 517 Site 9A  | Mid brown grey sandy clay silt with stone and charcoal inclusions, situated around large boulder in eastern extent of site. Deposit 2.4m long, 1.7m wide, 0.005m thick. Possible industrial waste deposit as contains slag and charcoal.  |
| 518 Site 9A  | Mottled (light blue grey/orange) silt, located within cut [519]. Deposit 2.4m long, 1.7m wide, 0.1–0.5m thick. Similar to (506) and potentially a naturally-formed sediment.  |





| Context Area | Description  |
|--------------|--|
| 519          | Site 9A Irregular cut with gently-sloping sides around northern edge of large boulder (529). Measured 2.4m long, 1.7m wide, 0.6m deep. Potentially a natural void/gully.   |
| 520          | Site 9A Mid brown grey sandy clay silt with frequent charcoal and occasional burnt stone inclusions, located in western portion of site. Deposit 1.5m long, 1.45m wide, 0.1m thick. Possible metal-working waste deposit as several slag fragments were recovered.           |
| 521          | Site 9A Mid grey brown silt containing a large number of small stones, packed around large boulder [527]. Deposit 0.1m long, 0.85m wide, 0.2m thick.   |
| 522          | Site 9A Mottled (pink/brown/black) sandy clay silt with frequent charcoal and occasional burnt stone inclusions, within [523] cut. Deposit 0.7m long, 0.6m wide, 0.07m thick. Residue of <i>in situ</i> burning which has effected surrounding sediments.                    |
| 523          | Site 9A Circular cut with gently-sloping sides, 0.7m long, 0.6m wide, 0.07m deep. Contains burnt deposit (522)   |
| 524          | Site 9A Linear cut with gently/steeply-sloping sides, 1m long, 0.4m wide, 0.18m deep. Contains natural (506). Potential animal burrow or natural gully.  |
| 525          | Site 9A Charcoal and silty sand, located in western extent of site. Deposit 0.55m long, 0.42m wide, 0.01m thick. Patch of <i>in situ</i> burning.  |
| 526          | Site 9A Stones below topsoil, varying from medium to large-sized.  |
| 527          | Site 9A Large boulder 1.27m long and 0.75m wide associated with cut [519].   |
| 528          | Site 9B Light brownish grey clay silt with iron panning and charcoal flecking, located within feature's interior space. Deposit varies in thickness, being thinnest at the eastern extent and thickening at the western (near the entrance). Possibly relates to occupation. |
| 529          | Site 9B Mottled (light grey/mid brown) clay silt with stone inclusions, located in the centre of structure. Potential surfacing medium.  |
| 530          | Site 9C Mid grey brown sandy clay silt with occasional charcoal flecks, situated across whole of site. Subsoil layer (same as deposit 562).  |
| 531          | Site 9C Turf and topsoil layer.  |
| 532          | Site 9C Dark grey brown sandy clay silt with occasional charcoal inclusions, located within depression in centre of site.  |
| 533          | Site 9C Mottled (blue grey/orangey brown) sandy clay silt with frequent charcoal inclusions, located across whole of site.   |
| 534          | Site 9C Mottled (greyish brown/yellowish brown) sandy silt with frequent charcoal lenses, located within (533).  |
| 535          | Site 9C Context number not used  |
| 536          | Site 9C Circular cut with steeply-sloping sides formed from two intercutting posholes (the western cutting the eastern) in the north extent of the site. Whole measures 0.49m long, 0.35m wide, 0.16–0.25m deep.   |
| 537          | Site 9C Mid brownish grey slightly stony loamy sand with charcoal inclusions, located within [536] posthole. Potentially deposited following the removal of the post.  |

| Context Area | Description  |
|--------------|--|
| 538          | Site 9B Flat stones located in the entrance area, over area 0.7m long, 1.5m wide. Stones were of variable size and were potentially laid as a surface.   |
| 539          | Site 9C Greyish brown sandy silt with charcoal inclusions, located within pit [540] in southern extent of site. Deposit 0.54m long, 0.44m wide, 0.18m thick. Fill of pit [540].  |
| 540          | Site 9C Sub-circular cut with vertical sides located in southern extent of site. Measured 0.54m long, 0.44m wide, 0.18m deep. Part-disturbed by animal burrows. Filled by (539). Posthole.   |
| 541          | Site 9C Circular cut with vertical sides, located to the north of posthole [536] and south of posthole [544]. Measured 0.35m long, 0.35m wide, 0.33m deep. Cut into the natural subsoil and lined with upright stones [542]. Posthole.                                       |
| 542          | Site 9C Stone packing in [541].  |
| 543          | Site 9C Brownish grey sandy silt with charcoal inclusions located within posthole [541]. Potentially silting following post removal.   |
| 544          | Site 9C Sub-circular cut with vertical sides located north of posthole [541]. Measured 0.35m long, 0.28m wide, 0.17m deep. Lined with stones [545] on east, south and western sides and contained deposit (546). Posthole.   |
| 545          | Site 9C Stone packing in [544].  |
| 546          | Site 9C Greyish brown sandy silt with occasional charcoal inclusions located within posthole [544]. Potentially backfill around stone packing.   |
| 547          | Site 9C Paved area comprising a number of larger stones, the largest measuring 0.55m long, 0.45m wide, 0.03m thick. The area covered 1.7m long, 1.25m wide, 0.03m thick. Overlay (556) and extended further to the north (where it was recorded as [557]). Probable surface. |
| 548          | Site 9C Sub-circular cut with gently-sloping sides located in central area of site, north of pit [540]. Measured 0.45m long, 0.4m wide, 0.19m deep. Cut into natural subsoil. Contained deposit (549). Posthole.   |
| 549          | Site 9C Dark greyish brown stony sandy clay with occasional charcoal inclusions located within [548].  |
| 550          | Site 9C Dark reddish brown stony silty sand with occasional quartz inclusions. Natural.  |
| 551          | Site 9C Circular cut with vertical sides, located in southern extent of site. Measured 0.2m long, 0.2m wide, 0.32m deep. Cut into natural subsoil. Contained deposit (552). Posthole.  |
| 552          | Site 9C Mid greyish brown stony sandy silt with occasional charcoal inclusions, located within posthole [551].   |
| 553          | Site 9C Sub-circular cut with gently-sloping sides located in southern extent of site. Measured 0.5m long, 0.4m wide, 0.17m deep. Heat-affected subsoil surrounding, suggesting <i>in situ</i> burning. Contained stones (563). Posthole.                                    |
| 554          | Site 9C Irregular cut with gently-sloping sides located south of [536]. Measured 0.53m long, 0.4m wide, 0.06–0.1m deep. Contained (555).   |
| 555          | Site 9C Reddish brown sandy silt with occasional charcoal inclusions located within [554]. Deposit 0.1m thick. Potentially represents <i>in situ</i> burning.  |

| Context Area | Description  |
|--------------|--|
| 556 Site 9C  | Dark greyish brown sandy silt with abundant charcoal inclusions, located beneath [547] and [557]. Deposit 3m long, 1.4m wide, 0.05m thick. Flint artefacts recovered from it. Potential occupation deposit predating [547] and [557].  |
| 557 Site 9C  | Series of angular flat stones compressed into the natural, heat-affected subsoil, forms a probable extension to [547]. Deposit 1m long, 0.62m wide, 0.01m thick. Probable surface.   |
| 558 Site 9C  | Charcoal deposit to the east of [554], 0.2m long, 0.15m wide, 0.02m thick. Probable <i>in situ</i> burning.  |
| 559 Site 9C  | Mottled (light grey/orange) silty sand with frequent charcoal inclusions. Deposit 3.5m long, 1.5m wide, 0.1m thick. Potential turf bank.   |
| 560 Site 9C  | Dark greyish brown sandy clay with occasional charcoal inclusions, located around stone packing (545) in posthole [544]. Deposit 0.15m long, 0.12m wide, 0.1m thick. Formed backfill for posthole [544].   |
| 561 Site 9C  | Reddish black stony sandy silt with abundant charcoal inclusions, located within pit [533]. Deposit 0.5m long, 0.4m wide, 0.17m thick. Potentially the result of <i>in situ</i> burning.   |
| 562 Site 9C  | Mid reddish brown fine silty sand with charcoal and occasional stone inclusions, 5.5m long, 3.5m wide, 0.1m thick. Formed as a uniform silty sand deposit with lenses of charcoal and ash, with the charcoal content being less than (571) below. Potential occupation layer or wall/roof collapse detritus. |
| 563 Site 9C  | Three upright stones arranged at the base of pit [553]. Largest stone 0.15m x 0.05m x 0.05m. Form the post-packing within the pit.   |
| 564 Site 9C  | Sub-circular cut with gently-sloping sides and a flat base located to the west of paved area [547]. Measured 0.48m long, 0.45m wide, 0.06m deep. Contained deposit (565). Shallow pit.   |
| 565 Site 9C  | Greyish brown stony sandy clay with abundant charcoal inclusions, located within pit [564]. Deposit 0.48m long, 0.45m wide, 0.06m thick. Natural subsoil surrounding deposit had been heat-affected, the deposit probably formed through <i>in situ</i> burning.   |
| 566 Site 9C  | Dark reddish brown silty clay with occasional charcoal inclusions, located below deposit (556). Deposit 3.05m long, 1.4m wide. Probably the result of <i>in situ</i> burning.  |
| 567 Site 9C  | Black sandy silt with frequent charcoal and occasional burnt bone inclusions, located beneath deposit (556). Deposit 0.3m long, 0.25m wide, 0.02m thick. Probably the result of <i>in situ</i> burning.  |
| 568 Site 9C  | Sub-circular cut with steeply-sloping sides and flat base, located north of posthole [454]. Measured 0.28m long, 0.22m wide, 0.23m deep. Stone (569) lined the top of the cut and filled with deposit (570). Posthole.   |
| 569 Site 9C  | Seven flat stones lining the edge of posthole [568], across an area 0.22m long, 0.12m wide, 0.16m thick. Stones on average 0.08m x 0.08m x 0.02m. Posthole packing.  |
| 570 Site 9C  | Dark greyish brown sandy silt with occasional charcoal inclusions, located within posthole [568]. Deposit 0.28m long, 0.22m wide, 0.23m thick. Posthole fill.  |

| Context Area | Description   |
|--------------|---|
| 571 Site 9C  | Mottled (brown/reddish brown) silty sand with frequent charcoal and quartz inclusions. Deposit 4.5m long, 2.7m wide, 0.05m thick. Contains large (<0.04m) pieces of charcoal. Potentially represents burning of built elements. |
| 572 Site 9C  | Circular cut with steeply-sloping sides and flat base, associated with (562). Measured 0.23m long, 0.2m wide, 0.2m deep. Contained stones (573) and deposit (574). Posthole.  |
| 573 Site 9C  | Six upright stones located within cut [572], across an area 0.12m long, 0.1m wide, 0.12m thick. Stones on average 0.1m x 0.008m x 0.02m. Posthole packing.  |
| 574 Site 9C  | Dark greyish brown stony sandy silt with occasional charcoal inclusions, located within posthole [572]. Deposit 0.12m long, 0.1m wide, 0.2m thick. Posthole fill.   |
| 575 Site 9C  | Sub-circular cut with steeply-sloping sides and rounded base, located north east of [572]. Measured 0.22m long, 0.16m wide, 0.16m deep. Contained stones (576) and deposit (577). Posthole.                                     |
| 576 Site 9C  | Several small upright stones lining cut [575], across an area 0.16m long, 0.12m wide, 0.2m thick. Largest stones 0.14m x 0.07m x 0.02m. Posthole packing.   |
| 577 Site 9C  | Dark greyish brown sandy silt with occasional charcoal inclusions, located within posthole [575]. Deposit 0.2m thick. Posthole fill.  |
| 578 Site 9C  | Sub-circular cut with steeply-sloping sides and flat base, located in southern extent of site. Measured 0.31m long, 0.24m wide, 0.22m deep. Contained stones (579) and deposit (580). Posthole.                                 |
| 579 Site 9C  | Series of upright stones lining the sides of cut [578], across an area 0.22m long, 0.15m wide, 0.18m thick. Largest stone 0.3m x 0.2m x 0.03m. Stone also present on base of cut. Posthole packing.                             |
| 580 Site 9C  | Dark greyish brown sandy silt with occasional charcoal inclusions, located within posthole [578]. Deposit 0.2m thick. Posthole fill.  |

## Appendix 1.2 Photographic register

| Shot | B/W | Digital file name | Direction | Description  |
|------|-----|-------------------|-----------|--|
| 1    | -   | CALL11-005-01     | N         | Site 9A. Pre-excavation shot                       |
| 2    | -   | CALL11-005-02     | NW        | Site 9A. Pre-excavation shot                       |
| 3    | -   | CALL11-005-03     | SE        | Site 9A. Pre-excavation shot                       |
| 4    | -   | CALL11-005-04     | SW        | Working shot of cairn (Site 10)                    |
| 5    | y   | CALL11-005-05     | N         | Site 9B. After removal of heather                  |
| 6    | y   | CALL11-005-06     | S         | Site 9B. After removal of heather                  |
| 7    | y   | CALL11-005-07     | W         | Site 9A and 9B. Setting                            |
| 8    | y   | CALL11-005-08     | W         | Site 10. Central area                              |
| 9    | y   | CALL11-005-09     | SW        | Site 10. Charcoal patches from south area          |
| 10   | -   | CALL11-005-010    | N         | Site 10. Charcoal concentration detail/setting     |
| 11   | -   | CALL11-005-011    | N         | Site 10. Charcoal concentration, detail [407, 409] |



| Shot | B/W | Digital file name | Direction | Description   |
|------|-----|-------------------|-----------|---|
| 12   | y   | -                 | N         | Site 10. Southern charcoal concentration                      |
| 13   | y   | CALL11-005-013    | NE        | Site 10. Curvilinear stone concentration and hollow           |
| 14   | y   | CALL11-005-014    | SE        | Site 10. General site shot                                    |
| 15   | y   | CALL11-005-015    | S         | Site 10. Depression detail                                    |
| 16   | y   | CALL11-005-016    | W         | Site 10. Pre excavation of [415]                              |
| 17   | y   | CALL11-005-017    | S         | Site 10. Charcoal patch on north side                         |
| 18   | y   | CALL11-005-018    | N         | Site 10. Stone concentration at NW corner                     |
| 19   | y   | CALL11-005-019    | W         | Site 10. Trench to west of site 10                            |
| 20   |     | CALL11-005-020    | E         | Site 10. Trench to west of site 10                            |
| 21   | y   | CALL11-005-021    | S         | Site 9A. Post de-turfing and cleaning of site. General shots  |
| 22   | y   | CALL11-005-022    | S         | Site 9A. Post de-turfing and cleaning of site. General shots  |
| 23   | y   | CALL11-005-023    | N         | Site 9A. Post de-turfing and cleaning of site. General shots  |
| 24   | y   | CALL11-005-024    | N         | Site 9A. Post de-turfing and cleaning of site. General shots  |
| 25   | y   | CALL11-005-025    | E         | Site 9A. Post de-turfing and cleaning of site. General shots  |
| 26   | y   | CALL11-005-026    | NE        | Site 10. Pre-excavation photo of burnt deposit (407)          |
| 27   | y   | CALL11-005-027    | NW        | Site 10. Location shot of burnt deposit (407)                 |
| 28   | y   | CALL11-005-028    | NE        | Site 10. West extent. (400), silt in depression, half section |
| 29   |     | CALL11-005-029    | SE        | Site 10. West extent. (400), silt in depression, half section |
| 30   | -   | CALL11-005-030    | NW        | Site 10. Pre-excavation shot of deposit (406)                 |
| 31   | -   | CALL11-005-031    | NW        | Site 10. (406) detail   |
| 32   | -   | CALL11-005-032    | W         | Site 10. [405], pre-excavation shot                           |
| 33   | y   | CALL11-005-033    | W         | Site 10. [405]. General shot                                  |
| 34   | -   | CALL11-005-034    | NW        | Site 10. Showing (410) clay silt in depression                |
| 35   | -   | CALL11-005-035    | SE        | Site 10. Showing (410) clay silt in depression                |
| 36   | -   | CALL11-005-036    | SE        | Site 10. Showing (410) clay silt in depression                |
| 37   | y   | CALL11-005-037    | N         | Site 9A. Showing site after de-turfing and cleaning           |
| 38   | y   | CALL11-005-038    | W         | Site 9A. Showing site after de-turfing and cleaning           |
| 39   | y   | CALL11-005-039    | S         | Site 9A. Showing site after de-turfing and cleaning           |

| Shot | B/W | Digital file name | Direction | Description   |
|------|-----|-------------------|-----------|---|
| 40   | y   | CALL11-005-040    | E         | Site 9A. Showing site after de-turfing and cleaning                         |
| 41   | -   | CALL11-005-041    | W         | Site 10. (404)  |
| 42   | -   | CALL11-005-042    | W         | Site 10. (404). Location shot   |
| 43   | -   | CALL11-005-043    | W         | Site 10. Centre. Cist [415], (411) silt, (401) charcoal                     |
| 44   | -   | CALL11-005-044    | E         | Site 10. Centre. Cist [415], (411) silt, (401) charcoal                     |
| 45   | -   | CALL11-005-045    | NW        | Site 10. Centre. Silt (412), charcoal (403)                                 |
| 46   | -   | CALL11-005-046    | SW        | Site 10. Centre. Silt (412), charcoal (403), (414)                          |
| 47   | y   | CALL11-005-047    | SE        | Site 10. Centre. Silt (412), charcoal (403), (414)                          |
| 48   | y   | CALL11-005-048    | E         | Site 10. Centre. Silt (412), charcoal (403), (414). Cist [415], (401)-(402) |
| 49   | y   | CALL11-005-049    | N         | Site 9B. After de-turfing   |
| 50   | -   | CALL11-005-050    | NNW       | Site 9B. After de-turfing   |
| 51   | y   | CALL11-005-051    | S         | Site 9B. East wall  |
| 52   | y   | CALL11-005-052    | N         | Site 9B. East wall  |
| 53   | y   | CALL11-005-053    | N         | Site 9C. After removal of heather   |
| 54   |     | CALL11-005-054    | N         | Site 9C. After removal of heather   |
| 55   | y   | CALL11-005-055    | NE        | Site 10. Excavation in north west quadrant to natural                       |
| 56   | y   | CALL11-005-056    | SW        | Site 10. Excavation west of depression. Continuation of (412) and natural   |
| 57   | y   | CALL11-005-057    | SE        | Site 10. 'pit' [416]. Shows (419) silt                                      |
| 58   | y   | CALL11-005-058    | S         | Site 10. Burnt patch (503)  |
| 59   | y   | CALL11-005-059    | S         | Site 10. Burnt patch (503). Half sectioned showing burnt stones             |
| 60   | -   | CALL11-005-060    | SE        | Site 10. 'Pit' [416]. (419) removed, (420) exposed                          |
| 61   | -   | CALL11-005-061    | SE        | Site 10. 'Pit' [416]. Mid-excavation shot showing stones (natural?)         |
| 62   | y   | CALL11-005-062    | N         | Site 10. Pit [421] mid-excavation and charcoal patch (401)                  |
| 63   | y   | CALL11-005-063    | NNE       | Site 10. 'Pit' [416] showing (412) removed                                  |
| 64   | -   | CALL11-005-064    | S         | Site 10. Charcoal under (412)   |
| 65   | -   | CALL11-005-065    | SE        | Site 10. [421] and [416] following removal of (412)                         |
| 66   | -   | CALL11-005-066    | NE        | Site 10. 'Pit' [416], mid-excavation  |
| 67   | y   | CALL11-005-067    | N         | Site 10. [435] showing deposit (423)  |
| 68   | y   | CALL11-005-068    | N         | Site 10. 'Pit' [416]. Excavated to natural                                  |



| Shot | B/W | Digital file name | Direction | Description  | Shot | B/W | Digital file name | Direction | Description   |
|------|-----|-------------------|-----------|--|------|-----|-------------------|-----------|---|
| 69   | y   | CALL11-005-069    | W         | Site 9A. (516) east-facing excavation                                      | 95   | y   | CALL11-005-095    | E         | Site 9A. Patch of <i>in situ</i> burning (522), showing location  |
| 70   | y   | CALL11-005-070    | W         | Site 9A. (516), plan   | 96   | y   | CALL11-005-096    | W         | Site 9A. Cut [523] post-excavation with animal burrow disturbance |
| 71   | y   | CALL11-005-071    | E         | Site 9A. Section of slot through cut [519]                                 | 97   | y   | CALL11-005-097    | W         | Site 9B. Stones visible. Pre-excavation                           |
| 72   | y   | CALL11-005-072    | S         | Site 9A. Location of slot through cut [519]                                | 98   | y   | CALL11-005-098    | S         | Site 9B. Stones visible. Pre-excavation                           |
| 73   | -   | CALL11-005-073    | NW        | Site 10. 'Pit' [416]. South half. (403) removed, (417) and (418) exposed   | 99   | y   | CALL11-005-099    | E         | Site 9B. Stones visible. Pre-excavation                           |
| 74   | -   | CALL11-005-074    | NW        | Site 10. 'Pit' [416]. South half. (417)/(418) removed, (425) exposed/(426) | 100  | y   | CALL11-005-100    | W         | Site 9B. Stones visible. Entrance detail                          |
| 75   | -   | CALL11-005-075    | NW        | Site 10. 'Pit' [416]. South half. (426) charcoal                           | 101  | -   | CALL11-005-101    | S         | Site 9B. Stones visible.  |
| 76   | y   | CALL11-005-076    | W         | Site 9A. (315) post-excavation view  | 102  | y   | CALL11-005-102    | N         | Site 9B. Stones visible. Showing orthostats                       |
| 77   | -   | CALL11-005-077    | N         | Site 9A. (315) post-excavation view  | 103  | y   | CALL11-005-103    | NW        | Site 9B. Slots and interior ((528) and (529))                     |
| 78   | y   | CALL11-005-078    | N         | Site 10. 'Cist' [435]  | 104  | y   | -                 | NW        | Site 9B. Slots and interior ((528) and (529))                     |
| 79   | y   | CALL11-005-079    | S         | Site 10. 'Cist' [435]  | 105  | -   | CALL11-005-105    | -         | Site 9B. Working shot   |
| 80   | y   | CALL11-005-080    | SE        | Site 10. 'Cist' [435]  | 106  | y   | CALL11-005-106    | S         | Site 9B. Interior (528) and (529)                                 |
| 81   | y   | CALL11-005-081    | NE        | Site 10. Location shot of cist [435]                                       | 107  | y   | CALL11-005-107    | SE        | Site 9B. Slots, interior (528) and (529)                          |
| 82   | y   | CALL11-005-082    | S         | Site 9A. Possible gleyed natural (518)                                     | 108  | -   | CALL11-005-108    | E         | Site 9B. Entrance detail  |
| 83   | y   | CALL11-005-083    | S         | Site 9A. Burnt area (52). Showing associated stones                        | 109  | y   | CALL11-005-109    | W         | Site 9C. West facing section                                      |
| 84   | y   | CALL11-005-084    | N         | Site 9A. Burnt area (52). Showing associated stones                        | 110  | y   | CALL11-005-110    | W         | Site 9C. West facing section                                      |
| 85   | y   | CALL11-005-085    | E         | Site 10. General shot of [435] and pit [421] and (401), [415]              | 111  | y   | CALL11-005-111    | W         | Site 9C. West facing section                                      |
| 86   | y   | CALL11-005-086    | E         | Site 10. General shot of [435] and pit [421] and (401), [415]              | 112  | y   | CALL11-005-112    | S         | Site 9C. General shot of slot                                     |
| 87   | y   | CALL11-005-087    | E         | Site 10. Detail of [435]   | 113  | y   | CALL11-005-113    | N         | Site 9C. General shot of slot                                     |
| 88   | y   | CALL11-005-088    | NE        | Site 10. Area 'pit' [416]/[433] to natural                                 | 114  | y   | CALL11-005-114    | SE        | Site 9B. To natural   |
| 89   | -   | CALL11-005-089    | NE        | Site 10. Area 'pit' [416]/[433] to natural ((432) charcoal removed)        | 115  | y   | CALL11-005-115    | N         | Site 9B. To natural   |
| 90   | -   | CALL11-005-090    | NW        | Site 10. Area 'pit' [416]/[433] to natural central area                    | 116  | -   | CALL11-005-116    | NW        | Site 9B. To natural   |
| 91   | y   | CALL11-005-091    | S         | Site 10. Area 'pit' [416]/[433] to natural includes possible orthostats    | 117  | -   | CALL11-005-117    | NE        | Site 9B. To natural. Section through south embankment             |
| 92   | -   | CALL11-005-092    | SW        | Site 10. Area 'pit' [416]/[433] to natural eastern area                    | 118  | -   | CALL11-005-118    | NE        | Site 9B. To natural. Section through north embankment             |
| 93   | y   | CALL11-005-093    | W         | Site 9A. Patch of <i>in situ</i> burning (522), showing animal disturbance | 119  | y   | CALL11-005-119    | W         | Site 9B. Entrance area  |
| 94   | y   | CALL11-005-094    | W         | Site 9A. Patch of <i>in situ</i> burning (522), showing location           | 120  | y   | CALL11-005-120    | N         | Site 9B. Entrance area  |
|      |     |                   |           |  | 121  | y   | CALL11-005-121    | NE        | Site 9B. Entrance area. To natural                                |
|      |     |                   |           |  | 122  | -   | CALL11-005-122    | W         | Site 9B. Entrance area. To natural                                |
|      |     |                   |           |  | 123  | -   | CALL11-005-123    | N         | Site 9B. Post-excavation  |
|      |     |                   |           |  | 124  | -   | CALL11-005-124    | W         | Site 9B. Post-excavation  |
|      |     |                   |           |  | 125  | -   | CALL11-005-125    | S         | Site 9B. Post-excavation  |
|      |     |                   |           |  | 126  | -   | CALL11-005-126    | E         | Site 9B. Post-excavation  |



| Shot | B/W | Digital file name | Direction | Description  |
|------|-----|-------------------|-----------|--|
| 127  | -   | CALL11-005-127    | W         | Site 10. Post-excavation                               |
| 128  | -   | CALL11-005-128    | SW        | Site 10. Post-excavation                               |
| 129  | -   | CALL11-005-129    | N         | Site 10. Post-excavation                               |
| 130  | -   | CALL11-005-130    | E         | Site 10. Post-excavation                               |
| 131  | -   | CALL11-005-131    | N         | Site 10. Post-excavation                               |
| 132  | -   | CALL11-005-132    | W         | Site 10. Post-excavation                               |
| 133  | -   | CALL11-005-133    | S         | Site 10. Post-excavation                               |
| 134  | -   | CALL11-005-134    | NW        | Site 10. Post-excavation                               |
| 135  | y   | CALL11-005-135    | E         | Site 9C. Section                                       |
| 136  | y   | CALL11-005-136    | E         | Site 9C. Section                                       |
| 137  | y   | CALL11-005-137    | E         | Site 9C. Section                                       |
| 138  | y   | CALL11-005-138    | E         | Site 9C. Section                                       |
| 139  | y   | CALL11-005-139a-c | N         | Site 9C. General shot                                  |
| 140  | y   | CALL11-005-140a-b | E         | Site 9C. Charcoal layer (534)                          |
| 141  | y   | CALL11-005-141    | N         | Site 9C. Shot of layer (533)                           |
| 142  | y   | CALL11-005-142    | NW        | Site 9C. Posthole [537]                                |
| 143  | y   | CALL11-005-143    | N         | Site 9C. Posthole [537]                                |
| 144  | y   | CALL11-005-144    | W         | Site 9C. Pre-excavation shot of pit [540]              |
| 145  | y   | CALL11-005-145    | W         | Site 9C. Half section through pit [540]                |
| 146  | y   | CALL11-005-146    | W         | Site 9C. Post-excavation shot of pit [540]             |
| 147  | y   | CALL11-005-147    | N         | Site 9C. Pre-excavation shot of double posthole [536]  |
| 148  | y   | CALL11-005-148    | E         | Site 9C. Post-excavation shot of posthole [541]        |
| 149  | y   | CALL11-005-149    | N         | Site 9C. Working shot                                  |
| 150  | -   | CALL11-005-150    | S         | Site 9C. Working shot                                  |
| 151  | -   | CALL11-005-151    | W         | Site 9C. Working shot                                  |
| 152  | -   | CALL11-005-152    | S         | Site 9C. Working shot                                  |
| 153  | y   | CALL11-005-153    | S         | Site 9C. Posthole [544]                                |
| 154  | y   | CALL11-005-154    | N         | Site 9C. Possible feature south side                   |
| 155  | y   | CALL11-005-155    | E         | Site 9C. Paving on south west side of site (547)       |
| 156  | y   | CALL11-005-156    | S         | Site 9C. Paving on south west side of site (547)       |
| 157  | y   | CALL11-005-157    | S         | Site 9C. Paving [547] following removal of north stone |
| 158  | y   | CALL11-005-158    | E         | Site 9C. Paving [547] following removal of north stone |

| Shot | B/W | Digital file name | Direction | Description   |
|------|-----|-------------------|-----------|---|
| 159  | y   | CALL11-005-159    | W         | Site 9C. Pre-excavation of pit [548]                                |
| 160  | y   | CALL11-005-160    | NW        | Site 9C. Mid-excavation, section of pit [548]                       |
| 161  | y   | CALL11-005-161    | W         | Site 9C. Post-excavation of [548]                                   |
| 162  | -   | CALL11-005-162    | E         | Site 9C. Pre-excavation of posthole [551]                           |
| 163  | -   | CALL11-005-163    | N         | Site 9C. Half section of posthole [551]                             |
| 164  | y   | CALL11-005-164    | N         | Site 9C. Post excavation of [551]                                   |
| 165  | y   | CALL11-005-165    | N         | Site 9C. <i>In situ</i> burning with (536) in background            |
| 166  | y   | CALL11-005-166    | N         | Site 9C. Post-excavation of burning (554)                           |
| 167  | y   | CALL11-005-167    | S         | Site 9C. Paved area [547]   |
| 168  | y   | CALL11-005-168    | N         | Site 9C. Pits [540], [554], [536], general shot                     |
| 169  | y   | CALL11-005-169    | NW        | Site 9C. General site shot  |
| 170  | y   | CALL11-005-170    | SW        | Site 9C. General shot showing stone-lined postholes [541] and [544] |
| 171  | y   | CALL11-005-171    | S         | Site 9C. Postholes [541] and [544] detail                           |
| 172  | y   | CALL11-005-172    | S         | Site 9C. Bedrock outcrop on south of site                           |
| 173  | y   | CALL11-005-173    | SW        | Site 9C. General site shot  |
| 174  | y   | CALL11-005-174    | E         | Site 9C. Possible turf bank, (559)                                  |
| 175  | -   | CALL11-005-175    | E         | Site 9C. Possible turf bank, (559)                                  |
| 176  | y   | CALL11-005-176    | W         | Site 9C. Possible turf bank, (559)                                  |
| 177  | -   | CALL11-005-177    | W         | Site 9C. Possible turf bank, (559)                                  |
| 178  | y   | CALL11-005-178    | W         | Site 9C. Slot through possible turf bank (559)                      |
| 179  | y   | CALL11-005-179    | S         | Site 9C. Posthole [544] detail                                      |
| 180  | y   | CALL11-005-180    | S         | Site 9C. General site shot with [544] in foreground                 |
| 181  | y   | CALL11-005-181    | S         | Site 9C. Posthole [544] detail                                      |
| 182  | y   | CALL11-005-182    | S         | Site 9C. Posthole [544] post-excavation                             |
| 183  | y   | CALL11-005-183    | S         | Site 9C. [541] detail   |
| 184  | y   | CALL11-005-184    | S         | Site 9C. General site shot with [541] in foreground                 |
| 185  | -   | CALL11-005-185    | E         | Site 9C. Posthole [541]   |
| 186  | -   | CALL11-005-186    | E         | Site 9C. Posthole [541] post-excavation                             |
| 187  | -   | CALL11-005-187    | SW        | Site 9C. [541] in relation to double posthole [536]                 |
| 188  | -   | CALL11-005-188    | E         | Site 9C. Posthole [553] west facing section                         |

| Shot | B/W | Digital file name | Direction | Description  |
|------|-----|-------------------|-----------|--|
| 189  | y   | CALL11-005-189    | E         | Site 9C. Posthole [553] west facing section                          |
| 190  | -   | CALL11-005-190    | SE        | Site 9C. Posthole [553], stone lining at base                        |
| 191  | y   | CALL11-005-191    | W         | Site 9C. (562) occupation deposit                                    |
| 192  | y   | CALL11-005-192    | E         | Site 9C. (562) occupation deposit                                    |
| 193  | y   | CALL11-005-193    | SE        | Site 9C. Pre-excavation of [564]                                     |
| 194  | y   | CALL11-005-194    | N         | Site 9C. Post-excavation of posthole [553]                           |
| 195  | y   | CALL11-005-195    | N         | Site 9C. [553] in relation to posthole [551]                         |
| 196  | y   | CALL11-005-196    | NW        | Site 9C. South west area of site, showing [553] and paved area [547] |
| 197  | y   | CALL11-005-197    | S         | Site 9C. Section through [564]                                       |
| 198  | y   | CALL11-005-198    | S         | Site 9C. Post-excavation of [564]                                    |
| 199  | y   | CALL11-005-199    | S         | Site 9C. Deposits (556) and (566)                                    |
| 200  | y   | CALL11-005-200    | E         | Site 9C. Deposits (556) and (566) and [564] in foreground            |
| 201  | y   | CALL11-005-201    | N         | Site 9C. Deposits (556) and (566) and [564] in foreground            |
| 202  | y   | CALL11-005-202    | N         | Site 9C. Section through deposit (556)                               |
| 203  | y   | CALL11-005-203    | N         | Site 9C. Deposits (566) following removal of (556)                   |
| 204  | y   | CALL11-005-204    | N         | Site 9C. (567)   |
| 205  | y   | CALL11-005-205    | NE        | Site 9C. Pre-excavation of posthole [568]                            |
| 206  | y   | CALL11-005-206    | NE        | Site 9C. Posthole [568] following removal of fill                    |
| 207  | y   | CALL11-005-207    | W         | Site 9C. Lower occupation deposit (571)                              |
| 208  | y   | CALL11-005-208    | E         | Site 9C. Lower occupation deposit (571)                              |
| 209  | y   | CALL11-005-209    | SE        | Site 9C. Baulk across (562) general                                  |
| 210  | y   | CALL11-005-210    | SE        | Site 9C. Baulk across (562) detail                                   |
| 211  | y   | CALL11-005-211    | E         | Site 9C. Post-excavation of [568]                                    |
| 212  | y   | CALL11-005-212    | SE        | Site 9C. [568] in relation to [544]                                  |
| 213  | y   | CALL11-005-213    | E         | Site 9C. Pre-excavation of posthole [572]                            |
| 214  | y   | CALL11-005-214    | E         | Site 9C. Pre-excavation of posthole [572] showing lining (573)       |
| 215  | y   | CALL11-005-215    | E         | Site 9C. General shot of packing (573) <i>in situ</i>                |
| 216  | y   | CALL11-005-216    | W         | Site 9C. Pre-excavation of posthole [575]                            |
| 217  | y   | CALL11-005-217    | SSW       | Site 9C. Post-excavation of [575]                                    |

| Shot | B/W | Digital file name | Direction | Description   |
|------|-----|-------------------|-----------|---|
| 218  | y   | CALL11-005-218    | SSW       | Site 9C. [575] in relation to [572]                             |
| 219  | y   | CALL11-005-219    | W         | Site 9C. After removal of (571)                                 |
| 220  | y   | CALL11-005-220    | E         | Site 9C. After removal of (571)                                 |
| 221  | y   | CALL11-005-221    | W         | Site 9C. Pre-excavation of posthole [578]                       |
| 222  | y   | CALL11-005-222    | W         | Site 9C. Mid-excavation of posthole [578] showing packing (579) |
| 223  | y   | CALL11-005-223    | SW        | Site 9C. Post-excavation shot of [578]                          |
| 224  | y   | CALL11-005-224    | N         | Site 9C. Post-excavation shot of south side of site             |

### Appendix 1.3 Drawing register

| Drw | Scale | Plan / Section | Description  |
|-----|-------|----------------|--|
| 50  | 1:20  | S              | Site 9A. North facing section                              |
| 51  | 1:50  | P              | Site 10. Southern half of site                             |
| 52  | 1:50  | P              | Site 10. Northern half of site                             |
| 53  | 1:20  | P              | Site 9A. Plan of site, post-deturfing                      |
| 54  | 1:20  | P              | Site 10. Pre-excavation. Plan of [415]                     |
| 55  | 1:20  | P              | Site 10. Plan of [415], following partial removal of (423) |
| 56  | 1:10  | S              | Site 10. Section (NNE-SSW) through 'pit' [416]             |
| 57  | 1:20  | P              | Site 9A. [515] post-excavation plan                        |
| 58  | 1:10  | S              | Site 9A. [519] section through cut                         |
| 59  | 1:10  | S              | Site 10. Section through (415) and (421)                   |
| 60  | 1:20  | P              | Site 9B. Plan of stones (x2 sheets)                        |
| 61  | 1:10  | S              | Site 9C. East-facing section across 9C                     |
| 62  | 1:10  | S              | Site 9B. Section (SW-facing), slot                         |
| 63  | 1:20  | P              | Site 9C. Plan of paved area [547]                          |
| 64  | 1:20  | P              | Site 9C. Plan of paved area [557]                          |
| 65  | 1:20  | P              | Site 9C. Plan of stone-lined postholes                     |
| 66  | 1:10  | S              | Site 9C. Section of posthole [541]                         |
| 67  | 1:10  | S              | Site 9C. Section of posthole [544]                         |
| 68  | 1:10  | S              | Site 9C. Post packing (562) in pit [553]                   |
| 69  | 1:20  | P              | Site 9C. Plan of [553] and post packing (562)              |
| 70  | 1:10  | S              | Site 9C. Profile of posthole [568] showing [569]           |
| 71  | 1:10  | P              | Site 9C. Plan of posthole [568]                            |
| 72  | 1:10  | P              | Site 9C. Plan of posthole [572]                            |
| 73  | 1:10  | S              | Site 9C. Section of posthole [572]                         |
| 74  | 1:10  | P              | Site 9C. Plan of posthole [575]                            |





| Drw | Scale | Plan / Section | Description                        |
|-----|-------|----------------|------------------------------------|
| 75  | 1:10  | S              | Site 9C. Section of posthole [575] |
| 76  | 1:10  | P              | Site 9C. Plan of posthole [578]    |
| 77  | 1:10  | S              | Site 9C. Section of posthole [578] |

#### Appendix 1.4 Sample register

| Sample | Context | Description                               |
|--------|---------|---|
| 100    | 407     | Site 10. Charcoal rich deposit            |
| 101    | 400     | Site 10. Deposit in depression            |
| 102    | 406     | Site 10. Charcoal rich deposit            |
| 103    | 405     | Site 10. Charcoal rich deposit            |
| 104    | 404     | Site 10. Charcoal rich deposit            |
| 105    | 410     | Site 10. Sandy clay loam                  |
| 106    | 503     | Site 9A. Charcoal rich deposit            |
| 107    | 431     | Site 10. Fill of 'Cist' 415               |
| 108    | 423     | Site 10. Fill of 'Cist' 415               |
| 109    | 403     | Site 10. Charcoal. Upper fill of Cist 416 |
| 110    | 418     | Site 10. Charcoal. Middle fill of 416     |
| 111    | 425     | Site 10. Dark brown stony clay silt       |
| 112    | 426     | Site 10. Charcoal and grey silt           |
| 113    | 427     | Site 10. Charcoal patch, above (412)      |
| 114    | 428     | Site 10. Charcoal patch, above (412)      |
| 115    | 429     | Site 10. Charcoal patch, above (412)      |
| 116    | 430     | Site 10. Charcoal patch, above (412)      |
| 117    | 432     | Site 10. Charcoal patch, base of (412)    |
| 118    | 401     | Site 10. Charcoal within Cist 435         |
| 119    | 520     | Site 9A. Charcoal and burning patch       |
| 120    | 522     | Site 9A. <i>In situ</i> burning patch     |
| 121    | 516     | Site 9A. 'surface' deposit                |
| 122    | 534     | Site 9C. Deposit 534                      |
| 123    | 539     | Site 9C. Fill of pit [540]                |
| 124    | 543     | Site 9C. Fill of posthole [542]           |
| 125    | 549     | Site 9C. Fill of pit [548]                |
| 126    | 552     | Site 9C. Fill of posthole [551]           |
| 127    | 555     | Site 9C. Fill of pit [554]                |
| 128    | 558     | Site 9C. <i>In situ</i> burning           |
| 129    | 560     | Site 9C. Backfill around posthole [544]   |
| 130    | 559     | Site 9C. Possible bank                    |
| 131    | 561     | Site 9C. Fill of pit [563]                |

| Sample | Context | Description   |
|--------|---------|---|
| 132    | 565     | Site 9C. Fill of potential fire pit [564]             |
| 133    | 556     | Site 9C. Occupation deposit beneath paving (566)      |
| 134    | 567     | Site 9C. <i>In situ</i> burning containing burnt bone |
| 135    | 570     | Site 9C. Fill of posthole [569]                       |
| 136    | 562     | Site 9C. Occupation deposit at north end of area      |
| 137    | 574     | Site 9C. Fill of posthole [573]                       |
| 138    | 577     | Site 9C. Fill of posthole [576]                       |
| 139    | 571     | Site 9C. Sample from west end of deposit              |
| 140    | 571     | Site 9C. Sample from east end of deposit              |
| 141    | 580     | Site 9C. Fill of posthole [579]                       |
| 142    | 537     | Site 9C. Fill of posthole [536]                       |

#### Appendix 1.5 Small finds register

| SF | Site | Context | Description                        |
|----|------|---------|------------------------------------|
| 1  | 9a   | 517     | Fe slag                            |
| 2  | 9c   | 556     | Flint arrowhead                    |
| 3  | 9c   | U/S     | Red Flint arrowhead fragment       |
| 4  | 9c   | -       | Number not used                    |
| 5  | 9c   | 571     | Quartz fragments- possibly worked? |

## Appendix 2 Environmental tables

### Appendix 2.1 Retent sample result

| Context        | Sample | Sample Vol (l) | Stone   | Burnt bone | Charred plant | Charcoal |               | Material available for AMS Dating | Cinders | Comments   |
|----------------|--------|----------------|---------|------------|---------------|----------|---------------|-----------------------------------|---------|--|
|                |        |                | Lithics | Mammal     | remains       | Qty      | Max size (cm) |                                   |         |  |
| <b>Site 9A</b> |        |                |         |            |               |          |               |                                   |         |  |
| 503            | 106    | 20             | -       | -          | -             | ++++     | 1.5           | Charcoal +++                      | -       | Charcoal is non-oak  |
| 520            | 119    | 30             | -       | -          | +             | ++++     | 1.7           | Charcoal +++                      | -       | <i>Corylus</i> nutshell +, Charcoal is non-oak   |
| 522            | 120    | 20             | -       | -          | -             | ++++     | 1.2           | Charcoal +++                      | -       | Charcoal is non-oak  |
| 516            | 121    | 20             | -       | -          | -             | +++      | 1.3           | Charcoal +                        | -       | Charcoal is non-oak  |
| <b>Site 9C</b> |        |                |         |            |               |          |               |                                   |         |  |
| 534            | 122    | 5              | -       | -          | -             | +++      | 1.7           | Charcoal ++                       | -       | Charcoal is non-oak  |
| 543            | 124    | 2.5            | -       | -          | -             | +++      | 1.7           | Charcoal +                        | -       | Charcoal is non-oak  |
| 549            | 125    | 5              | -       | -          | -             | +++      | 0.7           | -                                 | -       | Charcoal is non-oak  |
| 552            | 126    | 5              | -       | -          | -             | ++       | 1.0           | Charcoal +                        | -       | Charcoal is non-oak  |
| 555            | 127    | 5              | -       | -          | -             | +        | <1.0          | -                                 | -       | Charcoal not retained.   |
| 558            | 128    | 2              | -       | -          | -             | +        | 0.7           | -                                 | -       | Charcoal is non-oak  |
| 559            | 130    | 10             | -       | -          | -             | +++      | 1.0           | Charcoal ++                       | -       | Charcoal is non-oak  |
| 565            | 132    | 5              | -       | -          | +             | ++++     | 1.4           | Charcoal +++                      | -       | <i>Hordeum vulgare</i> var. <i>nudum</i> +, <i>Corylus</i> nutshell +, Charcoal is non-oak |
| 556            | 133    | 10             | +       | -          | +             | ++       | 1.0           | Charcoal ++                       | -       | <i>Corylus</i> nutshell +, Charcoal is non-oak   |
| 567            | 134    | 2              | ++      | ++         | -             | +++      | 1.4           | Charcoal ++, Burnt Bone +         | -       | Charcoal is non-oak  |
| 562            | 136    | 10             | ++      | -          | -             | +++      | 1.5           | Charcoal ++                       | -       | Charcoal is non-oak  |
| 571            | 139    | 10             | ++      | -          | -             | +++      | 1.2           | Charcoal ++                       | -       | Charcoal is non-oak  |
| 580            | 141    | 2              | -       | -          | -             | ++       | 1.3           | Charcoal +                        | -       | Charcoal is non-oak  |
| 537            | 142    | 10             | -       | -          | -             | +++      | 1.4           | Charcoal ++                       | -       | Charcoal is non-oak  |
| <b>Site 10</b> |        |                |         |            |               |          |               |                                   |         |  |
| 400            | 101    | 10             | -       | -          | -             | ++       | 1.0           | Charcoal +                        | -       | Charcoal is non-oak  |
| 404            | 104    | 5              | +       | -          | -             | +++      | 1.0           | Charcoal ++                       | -       | Charcoal is non-oak  |
| 431            | 107    | 10             | +       | -          | -             | ++++     | 1.8           | Charcoal +++                      | -       | Charcoal is non-oak  |
| 423            | 108    | 5              | -       | -          | -             | +++      | 1.5           | Charcoal ++                       | -       | Charcoal is non-oak  |
| 403            | 109    | 5              | -       | -          | -             | +++      | 1.4           | Charcoal +                        | ++      | Charcoal is non-oak and includes possible heather fragments                                |
| 426            | 112    | 5              | -       | -          | -             | ++++     | 1.2           | Charcoal ++                       | -       | Charcoal is non-oak  |
| 401            | 118    | 5              | -       | -          | -             | ++++     | 2.3           | Charcoal +++                      | -       | Charcoal is non-oak  |

Key: + = rare (0-5), ++ = occasional (6-15), +++ = common (15-50) and ++++ = abundant (>50)

NB charcoal over 1cm is suitable for identification and AMS dating



## Appendix 2.2 Flotation sample results

| Context        | Sample | Total flot Vol (ml) | Cereal grain |                 |              |                   |                 | Other plant remains       | Charcoal |               | Material available for AMS | Comments                |
|----------------|--------|---------------------|--------------|-----------------|--------------|-------------------|-----------------|---------------------------|----------|---------------|----------------------------|-------------------------|
|                |        |                     | Avena sp.    | Hordeum vulgare | Triticum sp. | Triticum dicoccum | Cerealia indet. |                           | Qty      | Max size (cm) |                            |                         |
| <b>Site 9A</b> |        |                     |              |                 |              |                   |                 |                           |          |               |                            |                         |
| 503            | 106    | 400                 | -            | -               | -            | -                 | -               | -                         | ++++     | 1             | Charcoal +                 | Non-oak charcoal        |
| 520            | 119    | 150                 | -            | -               | -            | -                 | -               | -                         | ++++     | 1             | Charcoal +                 | Non-oak charcoal        |
| 522            | 120    | 50                  | +            | -               | -            | +                 | -               | -                         | ++++     | 1.2           | Charcoal +                 | Non-oak charcoal        |
| 516            | 121    | 70                  | -            | -               | -            | -                 | -               | -                         | +++      | 0.3           | -                          | Non-oak charcoal        |
| <b>Site 9C</b> |        |                     |              |                 |              |                   |                 |                           |          |               |                            |                         |
| 534            | 122    | 50                  | -            | -               | -            | -                 | -               | -                         | ++++     | 0.8           | -                          | Non-oak charcoal        |
| 549            | 125    | 100                 | -            | -               | -            | +                 | -               | -                         | ++++     | 1             | Charcoal +                 | Non-oak charcoal        |
| 552            | 126    | 70                  | -            | -               | -            | -                 | -               | <i>Sclerotia</i> +++      | ++++     | 2             | Charcoal ++                | Non-oak charcoal        |
| 555            | 127    | 70                  | -            | -               | -            | -                 | -               | -                         | ++++     | 0.8           | -                          | Non-oak charcoal        |
| 558            | 128    | 75                  | -            | -               | -            | -                 | -               | -                         | ++++     | 1.8           | Charcoal +++               | -                       |
| 559            | 130    | 500                 | -            | -               | -            | -                 | -               | -                         | ++++     | 0.9           | -                          | Non-oak charcoal        |
| 565            | 132    | 200                 | -            | +               | -            | -                 | -               | <i>Corylus avellana</i> + | ++++     | 1.5           | Charcoal +                 | Non-oak charcoal        |
| 556            | 133    | 150                 | -            | -               | -            | -                 | -               | -                         | ++++     | 2.3           | Charcoal ++                | Mostly non-oak charcoal |
| 567            | 134    | 70                  | -            | -               | -            | -                 | -               | -                         | ++++     | 1             | Charcoal +                 | Non-oak charcoal        |
| 562            | 136    | 400                 | +            | -               | -            | -                 | -               | -                         | ++++     | 2.6           | Charcoal ++                | Non-oak charcoal        |
| 571            | 139    | 600                 | -            | -               | -            | -                 | -               | -                         | ++++     | 2.3           | Charcoal +++               | -                       |
| 580            | 141    | 1                   | -            | -               | -            | -                 | -               | -                         | ++       | 0.3           | -                          | Non-oak charcoal        |
| 537            | 142    | 80                  | -            | -               | -            | -                 | -               | -                         | ++++     | 1.4           | Charcoal ++                | Non-oak charcoal        |
| <b>Site 10</b> |        |                     |              |                 |              |                   |                 |                           |          |               |                            |                         |
| 400            | 101    | 200                 | -            | -               | -            | -                 | -               | -                         | ++++     | 0.7           | -                          | Non-oak charcoal        |
| 404            | 104    | 200                 | -            | -               | -            | -                 | -               | -                         | ++++     | 1             | Charcoal +                 | Non-oak charcoal        |
| 431            | 107    | 200                 | -            | -               | -            | -                 | -               | -                         | ++++     | 0.9           | -                          | Non-oak charcoal        |
| 423            | 108    | 70                  | -            | -               | -            | -                 | -               | <i>Plantago</i> sp. +     | ++++     | 0.6           | -                          | Non-oak charcoal        |
| 403            | 109    | 600                 | +            | +               | -            | -                 | -               | -                         | ++++     | 2             | Charcoal +++               | Non-oak charcoal        |
| 426            | 112    | 120                 | -            | -               | -            | -                 | +               | -                         | ++++     | 1.5           | Charcoal +                 | Non-oak charcoal        |
| 401            | 118    | 70                  | +            | -               | +            | +                 | +               | -                         | ++++     | 0.5           | -                          | Non-oak charcoal        |

Key: + = rare (0-5), ++ = occasional (6-15), +++ = common (15-50) and ++++ = abundant (>50)

NB charcoal over 1cm is suitable for identification and AMS dating

### Appendix 3 Finds catalogue

| Site | Context | SF | Sample | Qty | Weight (g) | Material         | Object    | Description  | Period          |
|------|---------|----|--------|-----|------------|------------------|-----------|--|-----------------|
| 9A   | 517     | 1  | –      | –   | 678        | Industrial Waste | Slag      | Plano-convex hearth base   | IA or later     |
| 9A   | 520     | –  | –      | –   | 1143       | Industrial Waste | Slag      | Fragments  | IA or later     |
| 9C   | U/S     | 3  | –      | 1   | –          | Lithics          | Arrowhead | Leaf shaped arrowhead, medial fragment. Red brown flint          | E.Neol - M.Neol |
| 9C   | 530     | –  | –      | –   | 249        | Industrial Waste | Slag      | Fragments  | IA or later     |
| 9C   | 556     | 2  | –      | 1   | –          | Lithics          | Arrowhead | Hollow based arrowhead. Honey brown flint                        | L.Neol          |
| 9C   | 556     | –  | –      | 1   | –          | Lithics          | Debitage  | Inner, hard hammer blade. Light grey mottled flint               | PH              |
| 9C   | 556     | –  | 133    | 1   | –          | Lithics          | Debitage  | Inner, hard hammer flake. Light grey flint                       | PH              |
| 9C   | 559     | –  | –      | –   | 59         | Industrial Waste | Slag      | Fragments  | IA or later     |
| 9C   | 562     | –  | 136    | 1   | –          | Lithics          | Debitage  | Inner chip. Red brown flint                                      | PH              |
| 9C   | 567     | –  | 134    | 2   | –          | Lithics          | Debitage  | Hinge terminated distal fragment and burnt chip. Red brown flint | PH              |
| 9C   | 571     | –  | 139    | 1   | –          | Lithics          | Debitage  | Inner, hard hammer chip. Light grey flint                        | PH              |
| 10   | 404     | –  | 104    | 1   | –          | Lithics          | Debitage  | Secondary chunk. Dull black brown chert. Possibly natural        | PH              |
| 10   | 431     | –  | 107    | 1   | –          | Lithics          | Debitage  | Inner chip. Honey brown flint                                    | PH              |









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