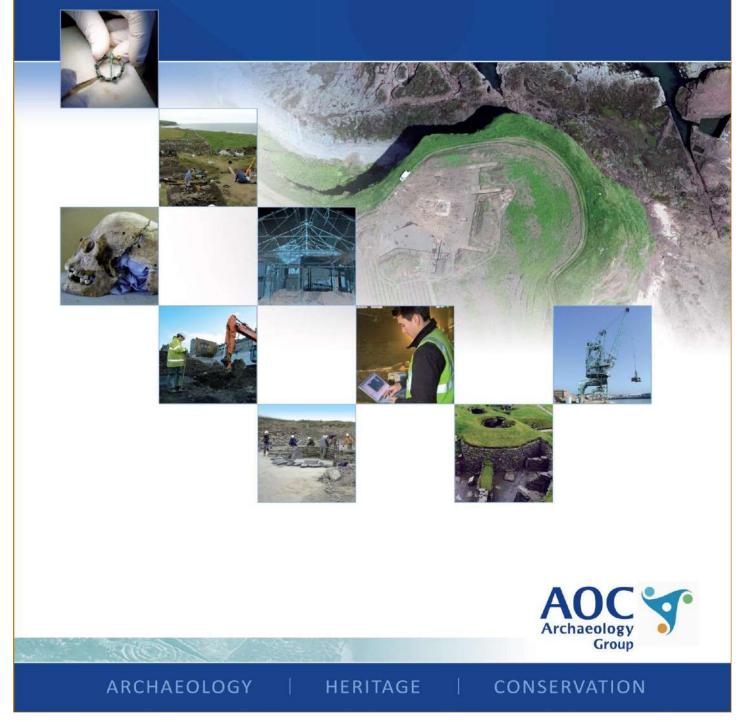
King's Seat, Dunkeld, Perth and Kinross: Archaeological Evaluation Phase 3 Data Structure Report

> AOC 23917-3 aocarcha1-377506



King's Seat, Dunkeld, Perth and Kinross:

Archaeological Evaluation Phase 3

Data Structure Report

On Behalf of:	Perth and Kinross Heritage Trust Lower City Mills West Mill Street Perth PH1 5QP
National Grid Reference (NGR):	NO 0093 4303
AOC Project No:	23917-3
Prepared by:	C. Maclver, M. Cook, A. Heald, Y. Robertson, D. McLaren, D. Strachan, C. Henderson
Illustration by:	C.Maclver, L.Stirling & L.Teufel
Date of Fieldwork:	September 2019
Date of Report:	December 2019

This document has been prepared in accordance with AOC standard operating procedures.			
Author: Cathy Maclver, Martin Cook	Date: 13/12/2019		
Approved by: Martin Cook			
Report Stage: Final	Date: 16/12/2019		

Enquiries to: AOC Archaeology Group Edgefield Industrial Estate Edgefield Road Loanhead EH20 9SY

 Tel.
 0131 440 3593

 Fax.
 0131 440 3422

 e-mail.
 edinburgh@aocarchaeology.com



www.aocarchaeology.com

Contents

List of III	۲ ustrations	'age 2
List of PI	ates	2
List of A	opendices	3
ABSTRA	СТ	4
1	INTRODUCTION	6
2	HISTORICAL BACKGROUND	6
3	OBJECTIVES	9
4	METHODOLOGY	11
5	RESULTS	11
6	ASSESSMENT OF THE 2019 FINDS ASSEMBLAGE	32
7	DISCUSSION	37
9	REFERENCES	41
APPEND	X 1: CONTEXT REGISTER	44
APPEND	X 2: PHOTOGRAPHIC REGISTER	51
APPEND	X 3: DRAWING REGISTER	64
APPEND	X 4: FINDS REGISTER	66
APPEND	X 5: SAMPLES REGISTER	79
APPEND	X 6: 'DISCOVERY AND EXCAVATION IN SCOTLAND' REPORT	82

List of Illustrations

- Figure 1 Location map Figure 2 Site Trench Plan Figure 3 Mid-excavation plan of Trench 4 (2019) Figure 4 Post-excavation plan of Trench 4 (2019) Figure 5 Sections of Trench 4 Figure 6 Post-excavation plan of Trench 6 with overlays of hearth [606]/[617] Figure 7 Sections of Trench 6 and hearth setting [606]/[617] Figure 8 West facing section of Trench 6 showing depth of bedrock Figure 9 Post-excavation plan of Trench 7 Figure 10 Northeast facing section of Trench 7 Plate 1 Small revetted platform [405] up against bedrock with kerb [408] below Plate 2 Platform [405] with heat affected layer (407) on the surface
- Plate 3 Inner kerb of bank (402) on edge of hill
- Plate 4 Lower hearth setting [410] with small postholes
- Plate 5 Upper hearth setting [420] (left) overlying and reusing elements of [410] (right)
- Plate 6 Western edge of structure with line of post settings [417], [418], [431] and [432]
- Plate 7 Band of material possibly related to remnants of a degraded turf wall (444)
- Plate 8 Basal remains of rig and furrow spade dug cultivation in the eastern edge of the trench
- Plate 9 Volunteers getting a site tour of Trench 4
- Plate 10 Post-excavation of hearth [605]/[610]
- Plate 11 Mid excavation of hearth [606] with possible structure wall [610] in foreground
- Plate 12 Hearth [617] emerging beneath hearth [606]
- Plate 13 Post-excavation of hearth [617]
- Plate 14 Mid-excavation of possible rough surface (615) (left) and setting or hearth [614] (right)
- Plate 15 Volunteers from UHI excavating the metal working waste dumped on the interior of the bank
- Plate 16 North east facing section of bank [7002]
- Plate 17 Dave holding up the decorated spindle whorl from Trench 4 (SF4060)
- Plate 18 Fragments of E-ware representing bowl and jar vessels
- Plate 19 Detail of the decorated spindle whorl (SF4060)
- Plate 20 Iron angle backed knife blade (SF4099)

List of Appendices

Appendix 1: Context Register Appendix 2: Photographic Register Appendix 3: Drawing Register Appendix 4: Finds Register Appendix 5: Samples Register Appendix 6: Discovery and Excavation in Scotland

ABSTRACT

An archaeological excavation was undertaken by Perth and Kinross Heritage Trust in partnership with Dunkeld and Birnam Historical Society, with local volunteers and AOC Archaeology Group at King's Seat hillfort. The works followed on from vegetation clearance and initial survey and excavation work done 2017-18. The 2019 works formed the third and final season of a three-year programme of excavations at the hillfort.

The 2019 works comprised three trenches, which investigated structures identified during topographic survey and on the RCHAMS interpretive survey of the site. These trenches aimed to assess the nature and construction of various structures across the hillfort including an area within the central enclosure (Trench 4); an area of the interior of the western enclosure (Trench 6) and the eastern enclosure bank (Trench 7).

In Trench 4 at the west end the deposits overlying the natural bedrock were thin and material was representative of disturbed hillwash, heavily impacted by rhododendron roots. This layer deepened eastwards across the trench where material had accumulated on a flatter terrace. Finds from this layer included glass beads, ceramic fragments, iron objects, spindle whorls, stone moulds, clay moulds and crucible fragments for metal working. Underlying this mixed deposit up against the bedrock face at the east end of the trench was a small roughly built stone revetted platform against the sloping face of quarried bedrock. Underlying this was an in situ compact layer and on this same horizon a stone kerbed hearth setting was identified several metres downslope from the platform. This setting was filled with animal bone and ashy layers. A line of small stone settings were identified, likely for posts related to a large structure enclosing the hearth. They ran roughly north to south across the trench and would have formed part of a larger structure extending outwith the excavated area. More recent spade dug rig and furrow cultivation had disturbed the deposits and any remnants of the structure on the west side of the hearth.

The deposits which had built up in the western enclosure interior were investigated in Trench 6. The deposits here were rich in material culture with the upper layer containing metal-working waste, a glass bead, E-ware ceramics and crucible fragments. Several hearth settings were identified in this area, likely within small structures that had been heavily disturbed.

The enclosure bank investigated in Trench 7 showed a substantial, roughly built bank comprising an inner and outer large boulders kerb with a core of stone and earth. On the interior of the bank deposits of midden or occupation material were identified, including a substantial dump of metal working waste and some ceramics.

The 2019 evidence helped to clarify the structures at King's Seat, as well as to start to add new information to understand the use, longevity and occupation of the hillfort complex. We have various finds suggesting activity and craft processes occurring on site in the early historic period. The material culture includes evidence of a metalworking industry producing high status objects, wide trade links delivering E-ware vessels, Anglo-Saxon glass beads and glass vessels. Spindle whorls indicate textile production and the quantity of animal bone in the hearth setting indicates processing of animals occurring on site. Metal-working activity is evidenced across the site in the upper, middle and lower terraces indicating dense activity across the site and a high-status site of production.

1 INTRODUCTION

A community archaeology project, comprising the excavation of seven trenches, was carried out at King's Seat, Dunkeld, Perth and Kinross. The project was undertaken on behalf of Perth and Kinross Heritage Trust (PKHT) and Dunkeld and Birnam Historical Society, by PKHT and AOC Archaeology Group. The project followed on from a phase of vegetation clearance and initial survey work. The excavation phase aimed to investigate the nature and date of the ramparts and to assess potential internal structures and deposits. The works were conducted according to the terms of an updated *Project Design* (Strachan and MacIver 2018). The project was undertaken with the kind permission of the landowner, Dunkeld House Hotel, to whom thanks are due. PKHT and AOC Archaeology Group would like to thank all of the volunteers who made the excavation a success.

2 HISTORICAL BACKGROUND

King's Seat Hillfort (NGR: NO 0093 4303; NMRS: NO04SW19; PKHER: MPK5444; Scheduled Monument: 1598), also known as 'The Fort of the Caledonians', is located on the summit of King's Seat, a key geographical feature in the landscape, located on a bend on the north size of the River Tay (Figure 1). The forts defences are comprised of a central citadel or enclosure occupying the summit of the hill and a series of ramparts taking in lower terraces. The enclosed summit measures about 35m by 22m within what are probably the remains of a thick wall. The entrance is located to the north and there appears to have been a trackway dropping down to a lower terrace on the west. This trackway and the terrace are edged by a rampart reduced to a stony bank up to 4m in thickness by 0.4m in height, its south end resting on the lip of a precipitous cliff. Below this terrace, on the west, the approach to the fort is partially blocked by three rampart-like features, which form a flight of terraces levelled into the slope. King's Seat Hillfort sits on exposed bedrock of the Ben Ledi Grit Formation, being Metasandstone, with the drift geology of the surrounding area consisting of alluvium and river terrace deposits of clay, sand and gravel (British Geological Survey 1:50000 digital data).

All of the currently identified earthworks relating to the site are included in the scheduled area. The Scheduled Monument designation documentation from October 2011 includes the following summary:

Scheduled as 'King's Seat, fort' the substantial upstanding remains of a later prehistoric or early historic fort. This defended settlement survives as a series of up to four concentric ramparts and terraces, enclosing a central walled citadel on the summit of a craggy hill known as King's Seat. The fort occupies a commanding position overlooking the River Tay at approximately 150m above sea level, with excellent views to the north, south and west.

Similar later prehistoric and early historic defended settlement sites are widely distributed across mainland eastern Scotland, especially south of the Firth of Forth, while isolated examples such as King's Seat occur elsewhere. King's Seat is not a particularly large example of its class. The comparatively low density of forts in this area, at least when viewed against the backdrop of their general distribution further south, suggests that sites such as this might have had increased significance as the strongholds of an elite element in the local population.

Dunkeld emerged as the centre of Atholl in the early historic period, probably because of its prime geographical location at the foot of the Highland Edge, dominating the lines of communication northwards and westwards by way of the valley of the Tay, and marking the transition between fertile lowlands and more marginal upland. It has been suggested that the fort at King's Seat may have been the seat of royal power in Atholl during the early historic period. Its location just above the Roman legionary fortress and other Roman works at Inchtuthil may also be significant in this respect.'

King's Seat is mentioned in the New Statistical Accounts of 1834-45 (vol.10 p.959), with the author noting that:

"Prior to the fifth century, the Caldones or Caledonians has a stronghold situated, it is supposed, upon a knoll called the King's Seat, at the entrance of the vale of Atholl, near the city of Dunkeld. The stronghold, from its position, had the effective commend of the passes leading into Atholl. It appears to have been at the time an important feature in the county, for Hollingshed, in speaking of the sanguinary battle of Monteith, between the Scots and Picts, adds, for geographical direction, that the field of engagement, although near to the county of Stirling, was "not farre from Calidon Castell, otherwise called Dunkeld".

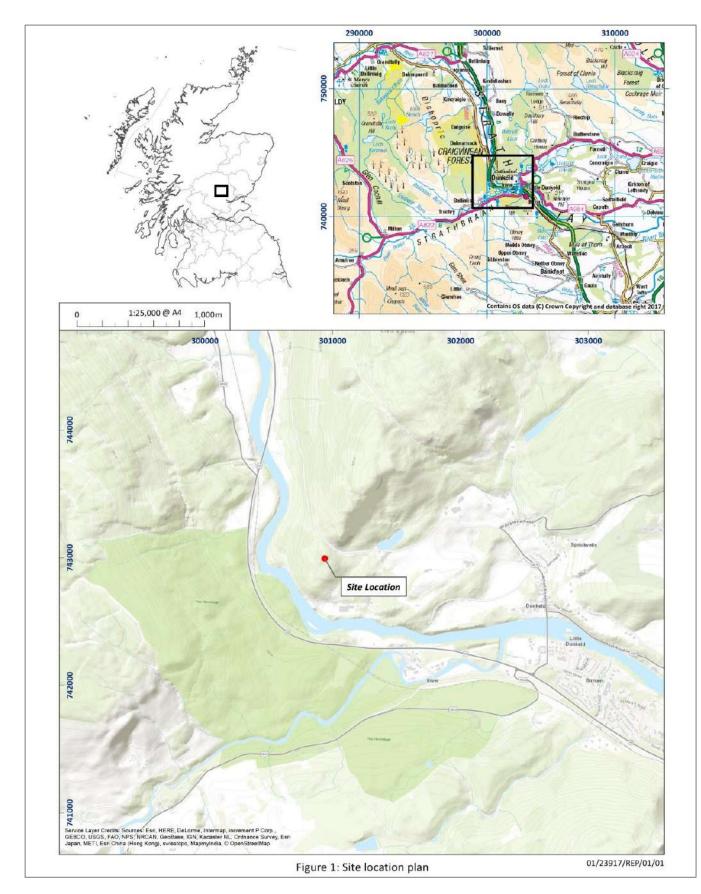
Previous archaeological work

RCAHMS made a visit in 1957, with Feachem producing a plane-table survey of the hillfort at a scale of 1mm to 1ft. Feachem (1966) draws comparison between King's Seat and other hillforts in Strathtay, many of which also have multivallate works, incorporating natural rock faces, and the innermost defences taking the form of a walled enclosure. He describes King's Seat as being of particular interest in Strathtay due to its location "in the jaws of Upper Strathtay just above the legionary fortress and other Roman works at Inchtuthil". He goes on to describe the hillfort:

"Here the walled inner enclosure, now choked with impenetrable rhododendrons, crowns a rocky bluff; it measures axially only 115 feet by 70 feet. It is very strongly defended by natural hazards and four ramparts".

The site appears annotated as 'Kings Seat (site of Castle)' on the OS 1st edition 6" map 1867 but there is no detail depicted other than general woodland. In the surrounding area 'St Colme's Well' and 'Duncan Ogg's Hole' are also depicted. These continue to be annotated on the OS 2nd Edition 6" map of 1900.

The site was visited by Ordnance Survey in 1971 and a visit from RCAHMS in1989 produced a survey based largely on the plan by Feachem.



3 OBJECTIVES

The overarching objective of the excavation was to 'establish a chronology for the development of this site'. The specific targets through which to achieve this objective were the series of ramparts on the lower slopes of the hill, the central summit enclosure (citadel) and interior of both the central summit enclosure and the middle western terrace (Strachan and Maclver 2018). Results from 2017 prompted a review of the project design and further proposed work (Strachan and Maclver 2018) and a new Scheduled Monument Consent application was granted in August 2018 for extension of Trench 4 and new Trenches 6-7.

To this end, the three trenches excavated in September 2019 (Figure 2) aimed to:

• Trench 4: Central enclosure

This trench was opened to aid in answering two research questions regarding the impact of rhododendron growth on archaeological deposits and the chronology and architectural composition of the hillfort. A c.2x5m trench was located across the SE of the summit rampart and into the interior in 2017. Due to significant metal working evidence being located here this was extended to a more open excavation of 6m by 12m in 2018. This was excavated to the first significant archaeological horizon, recorded and features excavated and will be continued in 2019.

• Trench 6: Western enclosure interior

A c.3x10m trench was proposed, located within the interior of the western enclosure. The aim of this trench was to assess: the impact of rhododendron growth on archaeological deposits and contrast with elsewhere on the site. It also aimed to evaluate an area of enclosure interior and assess the potential for archaeological deposits or structures. It was intended that this would aid in develop a chronology for the construction of the hillfort and an understanding of its function and the activities taking place on the site. This was excavated to the first significant horizon to understand the depth of topsoil and will be continued in 2019.

• Trench 7: Eastern enclosure interior and bank

A c.3x8m trench was proposed, located across the bank and into the interior of the east enclosure. This enclosure has been suggested to be later than the others by RCAHMS. The aim of this trench was to assess: the architectural composition of this feature, develop a chronology for the construction of this bank and contrast with the other earthworks assessed on the site. It was also aimed at developing a chronology for the construction of the hillfort and associated enclosures and comparing rhododendron impact elsewhere on the hill.

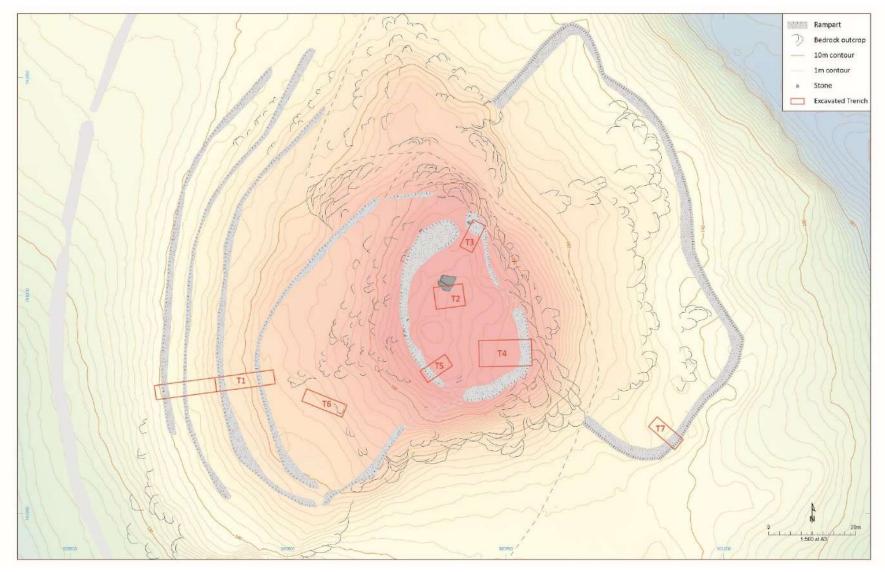


Figure 2 Site Trench Plan

© AOC Archaeology 2019 | 10 | www.aocarchaeology.com

4 METHODOLOGY

The archaeological evaluation comprised the hand excavation of seven trenches in locations agreed in advance with Historic Environment Scotland, as a condition of the Scheduled Monument Consent (SMC). These trenches were placed to assess potential features identified in the RCAHMS survey.

The trenches were excavated by hand and all features and structures revealed were cleaned by hand before being recorded by digital photography, drawn to an appropriate scale and a written record produced using AOC *pro forma* context sheets. The archaeological works were undertaken in agreement with the original and revised project design (Strachan and MacIver 2018).

5 RESULTS

The excavations were carried out from the $3^{rd} - 14^{th}$ of September 2019. Weather conditions were variable but generally clear and dry through the course of the excavations and archaeological visibility remained good. The following presents a summary of the excavation results and full details can be found in the appendices.

5.1 Trench 4

2017 results summary

Trench 4 was deturfed in 2017 as it became clear that the preservation and stratigraphy in Trench 2 was not complex. Trench 4's location to the east of Trench 2 on the lower terrace at the base of the steep slope from the upper terrace provided an opportunity to explore the depth and preservation of deposits elsewhere on the site and contrast them with results from Trench 2 where deposits were shallow and heavily disturbed by rhododendrons. In 2017 excavation halted at the base of the topsoil layer having ascertained that a deeper topsoil deposit had formed in this area of the site and archaeologically significant deposits were exposed underneath, indicating preservation was likely to be better in this area. In the east of the trench the upper stonework of the central enclosure rampart was visible. It consisted of coarse, large angular stone work (402) and was concentrated on the east side of the trench. At this level it had no clear arrangement. Overlying this across the trench was the topsoil, below a layer of vegetation mulch. The topsoil (401) was a mid grey brown silt layer with flecks of charcoal and burnt bone. It contained lots of animal bone, teeth, claws and horns, metalworking waste, crucible fragments and a spindle whorl. There was a significant amount of root disturbance in this area but it was not as heavily impacted by rhododendron roots as Trench 2. The excavation of this trench, although unfinished, implied that there was potential for informative archaeological deposits underlying the topsoil and that this area is richer in material culture than elsewhere on the site. Therefore a revised SMC application (Strachan and MacIver 2018) was submitted to gain consent to excavate a larger area 4m by 12m around the original Trench 4 extent. In 2018 and 2019 the trench was extended to better understand this area of metalworking activity and any structural components in a larger open area excavation.

Stone revetted platform [405]

In the southwest corner of the trench (2018) a possible pit or hollow with dark charcoal rich soil filled with animal bone was identified (416). This was under a small stone revetted platform measuring 1m by 2m across the top surface. It was placed up against the vertical bedrock face and at the front edge had a small stone revetment wall [405] 2-3 courses high, composed of rough angular stones and small boulders (Plate 1-2). Below this was a rough kerb [408] comprised of five rough angular boulders c. 0.4m by .3m revetting (411), mixed grey-yellow brown silt (411) with frequent stone and animal bone. To the east of this edge a tumbled spread of angular stone (404) 0.25m by 0.15m demonstrated where some stones from this structure had collapsed

down the slope. On the surface of the platform a thin layer of ashy charcoal rich silt with patches of bright orange demonstrated that burning had taken place on the platform (Plate 2). Overlying this structure was a thin 0.05m thick layer of topsoil (401).

Upper citadel enclosure wall (402)

The upper citadel wall consists of a low wall, characterized by a spread of rough angular stones, visible running around the edge of the upper part of the hill. A genuine entrance gap c. 2.5m wide is visible at the north approach to the site. A sloping terrace or rough track leads down to another possible entrance in the western enclosure wall and into the middle terrace. On the south of the upper enclosure another gap is visible in the low wall, also a possible entrance through which the middle terrace can be accessed down a steep slope. The wall itself was excavated in Trench 3, 5 and 4. In Trench 3 a rough inner kerb was identified and the outer face was confirmed to have slumped and likely eroded off the hill. Here the wall seemed quite substantial, indicating that the entrance here was likely the main or primary entrance. In Trench 5 an inner kerb consisting a single course of angular stone was identified within the trench, the wall tumble here was low and unsubstantial and directly overlay natural subsoil and bedrock. In Trench 4 the wall was slightly better preserved than in Trench 5 but not as substantial as Trench 3. Directly under the topsoil a mixed spread of angular stone with no clear arrangement was identified. Once the tumbled stone was removed a clear rough kerb consisting of a single line of medium stone was identified (Plate 3) (similar to the same wall identified in Trench 3). The outer kerb was tentatively identified off the side of the hill, outwith the trench, forming a c.4m wide wall from kerb to kerb. No evidence of a palisade or timber component was identified in the tumbled remains of wall and the material lay directly over natural subsoil.

Old ground surface (406)

Within the larger Trench 4 in 2018 and 2019 a compact ground surface was identified across most of the trench. It consisted of compact yellow brown silt with grey brown mottling and charcoal flecks throughout. Stone settings and a large hearth setting forming components of a large structure were set on top or slightly within this horizon and several test pits confirmed that an undisturbed sterile natural yellow brown clay (433) was below it. Underlying this was a sterile, compact grey yellow clay (434) or bedrock.

Kerbed hearth setting [410]

On this compact surface (406) was a stone kerbed hearth setting [410] (Plate 4, Figure 4 - 5) which comprised a rectangular setting of upright stones, partially exposed in the trench in 2018 and fully exposed in 2019. It measured c.1.5m by 0.75m with 0.4m deep deposits of ash within it. A small section of this was excavated to better understand the deposits and use of the hearth. Underlying the basal hearth layer was the same sterile natural seen in other areas across the trench a compact clay (434) overlain by a sterile yellow brown clay (433). At the base of the interior of the hearth setting was bright orange silty heat affected silt (415) (similar to 406). Over this was the basal fill of the hearth (414) composed of white ashy fill with frequent burnt bone about 0.15m thick. This was sampled in 2018 and a radiocarbon date obtained indicating the burning activity dated to 550-645 calAD. The middle fill of the hearth (413) was a 0.15m thick layer of dark black brown ash with very frequent fragments of animal bone. Within this layer an antler artefact (SF 4253) was found which has been provisionally interpreted as a fire rake. Over this was the upper ashy fill of the hearth (412) composed of a 0.1m thick layer of orange-black white ash with frequent burnt bone fragments. This was evident flush with the top of the kerbed setting. Overlying the setting was a more mixed amorphous spread of silt with frequent small rough flat angular stones and patches of ash (409). This could represent a closing layer over the top of the hearth setting or even a rough final use of the hearth using new base stones to set the fire on. Overlying this on the southern end of the hearth was a secondary stone kerb [420], mainly comprised of a long end set stone which matched up roughly with the higher northern end of kerb [410] (Plate 5, Figure 3). These stones together

formed a secondary hearth overlying [410]. Within this kerb was (409) the latest use of the earlier hearth and overlying this was a mid yellow brown charcoal rich ash deposit (419) with frequent animal bone. After the area around the hearth was cleaned onto (406) four small post settings were identified around the hearth. Two postholes, [435] and [441], were on opposite sides of the hearth and were circular in plan and measured roughly 0.2m in diameter and 0.15m deep. Two other postholes, [437] and [439], were opposite each other at the northern end of the hearth and were larger at 0.4m by 0.25m. Their shape in plan and profile suggests these were once smaller postholes but later recut to reuse and repair whatever they held. These postholes likely represent some sort of apparatus related to the use of the fire, perhaps a spit to roast joints of meat or whole animals on, relating to the substantial quantities of animal bone found in the hearth deposits.

Structure

At about 1.5m west of the reused hearth settings a series of four small stone settings [417], [418], [431] and [432] was identified running in a roughly north-south alignment (Plate 6). These consisted of small clusters of stones with at least one upright set in stone and are likely to have formed the base setting for small-medium 0.25m x 0.35m posts related to the structure that once enclosed the hearth setting. The alignment of these running parallel to the rectangular hearth setting, combined with the available space on the terrace between the bedrock face and the enclosure wall (402) implies that this structure was rectangular and approximately 5-6m wide. The north and south ends of the structure were not identified within the trench and the terrace extends c. 4m to the south and another 8m to the north. Between the stone settings and the bedrock face at the west of the trench edge a c. 2m wide band of dark brown loose silt was identified running roughly parallel with the outside of the stone settings. It contained frequent small stones and medium angular flat stones and while these did not look placed or in situ it is possible that the material relates to a degraded turf deposit from what was once a structure wall (Plate 7). The eastern edge of the structure was completely removed by later spade dug cultivation consisting of closely spaced rig and furrow. These were only easily identified towards the base of the cuts. At least five furrows [422], [424], [426], [428] and [430] were identified running SE-NE across the eastern half of the trench between the enclosure bank and the hearth setting (Plate 8). Furrow [430] was fully excavated to confirm it stopped short of the hearth setting, perhaps providing some explanation for the battered looking condition of the kerb stones in this location. The rig and furrow appeared hand dug with a spade used to split the furrows multiple times, indicating reuse of the south-facing terrace with rich fertile soils and explaining the very narrow distance left between the furrows (Halliday pers comm). Some fragments of later medieval or post-medieval ceramic were identified within one of the furrows. The evidence of cultivation for a market garden or similar also explained why this area of the site was covered in a deep rich deposit of undifferentiated topsoil (403) and (401). It seems likely that this later disturbance has moved material around and explains why there is a concentration of material from around the hearth which itself remains relatively undisturbed but everything else is slightly out of situ. The later substantial root action from trees and extensive rhododendron growth have exacerbated this situation.

Hillwash/Cultivation zone (403)

Overlying the hearth, stone settings and remains of rig and furrow was a 0.3m-0.45m deep layer of undifferentiated yellow brown silt. This was initially interpreted as hillwash or a heavily root disturbed 'overburden' however the later identification of the rig and furrow cultivation on the flat terrace means that this material represents a ploughzone or cultivated soil, particularly in its eastern extent. Similar material upslope where there is no evidence of cultivation disturbance is impossible to tell apart but more likely continues to represent hillwash and root disturbed areas (Figure 5). This material was composed primarily of

loose yellow brown silt similar in composition to the topsoil (401). It was heavily root affected and hard to differentiate any stratigraphy within it. The depth and quantity of this material in this part of the site is notable considering the thin or non-existent nature of the topsoil elsewhere on site where bedrock is close to the surface. The material is clearly abutting the central fort enclosure wall, indicating it has built up post wall construction. The quantity of material and the finds coming from it could indicate it represents very mixed remains of a structure with a turf component in this approximate location but it has completely degraded and been subject to significant bioturbation and cultivation disturbance. Samples were taken upslope from the hearth setting to assess this to characterize and understand the formation and origins of this material where it is not clearly related to cultivation disturbance. Within the layer a significant quantity of finds were noted including crucible fragments, stone moulds, clay moulds, glass beads, iron objects including blades and shears, stone tools including whetstones and much more. A notable concentration of metal blades came from immediately around the hearth whereas metal working debris was found more generally across the trench. The presence of the small stone revetted platform up against the bedrock could indicate a place where craft activities took place as well as activity situated around the hearth within a structure.



Plate 1 Small revetted platform [405] up against bedrock with kerb [408] below



Plate 2 Platform [405] with heat affected layer (407) on the surface



Plate 3 Inner kerb of bank (402) on edge of hill



Plate 4 Lower hearth setting [410] with small postholes



Plate 5 Upper hearth setting [420] (left) overlying and reusing elements of [410]



Plate 6 Western edge of structure with line of post settings [417], [418], [431] and [432]



Plate 7 Band of material possibly related to remnants of a degraded turf wall (444)



Plate 8 Basal remains of rig and furrow spade dug cultivation visible in the eastern edge of the trench



Plate 9 Volunteers getting a site tour of Trench 4

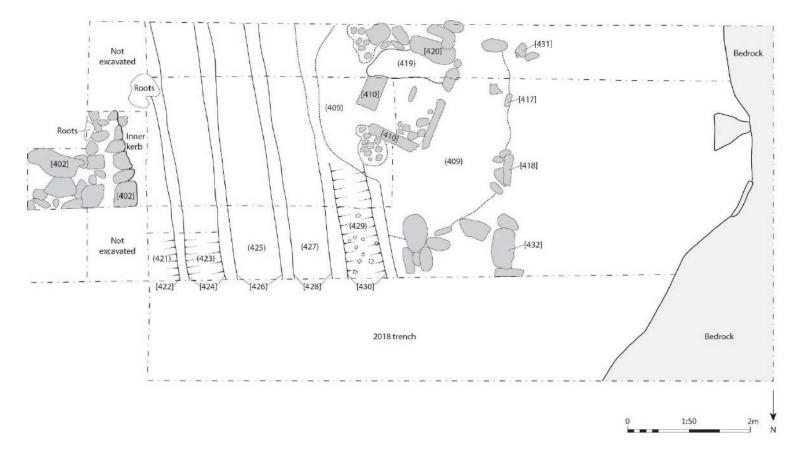


Figure 3 Mid-excavation plan of Trench 4 (2019)

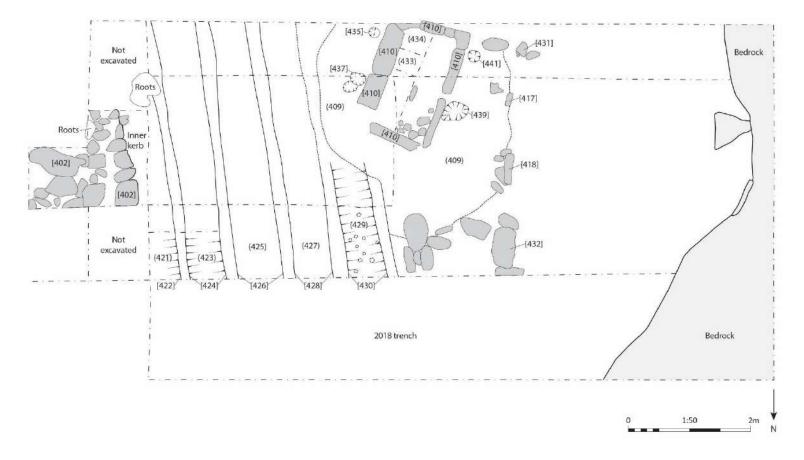
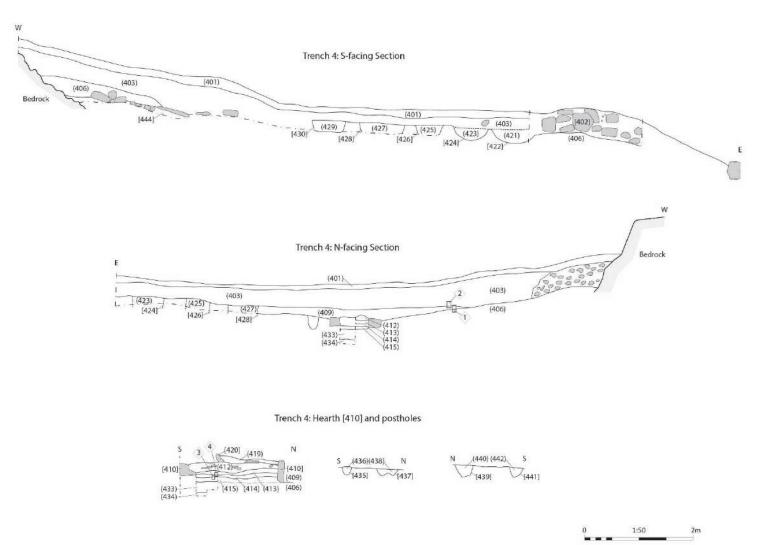


Figure 4 Mid-excavation plan of Trench 4 (2019)





5.2 Trench 6

Trench 6 was located on the interior of the middle terrace in the western enclosure. The western enclosure banks were investigated in 2017 and 2018 and charcoal from a posthole forming part of the bank enclosing the western terrace was dated to 435-642 calAD, indicating an early historic phase to construction and activity on this part of the site. Trench 6 was proposed as an opportunity to explore the depth and preservation of deposits and contrast them with results from Trench 2 where deposits were shallow and heavily disturbed by rhododendrons and Trench 4 where the deposits had accumulated and were rich in material culture. It also provided an opportunity to define what types of activities were taking place within this enclosure.

Trench 6 was laid out northwest to southeast measuring 10m by 3m. Topsoil across the site was a loose medium brown sandy silt (601) with burnt bone and charcoal flecks and extended to a depth of 0.8m at the east end and 0.4m at the west end (Figure 8). Like Trench 4 this area was located on a gently sloping or flat terrace and the overlying deposit was rich in material culture including flint flakes, ceramics, crucible fragments, a stone ingot mould and a glass bead. Slag indicated more metalworking activity areas in the vicinity in the initial 2018 results.

Hearth [605] and [610]

An activity horizon or occupation deposit was identified at a consistently similar depth across the trench (Figure 6-7). On the southeastern end of the trench a roughly rectangular slumped stone setting [605] and [608] measuring roughly 0.6m by 0.3m was identified (Plate 10) eroding off the edge of a steep bedrock face. This was interpreted as a small stone hearth setting due to its shape and the burnt orange heat affected and charcoal rich deposits (607) within and under it. Another heat affected deposit (609) was also identified within and around the hearth and included fragments of slag and smithing hearth bottom and an orange brown clay silt (613) with metal objects and slag was also identified underlying (607) in this part of the trench. These deposits and the stone hearth structure all overlay a steep natural bedrock face (604). Tree roots and this steep foundation layer could account for the slumped nature of the structure. Due to the location of the hearth within Trench 6 it was not possible to identify if it was placed within a structure or not but the quantity of metalworking waste could indicate it is part of a workshop or craft production area.

Hearth [617] and [606] within small structure

In the northwestern end of Trench 6 the deposits were much shallower due to the thinning out of hillwash/topsoil deposit as the natural slope levelled out to a flatter terrace. In the west corner of Trench 6 another hearth was identified at a comparable horizon to hearth [605]. Hearth [617] was a well-made rectangular stone hearth (Plate 12-13) formed of a kerb of large angular stones approximately 0.2m by 0.3m in size with large flat stones across the base. The hearth measured 1m by 0.8m but was not fully exposed during excavation. Overlying this was a charcoal rich ashy deposit (612) with a large circular patch of bright orange heat affected material in the middle. This fill was contained within a later stone kerbed hearth sub-rectangular in plan [606] (Plate 11), measuring 1.25m by 0.8m and defined by rough edge set kerb stones mirroring the rough footprint of the earlier underlying hearth [617].

The earlier hearth [617] itself sat on a bright orange heat affected layer with some charcoal inclusions (623) and was associated with occupation layer (618) a dark grey brown loose silt with frequent charcoal, burnt bone and lumps of clay extending around and abutting the hearth stones. The hearth above it [606] was associated

with an occupation layer overlying (618) a more compact dark grey brown silty clay (616) with lots of charcoal localized on the north east side of the trench.

This series of hearths was right at the trench edge but appeared to be situated in a structure defined to the north and northeast by a small stone wall one stone wide with up to three courses of stones [610] (Plate 11). This formed a deposit of distinctive larger flat stones arranged in a roughly U-shaped structure set into (602) an upper occupation deposit. Several metal objects and slag were found in this area perhaps indicating the hearth was used for metal working and the structure could possibly form some sort of workshop. The overall extent of the structure remained unclear as it extended out with the trench and there was no clear evidence for a return to the wall to the south or east. Tumbled stones (611) were more prevalent in this area than in other parts of the trench, reinforcing the interpretation that this hearth sat within what is now an almost completely collapsed structure.

Possible hearth [614] and surface (615)

In the middle of the trench a series of larger flatter stones were identified in a line and interpreted as a possible setting. It is not clear exactly what this relates to as it extends outwith the trench but it looks as if this could be another roughly rectangular hearth setting [614] measuring c. 1.2m in length and containing a charcoal rich fill (620) with patches of ash and orange heat affected material throughout. Abutting this to the north was a deposit of small mixed angular stones (615) within a loose grey brown silt matrix (621) which contains charcoal and burnt bone. This could be very rough remains of a surface but it was very disturbed by tree roots and bioturbation (Plate 14).

Trench 6 was situated to investigate activity within the middle terrace and uncovered the remains of at least three different hearths, all likely associated with metalworking. Several appeared to be within ephemeral remnants of structure(s), perhaps indicating a series of workshops or craft production zones.



Plate 10 Post-excavation of hearth [605]/[610]



Plate 11 Mid excavation of hearth [606] with possible structure wall [610] in foreground



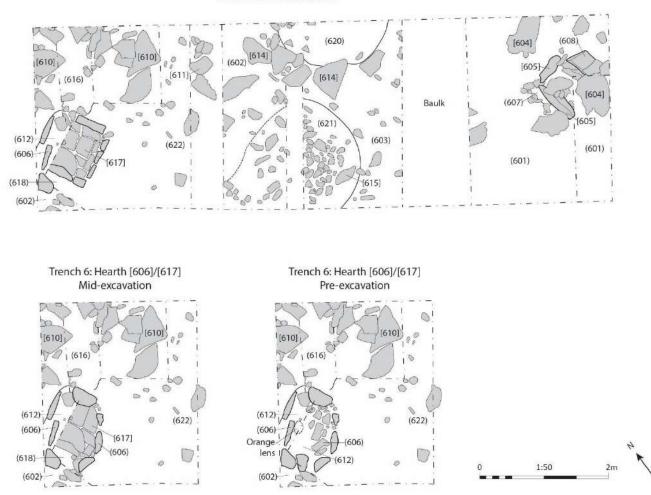
Plate 12 Hearth [617] emerging beneath hearth [606]



Plate 13 Post-excavation of hearth [617]



Plate 14 Mid-excavation of possible rough surface (615) (left) and setting or hearth [614] (right)



Trench 6: Post-excavation

Figure 6 Post-excavation plan of Trench 6 with overlays of hearth [606]/[617]

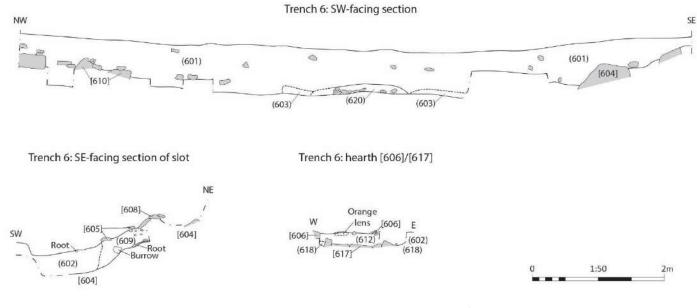


Figure 7 Sections of Trench 6 and hearth setting [606]/[617]

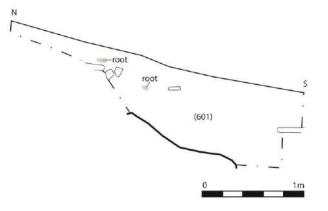


Figure 8 West facing section of Trench 6 showing depth of bedrock

5.3 Trench 7

Trench 7 (Figure 9-10) was investigated to understand the eastern enclosure bank at the base of the hill. At the north-western end of the trench a flat terrace of bedrock (7015) was exposed 0.2m-0.3m below a forest loam.

Structural rampart/bank [7002]

The bank looked quite substantial prior to excavation but it became apparent that the bank itself was situated on a steep abrupt change in the natural bedrock which enhanced its appearance. The bank [7002] measured about 1.15m high and comprised a substantial outer boulder kerb [7014] and an inner stone kerb [7004] comprising 2-3 stone courses with some possible evidence of refacing. The inner and outer kerbs were located c. 2m apart. Within the kerbs at the base of the bank an orange redeposited silty material (7011) was present, likely representing an old ground surface overlying a natural yellow silty clay subsoil (7016). Over this a lens of grey brown silt (7010) with possible organic material and charcoal inclusions was identified. The rest of the bank core was made up of a series of redeposited naturals with frequent angular stone or rubble (7009, 7008 and 7003). No palisade or timber component was visible along the top of the bank but upper deposits had been disturbed in places by rhododendron growth.

Activity within the enclosure

Material had been deposited in a hollow up against the inner edge of the bank between the natural bedrock (7015) and the inner kerb [7004]. Over the natural subsoil and bedrock there was a very compacted charcoal rich deposit (7013) with frequent slag inclusions and heat affected clay hearth or furnace lining. This represented a discrete dump of metalworking waste indicating metalworking had been taking place nearby. Overlying this was (7012) a 0.2m thick compact orange brown deposit containing frequent charcoal and slag. An orange brown silt and gravel with frequent charcoal, ceramics and slag (7005) extended from the inner kerb to the north overlying the bedrock. Over the whole trench was a 0.15m thick topsoil (7001).

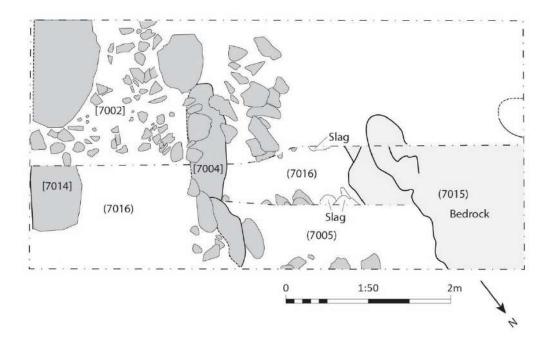
Finds from the trench indicated substantial metalworking was taking place in this part of the site, in keeping with activity identified further up the hill within the western enclosure and upper citadel. The upper layer included other material such as ceramics indicating an occupation or activity layer in this region after the construction of the bank.



Plate 15 Volunteers from UHI excavating the metal working waste dumped on the interior of the bank



Plate 16 North east facing section of bank [7002]





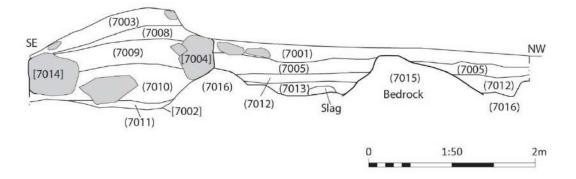


Figure 10 Northeast facing section of Trench 7



Plate 17 Dave holding up the decorated spindle whorl from Trench 4 (SF4060)



Plate 18 Fragments of E-ware representing bowl and jar vessels



Plate 19 Detail of the decorated spindle whorl (SF4060)



Plate 20 Iron angle backed knife blade (SF4099)

6 ASSESSMENT OF THE 2018 FINDS ASSEMBLAGE

The finds from 2017-2018 have been catalogued and stabilised. The assessment of the 2019 finds assemblage is ongoing; Dr Dawn McLaren and Dr Andy Heald are working in collaboration with Dr Ewan Campbell (University of Glasgow). The initial findings of the 2018-2019 finds work are presented here, the 2019 finds assemblage reflects similar material to the finds from the first few seasons of work on the site. Additional 2019 finds include more metal blades, iron objects, ceramics, possible gaming pieces, crucible fragments, slag and furnace base, moulds and animal bone and antler finds. Further analysis and work will be required.

Initial examination of King's Seat Artefacts, 2018

Bone

The bone assemblage consists of several bulk finds and eight small finds of animal bone, encompassing fragments of burnt bone, unburnt bone and animal teeth and horn. These need to be examined by a faunal bone specialist (Jack Robertson) who will be able to identify this material further, where possible. Majority of teeth appear to be those of sheep/goat.

Vitrified material

Seven finds (encompassing 13 individual pieces) of vitrified material were retrieved from Trench 4 and Trench 6. The fragments include possible plano-convex cake fragments, unclassified iron slag and low-density glassy slag (possibly vitrified ceramic). These will need to be studied further after washing to establish if these can be more closely identified. Initial examination does not indicate a particular stage in the ironworking process (e.g. smelting or smithing) but is conclusively evidence of ironworking. Any bulk samples are to be processed and scanned with a magnet for micro-debris (e.g. hammerscale).

Lithics

Sixteen small finds (28 individual pieces) of chipped stone were recovered from Trench 1, 4 and 6. The material includes grey and honey-coloured Buchan flint, chert, agate, ?carnelian, and quartz, and a single fragment of rock crystal. The majority of the fragments are chunks and flakes but a small number of worked lithics are present: a possible core, a possible scraper and at least 1 flake. These will need to be examined in more detail, catalogued and reported on by Rob Engl but the diagnostic fragments are undoubtedly early prehistoric.

Coarse stone

There are 45 items of stone which include a surprising number of bar-shaped whetstones and possible whetstones used for maintaining and sharpening metal blades, including two joining fragments (SF 4063 & 4048): SF 503, SF 4048 & 4063, SF 4070 (Plate 24); SF 4143 x 3; SF 4151. Most of these whetstones have been produced from elongated ovoid water-rounded cobbles, presumably fairly locally sourced. With the exception of one bar-shaped stone (SF 4151) which has been carefully shaped and smoothed prior to use, the cobbles were not modified prior to their use as whetstones. The quantity of whetstones from Trench 4 is worthy of note, not just because there are so many but because this area seems to be the focus for metalworking activities. The presence of so many whetstones bolsters this interpretation. In this context, the possible hammerstone/anvil (SF 4080) and the crucible stand (SF 4032) (Plate 20) are also worthy of mention. The former is a robust elongated bar-shaped cobble with concentrations of peckmarks, pits and gouges over a couple of the surfaces and fractured ends, probably used as both a hammerstone and a working surface. The latter, is a flat ?whinstone block with a central smoothed, round-based hollow in its interior (Plate 20). The

smoothness of the interior of the hollow and its round base suggests two possibilities for function: a pivot stone or a crucible stand. Its interpretation as the latter is based on the heat-affected appearance and traces of residues in the interior that are worth analysing for metallurgical residues; a similar item is known from Dunadd. Both were almost certainly used in conjunction with metalworking or the associated crafts going on in Trench 4. This is confirmed by the discovery two ingot moulds (SF 4157 and SF 617), consistent with those found in 2017. One (SF 4157) has been made on a rough slab of the outcropping schist native to the site and is unfinished and unused; the other (SF 617) (Plate 13) has a short bar-shaped matrix and has broken across a second matrix adjacent to this. It's unlikely there will get any positive results from the XRF analysis of these ingot moulds.

Also present are a number of spindle whorls suggesting textile production: 2 fragments of disc-shaped whorls (SF 4074 & 601) and 1 complete disc-shaped whorl (SF 401). They all appear to be made of sandstone which may not be local to the immediate area. (see also ?ceramic biconical whorl below). The complete disc-shaped whorl has interesting scratch marks around the central perforation, perhaps marking out lines for the placement of the whorl.

Possible gaming pieces are represented by small oval water-rounded pebbles, plano-convex in shape and polished from rubbing on one face: SF 4153, 4096 (x2) and 607. Also, consistent with finds from 2017.

The other finds are more generic and not chronologically distinct. These are a pounder (SF 1025), a disc-shaped weight (SF 505), a disc-shaped stone which has possibly seen use (SF 4149), a smoother for hide processing (SF 4105), a saddle quern or grinding stone (e.g. not necessarily for grinding grain but something else, SF 504), a fragment of a perforated stone (SF 4059) and a possible quern (not convinced; SF 4085).

Stones SF 604, 4065, 4159, 1027, 1022, 4147, 1019, 203, 4082, 502, 4052, 1024, 1025 appear natural to but will need to be examined after they have been washed.

Ceramics

Eware

A total of ten sherds of E-ware from multiple vessels were recognised (Plate 14). All but one of the sherds are from Trench 4, the other is from Trench 6. Dr Ewan Campbell has confirmed that these are indeed imported E-ware and has recommended that the sherds should be washed prior to further analysis and the profiles of each of the identified vessels will be illustrated to accompany publication, where possible.

Crucible fragments

Thirty crucible fragments (24 small find numbers) are present. None are intact but it is likely that re-fitting sherds will be identified during analysis. Various forms and sizes of crucible are recognised: large, tall, bag-shaped crucibles (e.g. SF 4138) suggest from the volume that they would have contained the casting of larger copper alloy objects; spouts from possible triangular and hemispherical fine walled crucibles (e.g. SF 4088), small, short hemispherical crucibles (e.g. SF 4140); and small bag-shaped, fine-walled crucibles (e.g. 4110) including one with a substantially intact profile and globules of adhering residues that could indicate the casting of silver (Plate 21). A programme of surface XRF analysis of the crucible sherds will be required to confirm the composition of the alloys being worked but the possibility of both bronze and silver working is indicated. This re-enforces the impression of the site as one of high status, comparable with the assemblages at Dunadd, for example.

These crucible fragments should not be washed prior to xrf analysis; a selection should be illustrated to accompany publication.

Mould fragments

Seventy-four fragments of possible ceramic moulds were recovered, most from Trench 4. The majority of the pieces are amorphous weather-rounded heat affected clay; further analysis may identify surface features which will help to identify the objects being cast and the methods of production. The colour and fabric of the clay is consistent throughout the assemblage suggesting that these are mould fragments rather than pieces of daub but, again, further analysis is required to confirm this. Five fragments have clear impressions: one (SF 4100) has a triangular keying mark; one (SF 4123) is potentially from a penannular brooch (Plate 17), similar to examples from Dunadd, Mote of Mark and Portmahomack, inter alia; two (SF 4114 & SF 4160) are matrices for pin shanks; and SF 4078 preserves the edge of a matrix for casting a ring-shaped brooch frame or simple ring.

XRF analysis of mould fragments has not been proven to be particularly successful in identifying the alloy being cast (Heald 2010) but those with recognisable matrix surfaces surviving should be analysed for any surviving residues. The fabric(s) used should be examined and classified and the categories of objects being cast should be analysed and illustrated to accompany publication.

Other

A biconical spindle whorl (Plates 12, 15), intact, but currently coated in soil came from Trench 4 (SF 4060). The surfaces have been decorated by a repeating geometric design and is consistent with an early medieval date. Like the stone example, it demonstrates the processing of wool and possible textile production on site.

Glass

Early medieval glass objects are present in the form of three glass beads and a translucent mustard yellow beaker sherd. Two possible glass gaming pieces, one almost certainly of Roman origin, are also recognised. Examination of the glass beads by Ewan Campbell confirms that all four are consistent with Anglo-Saxon bead forms: biconical blue bead (SF 4116) (Plate 22); Yellow/red cylindrical bead fragment (SF 603) and an opaque green glass bead (SF 501). All three have been produced by winding strips of molten glass around a circular-sectioned iron wire and then re-heating to smooth and form. Traces of the iron rod the glass was formed around survives on the internal surface of the perforation. The vessel glass (SF 4135) is from a blown glass beaker of Anglo-Saxon form (Plate 23). The glass gaming pieces are simple oval droplets, plano-convex in section. One is made from a translucent blue glass and is either Roman in date or has been made using recycled Roman glass; the other (SF 4077) is much smaller and made of opaque white glass.

A combination of XRF analysis and SEM analysis of a sample of the glass would have the potential to closer identify the composition of the glass used and allow direct comparison with contemporary examples from across Britain.

All the glass should be illustrated (hand drawn and photographed) for publication. The biconical glass bead would benefit from conservation to rejoin but this would be better undertaken after sampling, should XRF/SEM work be pursued. Cleaning of the surfaces of beaker should also be undertaken by a conservator.

Metal

Iron

There are 30 iron objects (recorded under 25 SF numbers) including five probable knife blades (SF 4056, SF 4099, SF 4121, SF 4132, SF 4139). One is substantially intact and shows a clear angle-backed form typical of early medieval knives (Plate 16).

All of the iron objects will need to be x-rayed prior to further analysis and a selection may benefit from conservation to clear and stabilise, as well as illustration to accompany publication. Items that stand out even in their current condition include: a possible socketed tool or spearhead (SF 4144) that appears to be substantially intact; an intact conical ferrule (SF 4125); a slide key for opening a padlock (SF 4087); a robust handle or fitting with nail in situ (SF 4062); the arm of a small set of shears or snips which could have been used to cut hair, textile, hides or even sheet metal (SF 4097); and a robust tapering bar that is probably a chisel or similar tool (SF 4127). The metal assemblage collected from the 2017 and 2018 excavations at Kings Seat are comparable to assemblages from Dunadd, Mote of Mark, Dundurn and Buiston.

All of the metal recovered on site looks ancient apart from the copper alloy button (see below) and a drawnwire (SF 4141) that appears to be modern fence.

Copper alloy

A single copper alloy object is recognised amongst the assemblage in the form of a plain disc-shaped brass button with looped attachment on the reverse face (SF 609). It is 19th/early 20th century in date. No further work on this item is recommended.

7 DISCUSSION

The excavations at the hillfort of King's Seat have produced a good basis for understanding the use, construction and occupation of the site, in addition to later remodelling of some of the features. This work will be essential to reinterpreting the site and informing the post-excavation programme.

The excavation revealed the character and differing construction of several of the enclosing ramparts on the west of the site and the low wall enclosing the upper central section of the site. The upper two of three ramparts on the west of the hill were substantial earth and stone banks with rough large boulders forming major elements of the construction material. The upper rampart had a timber component at the back, demonstrated by two substantial postholes. One of these postholes contained material that was radiocarbon dated to the 5th-7th centuries AD, implying an early historic phase of construction on the site. The mid rampart had slumped off the hill obscuring an outer stone face which had collapsed beneath it. Later construction or modifications to the lowest rampart or terrace on the west of the hill was noted, it is possible this structure was built primarily as a kerbed trackway to access the site in the Victorian period. The central upper enclosure was a much lower less substantial structure with a more defined stone face on the inner edge, forming a more coherent formal wall. This differing construction could suggest a level of phasing in the construction of the site.

The excavations within the central enclosure in 2017 highlighted the shallow nature of the deposits on the upper terrace and the significant impact that the rhododendron growth has had on these areas at the summit of the hill. The lack of stratigraphy on the site around the upper terrace and the rock cut features in the bedrock could indicate that at one time this upper area of the hillfort had exposed bedrock and the thin deposits there in the modern day are more recently formed. The rock cut features, quarrying and stone setting at the base of the slope all indicate activity on the site. Additionally, metal working waste, crucible fragments and stone moulds, including ingot moulds, indicate both iron and precious metal working was taking place on the site. Two of the stone moulds, with a mirror shape, bear similarities in form to stone moulds found at sites such as Portmahomack, Tarbat (Carver 2016 275) and Garranes, Ireland, (O'Riordain 1942) amongst other locations. These could indicate early historic activity on the site which would be in keeping with the two radiocarbon dates and other more diagnostic artefacts. Several of the stone mould fragments were discarded and reused as bank material in the central enclosure, indicating a level of reworking of the banks occurred during or after some of this metalworking activity took place.

Further work in 2018-19 at Trench 4 on the interior of the central enclosure revealed structural evidence on a small flat terrace on the east of the hill. The features identified included a kerbed hearth setting packed with animal bone and multiple ash rich burning events. The lower fill of this hearth was radiocarbon dated to the 6th-7th centuries AD, confirming an early historic phase of use. A small revetted platform with a burning event on it was also identified nearby. These features likely form components of larger structures present on this part of the site perhaps related to metalworking and prove that an open area excavation strategy on the interior has been important. The work in 2019 confirmed the presence of a line of stone settings, likely relating to a large rectangular structure on the upper central enclosure and remnants of a possible turf wall or bank were identified. Later disturbance through rig and furrow cultivation have truncated a large element of this structure and resulted in a thick deposit of undifferentiated material overlying everything in this area of the site. The work on the interior of the site has enabled the identification of both structures and craft production activities taking place within the fort and confirmed an early historic phase of activity on the site, covering several of the main objectives in hillfort studies identified by SCARF (2015 HES).

The quantity of material culture from this area also highlights the concentration of a range of activities involving precious metal working, iron working: particularly production of blades, textile processing and possible animal butchery. Animal bones and horns indicate animals were being processed on the site, whether this was for domestic purposes, feasting or related to craft activities taking place remains to be seen. Post-excavation work

on the animal bone assemblage will address this. Evidence of prestige items such as E-ware table ware including jar and bowl vessels, several Anglo-Saxon glass beads and a fragment of an Anglo-Saxon drinking vessel could demonstrate broken fragments or casual losses from a community with wide ranging trade links to east, west and south. The E-ware, particularly the bowl form, indicates a high status site and pushes the distribution of Eware in Scotland further northeast than previously recognised. A significant number of sherds have been identified from both Trench 4 and 6 and so the final numbers of sherds will be higher than 11, more than many sites in Scotland. The quantity and type of this continental import also prompts a reconsideration of the trade of this material, perhaps indicating trading further afield than previously thought from the sources in the western seaboard or even identifying 'new' trade routes coming up from the south/east by land or sea. The Anglo- Saxon material including a fragment of Kempston glass drinking beaker combined with this high status table ware indicates consumption on the site, either related to important people settled on the site or transitory activities including feasting. The number of metal blades identified around the hearth packed with animal bone could be related to these activities. Identification and a better characterisation of the structural evidence on the site has indicated a large structure was present in the upper central enclosure, in contrast to the smaller ephemeral structures and multiple hearths identified in the western enclosure. It is possible the upper central enclosure housed some sort of gather place and hall in contrast with the western enclosure which seems to have had a particular focus on metalworking and small workshop/craft production areas. In addition to the extensive evidence for iron and precious metalworking there are a notable number of spindlewhorls indicating possible textile production, fragments of leather, animal bone and some of the metal objects may be related to leather working and other crafts taking place on the site. In contrast the area of the eastern enclosure investigated in 2019 was limited but confirmed the presence of metalworking at the base of the hill as well as occupation deposits, indicating activity extends beyond the immediate upper central enclosure. Dating of material from the workshop hearths in the western enclosure and the metalworking waste from the eastern enclosure should clarify the chronology in relation to the western bank and the upper hearth. The glass items on the site indicate both trade and contact with the Anglo-Saxon kingdoms to the south in the form of the unusual beads and also a reuse or recycling of perhaps locally available materials such as Roman glass items being converted into gaming pieces.

Considered together, the material culture recovered from site, is hugely important and clearly indicates in situ high status early historic activity on site. While it seems obvious to the modern archaeologist that some sort of elite would have controlled if not occupied hillfort sites, it is still rare for such sites to produce such a wealth of evidence (Heald 2010). That evidence for ferrous and non-ferrous metal working was identified in every trench across the site in 2017-19 certainly suggests that the site was hugely important in the production of prestige metalwork, and similarly to sites such as Dunadd, may have been a centre of production. The metal working assemblage from the site so far has strong parallels in other significant Scottish Early Historic sites such as nearby Dundurn and Clatchard Craig. Clatchard Craig in Fife is a site with similarities to King's Seat in both structural and material culture terms. It is a multi-vallate prehistoric fort with later early historic reworking and reuse involving precious metalworking. Clay moulds and crucible fragments from this Clatchard Craig, as well as a silver ingot, could indicate similarities with metal-working activities at King's Seat. Further afield sites such as Buiston crannog, Dunadd and Mote of Mark, among others, have strong parallels in terms of finds assemblages, in particular those demonstrating metalworking and production and the presence of E-ware. It is worth bearing in mind that a lot of the metal working debris has been recovered from across the site in an upper disturbed layer. The likelihood is that this originates from a central place or places of production on the site, and indeed material appeared more concentrated around the hearth settings. The recovery of material from across the site is a product of the substantial disturbance of tree and rhododendron roots encouraging and creating erosion combined with spade dug cultivation from more recent times contributing to mixing of deposits.

Early historic occupation or activity is a definite likelihood on this site and would fit with the site's reputation as the King's Seat or the site of the 'Fort of the Caledonians' (ie Dun-keld). This is supported by both the material culture recovered from the site, but also the type of hilltop used. Very generally, early historic forts appear to favour such limited outcrops, where occupation and activity is difficult. This is apparent at known dated examples such as Dunadd (Lane and Campbell 2000) and Dundurn (Alcock et al 1989). Comparisons can also be drawn with the feature on Dundurn known as St Fillan's Chair, where a wide ledge has been sculpted from an outcrop. Alcock describes the "effect is that of a rock seat" and "given that the eminence is widely visible from the valley floor, it is not fanciful to suggest that we have here an inauguration seat for the rulers of Strathearn (Alcock 1989, 198)." This feature could be mirrored in the glacial erratic with holes drilled into it at the summit of King's Seat. Dundurn, Dunadd and King's Seat all share similar characteristics including topographic location, hilltop morphology, working and utilisation of exposed bedrock outcrops. An early historic use of the site can therefore be suggested and dating will aim to further substantiate this. However that does not preclude an earlier origin for the site in the prehistoric period. While Early Historic forts do contain multi-vallate banks, this is more common to Iron Age forts. The King's Seat is similar in that respect to Moredun, where the majority of dates fall between 4th to 3rd centuries BC (Cook at el 2017), and represent a site type perhaps more typical of this period (Halliday pers comm). Dating material from the base of the banks would allow a more refined chronology to be created to better understanding the phasing and use of the site over time however this can only be done if suitable material is recovered from the samples. Dating of the hearth in the upper central enclosure has been valuable to confirm that the internal activity is early historic and further dating of the other hearths and the discrete metalworking deposit on the interior of the eastern enclosure will aid in understand the phasing of this activity in relation to the construction of the enclosures themselves.

SCARF highlights that the lack of evidence for activities within enclosed sites, due to limited work in enclosure interiors, is a severe constraint in hillfort studies, as are the difficulties in connecting interior activity to enclosure sequences. At Kings Seat there has been a valuable opportunity to better understand the interior activities using Trench 2 and 4 to explore the upper central enclosure and Trench 6 to explore the mid-terrace enclosure interior. Excavation of deposits in these areas and characterisation of structural components and material culture has clarified the nature of structures, activities and chronology of activities taking place at King's Seat. SCARF also highlights that there is no overall picture regarding the role of 'hillforts', whether as tribal capitals, (seasonal) meeting places, elite residences, or other functions and it is likely that their role varied across time and space. At King's Seat the work undertaken between 2017-2019 will elucidate the role of King's Seat hillfort through exploring both the sequence of the structural enclosures and characterisation of activities taking place in different zones and at different times within the hillfort. This information will feed into regionally based models and aim to confirm whether proto-historic people are re-using this hillfort for defense or legitimising and are 'making reference' to earlier loyalties.

The site has clearly been impacted in more modern times during a phase of Victorian remodelling. The evidence for this includes some potential modification of ramparts, construction of a kerbed trackway up the west of the hill and the spade dug cultivation furrows identified in the upper layers of the central enclosure. The site has been heavily impacted by the introduction of rhododendrons and planted woodland which is now very mature. Previous attempts to clear or manage the site have been made. More recent vegetation clearance by volunteers was limited to removal of rhododendron above the ground and careful excavation around roots to understand any surviving deposits. Deposits underneath the King's Seat glacial erratic consisted of thin hillwash directly over bedrock with no *in situ* deposits.

It is clear that although a better understanding of the nature of the site has been gained in 2017-19 that further post-excavation work is required to better understand the site and the interplay between different features. Investigation in different areas of the site has aided in a more comprehensive understanding of how the site works as a whole, elucidating some phasing and clarifying the variation in the impact that the vegetation and

later Victorian remodelling has had on the site. Most of the material culture from this site demonstrates a significant high status site, used in the early historic period so further investigation has great potential and post-excavation work is essential to clarify the full results of this work. At this stage there has been no evidence for prehistoric activity on the site so it is possible that the site is relatively unique in a Scottish context, representing a high status site, constructed, used and abandoned within the early historic period.

This DSR report is both preliminary and provisional, with many issues raised by the excavation data still to be addressed. In ascertaining a fuller knowledge of the excavation results, a post-excavation research design will be produced that will describe all necessary and appropriate assessment processes and consequent post-excavation analyses together with publication proposals for the final report. This report will integrate the stratigraphic, contextual and descriptive data from the excavation with specialist post-excavation analyses covering dating, palaeo-environmental and economic issues. The results of this excavation and the post-excavation programme will be used to inform the publication of the project in the coming year.

8 ACKNOWLEDGEMENTS

Perth and Kinross Heritage Trust and AOC Archaeology would like to thank all of the volunteers who made the project as success contributing an amazing amount of work. The project is funded by The National Heritage Lottery Fund, The Gannochy Trust, and the Griffin and Calliachar Community Fund. Particular thanks to Dunkeld & Birnam Historical Society, Dave MacDougall and Dave Roberts.

Volunteers

Kevin Duncan, Corrie Glover, Barbara Hogarth, Gordon Gerrie, Forbes Bradley, Dave Macdougall, John Robb, Chris McNeill, Grant Muckart, Suzanne Swan, Deely Cumming, Allan Farmer, Cameron Maxwell, Bob Carchie, Michael Ballantine, Peter Heyes, Alison Brown, Fiona Robertson, Louise Thomson, Duncan Cameron, Tabitha Hilliard, Colin Jansen, Fran Gillespie, Graham Rees, Fiona Ritchie, Mary McDougall, Craig Trocker, Karen Trocker, Julianne McGraw, Pete Curtis, Imogen Bell.

Schools

Pitlochry High School

9 REFERENCES

Alcock, L, Alcock, E, & Driscoll, S T, 1989 *Reconnaissance excavations on Early Historic fortifications and other royal sites in Scotland, 1974–84: 3, Excavations at Dundurn, Strathearn, Perthshire, 1976–77*, Proc Soc Antiq Scot, 119, 189–226

Alcock, L, Alcock, E, & Driscoll, S T, 1989 *Reconnaissance excavations on Early Historic fortifications and other royal sites in Scotland, 1974–84: 1, Excavations near St Abb's Head, Berwickshire 1980,* Proc Soc Antiq Scot, 116, 255-279

Alcock, L. 2003 Kings and Warriors, Craftsmen and Priests in Northern Britain, AD 550-850. Oxbow Books

British Geological Survey (BGS). http://www.bgs.ac.uk/data/mapViewers/home.html Accessed 20/11/18.

Campbell, E. 2007 *Continental and Mediterranean Imports to Atlantic Britain and Ireland*. Council for British Archaeology.

Canmore. Accessed online at https://canmore.org.uk/ on 20th November 2017.

Carver, M et al. 2016 Portmahomack on Tarbat Ness: Changing Ideologies in North-east Scotland, Sixth to Sixteenth Century AD. Society of Antiquaries of Scotland.

Chartered Institute for Archaeologists. 2014. By-laws of the Institute for Archaeologists: Code of Conduct.

Chartered Institute for Archaeologists. 2014. Standards and guidance: Archaeological evaluation.

Closebrooks, J 1986 Excavations at Clatchard Craig, Fife, Proc Soc Antiq Scot, 116, 117–184

Crone, A. 2000 *The History of a Scottish Lowland Crannog: Excavations at Buiston, Ayrshire 1989-90.* STAR Monograph 4.

Feacham. Kings Seat survey plans accessed online at at https://canmore.org.uk/ on 20th November 2017.

Foster, S. 2014 Picts, Gaels and Scots. Early Historic Scotland. Birlinn.

Hall, M. 2007 *Playtime in Pictland: The Material Culture of Gaming in Early Medieval Scotland*. Groam House Museum

Harding, D. 2012 Iron Age Hillforts in Britain and Beyond. OUP Oxford

Heald, A. 2010 *The Interpretation of Non-Ferrous Metalworking In Early Historic Scotland* Pictish Progress 221-242

Historic Environment Scotland (2015) Scotland's Archaeology Strategy. Accessed 26.10.16.

Lane, A and Campbell, E. 2000 Dunadd: an early Dalriadic Capital. Oxbow Books

Laing, L. and Longley, D. 2006 The Mote of Mark: A Dark Age Hillfort in South-west Scotland. Oxbow books.

MacIver et al 2017 King's Seat Hillfort Survey and Excavation Data Structure Report. Unpublished Report.

National Map Library of Scotland. 2017. Accessed online at http://maps.nls.uk on 20th November 2017.

O'Riordain, S. 1942 The excavation of a large earthen ring-fort at Garranes, Co. Cork. Hodges, Figgis and Co.

Ordnance Survey Name Books. Accessed online at https://scotland'splaces,gov.uk on 15th September 2017.

Ralston, I. 2004 The Hillforts of Pictland since the Problem of the Picts. Groam House Museum

Robertson, P. 2016, Iron Age Hillfort defences and the tactics of sling warfare. Archaeopress

Statistical Accounts of Scotland (1791-1845). http://stataccscot.edina.ac.uk/static/statacc/dist/home. 20/11/17.

Strachan, D and Maclver, C. 2018, Kings Seat Hillfort, Perth: Revised Project Design, Unpublished Report.

Toolis, R. And Bowles, C. 2017 The Lost Dark Age Kingdom of Rheged. Oxbow Books.

King's Seat, Dunkeld, Perth and Kinross: Archaeological Evaluation Data Structure Report

Section 2: Appendices



APPENDIX 1: CONTEXT REGISTER

Trench 4

Context No.	Area	Description and Interpretation	
401	4	Topsoil deposit below vegetation mulch layer. A mid grey brown silt layer with flecks of charcoal and burnt bone. Lots of finds. Lots of root disturbance. C. 0.15m deep to 0.45m deep towards base of slope.	
		Topsoil	
402	4	Upper stonework of possible rampart in SE end of trench. Coarse, large angular stone work. Concentrated on the E side of the trench. A mixed spread of angular stone, no clear arrangement c. 1.2m wide. Once tumbled stone removed a clear rough kerb consisting of a single line of medium stone was identified (similar to the same wall identified in Trench 3). The outer kerb was tentatively identified off the side of the hill, forming a c.4m wide wall. No evidence of a palisade or timeber component identified in the tumbled remains of wall. Inner kerb abutted by (401), (403), (406).	
		Spread of bank material	
403	4	A loose yellow brown silt similar in composition to (401), heavily burrowed and root affected. Extends across trench. Likely hillwash in western extend of trench and clearly a cultivated soil to the east of the hearth setting. c.0.25m thick. Under (401). Over (406).	
		Hill wash/Cultivated soil	
404	4	Tumbled spread of angular stone 0.25m by 0.15m tipping down the slope to the east of [405].	
		Collapsed structure	
		A rough stone edged revetted platform 2-3 courses high. Comprises: ((407 burnt layer on top, [408] kerb, (411) redeposited base of platform, (404) collapsed stone from structure)	
405	4		
	4	Situated up against a vertical bedrock face to the west creating a space of c. 1m by 2m. Composed of medium angular stone and a mix of silty material. Heat affected on top. Over (406). Under (407) and (401).	
		Rough Stone platform	
406	4	Compact yellow brown silt with grey brown mottling and charcoal fleck. Some animal burrows. (Under 403).	
		Old ground surface?	
407	4	Thin layer of ashy charcoal rich silt on platform, heat affected and in places a very bright orange. Over [405]. Under (401).	
		Burnt horizon	
408	4	A rough kerb of a small platform [405] comprised of five rough angular boulders c. 0.4m by .3m reveting (411).	
		Stone kerb of platform	
409	4	A layer of angular flat stones covering over hearth setting. Could be rough remains of a later hearth or a deliberate deposit to fill or close over hearth setting.	
		Final deposit in hearth	
410	4	Kerbed hearth setting comprising: [410] kerb, (409) final deposit of small angular stones, (412) (413) and (414) ashy fills of hearth. Hearth is a rectangular kerbed setting 1.5m by 0.75m. 0.4m deep with multiple layers of ash and animal bone within. Hearth is cut into or on (406).	

Context No.	Area	Description and Interpretation	
		Hearth setting	
411	4	Grey yellow brown silt with frequent stone and animal bone under platform [405]. At the upper extent of this material is a possible pit or hollow with dark charcoal rich soil filled with animal bone (416).	
		Redeposited material, part of platform	
412	4 Upper fill of hearth composed of orange black white ash with burnt b Depth of c. 0.1m. Under (409). Over (413).		
		Hearth ash	
413	4	Mid fill of hearth composed of dark black brown ash with very frequent animal bone. Depth of c. 0.15m. Under (412). Over (414).	
		Hearth ash	
414	4	Lower fill of hearth composed of white ashy fill with burnt bone. Depth of c. 0.15m. Under (413). Over (415).	
		Hearth ash	
415	4	A bright orange silty heat affected soil underlying the hearth ash rich fills.	
410		Heat affected layer under hearth	
416	4	In the SW corner of the trench under the platform is a possible pit or hollow with dark charcoal rich soil filled with animal bone.	
		Fill of possible pit	
417	4	Small stone setting composed of upright stones and large angular stone. Encloses area 0.3m x 0.35m.	
		Stone setting	
418	4	Small stone setting, north of 417, composed of upright stone with a couple of packing stones and a post pad at the base. Could have held a post 0.20m - 0.30m in diameter.	
		Stone setting	
419	4	Mid yellow brown silt with charcoal, animal bone and occasional small angular stone inclusions. Fill of hearth 420. Same as 409 in terms of components but localised within hearth kerb 420. Under 403, over 410.	
		Deposit associated with secondary hearth	
420	4	Large, angular stone forming an edge-set line. Later hearth over 410 reusing northern stones from 410 kerb. Ashy deposit 419 associated with it. Under 409.	
		Secondary hearth on top of 410	
421	4	Yellow silt with occasional small stones and patches of brown silt (hill wash). Contains concentrations of bone near hearth and medieval pottery.	
		Rig and furrow, fill of 422	
400		Linear with a rounded top break of slope, gently sloping to vertical sides and a rounded base. Measures 3.67m long (N-S), 0.5m wide and 0.26m deep.	
422	4	Hand dug rig and furrow. Feature not apparent until excavated and more fragmentary towards South end. Feature continues beyond the limit of excavation.	
423	4	Yellow silt with occasional small stones and patches of brown silt (hill wash). Contains concentrations of bone near hearth and medieval pottery.	
		Rig and furrow, fill of 424	
424	4	Linear with a rounded top break of slope, gently sloping to vertical sides and a rounded base. Measures 3.67m long (N-S), 0.5m wide and 0.26m deep.	

Context No.	Area	Description and Interpretation		
		Hand dug rig and furrow. Feature not apparent until excavated and more fragmentary towards South end. Feature continues beyond the limit of excavation.		
425	4	Yellow silt with occasional small stones and patches of brown silt (hill wash). Contains concentrations of bone near hearth and medieval pottery.		
		Rig and furrow, fill of 426		
406	4	Linear with a rounded top break of slope, gently sloping to vertical sides and a rounded base. Measures 3.67m long (N-S), 0.5m wide and 0.26m deep.		
426	4	Hand dug rig and furrow. Feature not apparent until excavated and more fragmentary towards South end. Feature continues beyond the limit of excavation.		
427	4	Yellow silt with occasional small stones and patches of brown silt (hill wash). Contains concentrations of bone near hearth and medieval pottery.		
		Rig and furrow, fill of 428		
		Linear with a rounded top break of slope, gently sloping to vertical sides and a rounded base. Measures 3.67m long (N-S), 0.5m wide and 0.26m deep.		
428	4	Hand dug rig and furrow. Feature not apparent until excavated and more fragmentary towards South end. Feature continues beyond the limit of excavation.		
429	4	Yellow silt with occasional small stones and patches of brown silt (hill wash). Contains concentrations of bone near hearth and medieval pottery.		
		Rig and furrow, fill of 430		
430	4	Linear with a rounded top break of slope, gently sloping to vertical sides and a rounded base. Measures 3.67m long (N-S), 0.5m wide and 0.26m deep.		
		Hand dug rig and furrow. Feature not apparent until excavated and more fragmentary towards South end. Feature stops short of hearth.		
431	4	Possible small stone setting composed of two stones used for partitioning. Located 0.40m south of 417.		
-		Possible stone setting?		
432	4	Stone setting, 0.5m north of 418, composed of 3-4 large angular stones containing a possible post space 0.40m x 0.45m.		
		Stone setting		
433	4	A sterile, yellowish brown clayey silt with occasional small 0.02m x 0.05m angular stone. 0.55m deep. Under 415 basal hearth deposit.		
		Sterile natural underlying site		
434	4	Greyish yellow, solid clay under 433. Minimum 0.30m deep, not fully excavated to bedrock.		
		Sterile natural underlying site		
435	4	An oval shaped cut in plan with a U-shaped profile. Measures 0.2m in diameter and 0.15m deep. Located next to hearth 410. Stone-lined.		
		Small posthole next to hearth 410		
436	4	Dark yellowish brown, loose silt with small bone fragments and teeth.		
	•	Fill of posthole 435		
437	4	Figure of eight shaped oval cuts, U-shaped in profile, located next to hearth 410. Measures 0.38m long and 0.26m wide. One oval is 0.17m and the other is 0.09m in depth.		
		Small posthole next to hearth 410, possibly re-cut		

Context No.	Area	Description and Interpretation	
438	4	Yellowish brown, friable silt. Contains larger bone fragments.	
430	4	Fill of posthole 437	
439	4	Oval shaped cut in plan and U-shaped in profile, located less than 0.05m from hearth. Measures 0.44m long, 0.28m wide and 0.26m deep.	
		Small posthole by hearth 410, possibly recut	
440	4	Dark yellowish brown, friable silt. Contains larger bone fragments.	
440	4	Fill of posthole 439	
441	4	Circular cut in plan with U-shaped profile, located 0.10m from hearth 410. Measures 0.23m long, 018m wide and 0.28m deep.	
		Small posthole by hearth 410	
442	4	Dark yellowish brown, friable silt. Contains bone fragments.	
442	4	Fill of posthole 441	
442	Λ	Void	
443	4	Void	
444 4		Rectangular deposit located in northwest corner of the trench, running from bedrock to set stone features. Measures 2.20m long, 2.00m wide and 0.36m deep. Dark brown, loose silt. The rest of the trench was lighter brown/tan loose silt, inlayed with a deposit of rock running north-south. Contained frequent stone (north-south axis) and very rare charcoal.	
		Possible remnant of turf wall?	

Trench 6

Context No.	Area	Description and Interpretation		
601	6	Loose medium brown sandy silt with burnt bone and charcoal flecks as well as numerous out of situ finds. Some tree root and animal burrow disturbance. Max depth 0.4m at west end. 0.8m at east end.		
		Topsoil		
602	6	Deposit of angular large stone slabs 0.3m by 0.15m. Mid grey, compact clay silt with patches of charcoal and orange clay, matrix in Sondage 1.		
		Occupation layer - associated with hearth 606		
603	6	Compact/loose sandy clay with occasional charcoal, burnt bone and mottled orange patches and frequent angular stone inclusions or few small stone inclusions in Sondage 2.		
		Occupation layer - possibly the same as (602)		
604	6	Exposed in Sondage 3. At 0.6m-0.8m deep, sloping downhill.		
004		Natural Bedrock		
605	6 (Sondage 3)	Sub-rectangular stone hearth comprising large, angular stone (0.60m x x 0.40m) which appears to be locally quarried material. One edge set s appears to have small, circular peck marks. Flat stones 608 appear to be set against the hearth or may be slumped material. Packed stones vision beneath at east side between hearth and wall stones and bedrock. Dimensions: approximately 0.80m x 0.70m x 0.25m. Finds: associated and burnt bone. Over 607 and 619. Under 601. Filled by 609.		

Context No.	Area	Description and Interpretation	
		Hearth - slumped downhill with possible later wall. Built against bedrock with levelling material beneath	
606	6 (Sondage 1)	Sub-rectangular kerbed hearth in west corner of Sondage 1. Comprised of large, angular, local bedrock stones which are both edge set and sloping inwards to form kerb. Dimensions: 1.25m x 0.8m x 0.2m. Overlies earlier hearth 617 and filled by 612. Earlier hearth 617 is on the same alignment but slightly to east beneath it. 0.20m - 0.25m of topsoil 601 overlying the hearth stones.	
		Hearth - second phase	
607	6 (Sondage 3)	Medium orange sandy clay with charcoal inclusions west of hearth 605. Lots of bioturbation resulting in mottling with loose medium orange brown silt. Contains some small stone inclusions. Runs beneath hearth stones and extends for 0.30m x 0.40m with a depth of 0.15m. Under 601 and 605.	
		Slumped hearth fill material	
608	6	Two stacked sub-rectangular flat stones at east side of hearth 605. Stones measure 0.5m x 0.27m x 0.05m and 0.37m x 0.25m x 0.08m. Over 605 and angular packing stones 619. Under 601	
		Possible revetment wall remains or Hearth 605 stones at original height	
609	6 (Sondage 3)	Mid grey brown sandy silt with orange clay mottling and charcoal inclusions. Small angular stones (c. 0.10m x 0.05m). Finds: slag, burnt bone and smithing hearth bottom. Large tree root at base of fill. Over 604, under 601.	
	,	Fill of Hearth 605	
610	6 (Sondage 1)	A deposit of large (0.40m - 0.60m) stones arranged in a roughly U-shaped structure east of hearth 606 in sondage 1. Some flat stones are stacked up to three courses. All appear to be local material. Overlies occupation layer 602 which some are set within. Beneath 0.38m of topsoil. Dimensions: 2.10m x 1.0m x 0.30m. Finds: metal objects and slag.	
		Stone structure (wall/work area) associated with second phase of hearth 606	
611	6	Large sub-rectangular stones located at east corner of Sondage 1 and within previous baulk. Stones appear to be tumbled material within topsoil and 602. Over 602, 603, 618. No obvious structure.	
		Tumble	
612	6 (Sondage 1)	Dark grey brown sandy silt with burnt bone and lots of charcoal within hearth 606. Contains circular patch of bright orange clay within central part of hearth at upper level (max depth 0.05m). Contained within hearth 606 with dimensions 0.75m x 0.65m x 0.18m. Overlies earlier hearth 617.	
		Fill of hearth 606 - fill of secondary hearth	
613	6 (Sondage 3)	Medium orange brown clay silt with patches of orange and grey yellow sandy clay. Contains frequent small angular stone inclusions (c. 0.05m - 0.10m) and charcoal. Finds: metal objects including tools and slag. Under 601 and 607.	
		Activity layer	
614	6 (Sondage 2)	A possible hearth comprising large angular stones arranged in a semi-circle. The stones vary in size from approximately 0.35m to 0.55m in length. Located at the middle section, on north side of Sondage 2 and appears to continue past the limit of excavation. 620 fills the internal area. Appears to overlie occupation layer 603. Finds: bone fragments and slag.	
		Possible hearth	

Context No.	Area	Description and Interpretation	
615	6 (Sondage 2)	A layer of medium sized (c. 0.13m) angular stones within a grey brown loose silt matrix 621 containing charcoal and burnt bone, approximately 0.37m in depth. It is located on the south edge slope. There is severe root disturbance within the area. Abuts possible hearth 614 at north side.	
		Stone surface	
616	6 (Sondage 1)	Compact dark grey brown silty clay with lots of charcoal underlying 602 in northeast side of the trench. Overlies primary hearth 617. Visible in slots within Sondage 1. Contains frequent small to medium sized stone inclusions. No obvious interface with 602 elsewhere in trench.	
		Occupation layer associated with secondary hearth 606	
617	6 (Sondage 1)	Rectangular stone hearth located in the south side of sondage 1. Hearth is formed of large rectangular stones approximately 0.20m x 0.30m in length. The hearth contained large amounts of ash and charcoal fragments and frequent burnt bone fragments. Hearth is associated with occupation layer 618. Dimensions: approximately 1m in length and 0.80m in width. Continues beneath 606 (partly unexcavated).	
		Primary hearth associated with occupation layer 618	
618	6 (Sondage	Dark grey brown loose silty clay with frequent charcoal inclusions, burnt bone fragments and frequent inclusions of yellowish orange clay. Deposit is the fill of hearth 617. Under 606 and over 622.	
	2)	Occupation layer associated with hearth 617 and overspill of hea	
619	6	Medium angular stones (c. 0.10m - 0.15m) within medium grey brown silt beneath wall 608. directly over lying bedrock.	
		Packing/levelling stones for wall 608	
620	6 (Sondage 2)	Loose, Dark grey brown silty clay with frequent charcoal inclusions, medium sized stone inclusions (approximately 0.1m - 0.14m) and frequent burnt bone fragments. Also contains patches of ash and orange clay throughout. Fill appears to have spilled out of northwest side of hearth. Up to 0.50m of topsoil overlying 620. Diffuse boundary with 601 which it may overlie.	
		Fill of Hearth 614	
621	6 (Sondage	Loose grey brown clay silt matrix with charcoal inclusions and burnt bone fragments	
	2)	Matrix of stone surface 615	
622	6 (Sondage 1)	Grey brown loose silty clay soil with frequent stone inclusions (approximately 0.10m - 0.15m in length). Associated with hearth 617 and in line with hearth overspill and occupation layer 618. Only visible in sondage 1, possibly the same as 603.	
		Occupation layer associated with hearth 617	
623	6 (Sondage	Bright orange sandy clay with some charcoal inclusions beneath hearth stones 617.	
	1)	Natural boulder clay- heat affected?	

Trench 7

Context No.	Are a	Description and Interpretation	
7001	7	Black\orange fine silt with inclusions of gravel, stones of varying size, measuring 0.15m in depth.	
1001	,	Topsoil	
7002	7	Rampart comprising of kerb stones [7004 and 7014], redeposited natural with rubble deposits (7003, 7008, 7009), and a soil fill (7011). 3m in length (Visible), and up to 115cm.	
	_	Early historic rampart\bank structure	
7003	7	Silty orange redeposited natural material containing rubble and charcoal flecks measuring 0.15m in depth. Over (7004, 7008, 7009, 7010, 7011)	
		Upper fill of early historic bank [7002]	
7004	7	Inner facing kerb 2/3 stones stacked high, containing some tumble material from North facing bank [7002]. Some signs of possible refacing. Measuring 2.9m (visible). Located below (7003) and over (7010 and 7011).	
		Kerb facing of early historic wall	
7005	7	Orange brown silt and gravel, charcoal rich, and containing ceramic, slag measuring upto 0.3m deep. Bedrock (7015) through middle. Below (7001) and laying over deposit (7013).	
		Deposit laying against North face of kerb facing wall	
7006	7	Cut of possible pit, rounded in plan with flat base. Distinct in shape and colour located at the back of the trench. Cuts through (7001) & (7005). Measures 0.31m x 0.35m x 0.04m deep. Filled by (7007)	
		Possible pit	
7007	7	Black sticky silt affected by bioturbation, frequent roots.	
1001	'	Fill of possible pit [7006]	
7008	7	Orange silty gravel and rubble with charcoal inclusions measuring (0.15m) in depth. Below (7003) and laying over (7009)	
		Redeposited natural material infill of early historic bank [7002]	
7009	7	Orange silt with stone rubble measuring 0.25m in depth. Below (7008) and laying over (7010)	
		Redeposited infill material of early historic bank [7002]	
7010	7	Lense of grey brown silt, possibly organic material containing charcoal and measuring 0.02m in depth. Below (7009) and laying over (7011).	
		Organic layer related to early historic bank [7002]	
7011	7	Orange redeposited silty material below (7010).	
	•	Organic layer at base of early historic bank [7002]	
7012	7	Compact orange brown material containing slag and charcoal and measuring 0.2m in depth. Below (7005), above (7013 & 7015) and abutting [7004].	
		Interface between charcoal and natural bedrock (7015)	
7013	7	Very compacted black charcoal deposit with slag waste inclusions measuring 0.03m to 0.12m. Includes heat affected clay hearth lining. Below (7012) and laying over (7016).	
		Slag hearth base	
7014	7	Outer facing kerb stone comprising one single stone offering structural support to soil and stone constructed bank. Evidence of tumble and soil slippage over kerb stone to outer slope. Measuring 1m x 1m. Abuts (7009, 7010 and 7011), and below (7003 and 7008).	
		Outer facing kerb stone	
7015	7	Natural bedrock below (7005, 7012 and 7013)	
7016	7	Yellow silty clay natural subsoil below (7005 7012 and 7013)	

APPENDIX 2: PHOTOGRAPHIC REGISTER

Digital Photographs (2019)

Frame	Area	Description	Facing	Date		
	Cathy's Camera					
2382	4	Mid-excavation of Trench 4, bank 402	SE	05/09/2019		
2383	4	Mid-excavation of Trench 4, hearth 410	S	05/09/2019		
2384	4	Mid-excavation of Trench 4, structure? 402	SW	05/09/2019		
2385	4	Mid-excavation of inner edge of bank 402	E	05/09/2019		
2386	4	Mid-excavation of inner edge of bank 402	S	05/09/2019		
2387	4	Mid-excavation of inner edge of bank 402	S	05/09/2019		
2388	4	General working shots of Trench 4	-	05/09/2019		
2389	4	General working shots of Trench 4	-	05/09/2019		
2390	4	General view of bank 402	S	05/09/2019		
2391	4	Pre-excavation view of hearth 420 over 410	SW	10/09/2019		
2392	4	Pre-excavation view of hearth 420 over 410	SW	10/09/2019		
2393	4	Pre-excavation view of hearth 420 over 410	SW	10/09/2019		
2394	4	Pre-excavation view of hearth 420 over 410	SW	10/09/2019		
2395	4	Pre-excavation view of hearth 420 over 410	SW	10/09/2019		
2396	4	Pre-excavation view of hearth 420 and fill 419	SE	10/09/2019		
2397	4	Pre-excavation view of hearth 420 and fill 420	W	10/09/2019		
2398	4	Pre-excavation view of hearth 420 and fill 421	W	10/09/2019		
2399	4	Pre-excavation view of hearth 420 and fill 422	W	10/09/2019		
2400	4	Pre-excavation view of hearth 420 and fill 423	Ν	10/09/2019		
2401	4	Pre-excavation view of hearth 420 and fill 424	N	10/09/2019		
2402	4	Pre-excavation view of hearth 420 and fill 425	Ν	10/09/2019		
2403	4	Pre-excavation view of hearth 420 and fill 426	NE	10/09/2019		
2404	4	Pre-excavation view of hearth 420 and fill 427	Е	10/09/2019		
2405	4	Pre-excavation view of hearth 420 and fill 428	Е	10/09/2019		
2406	4	Pre-excavation view of hearth 420 and fill 429	Е	10/09/2019		
2407	4	Pre-excavation view of hearth 420 and fill 430	Е	10/09/2019		
2408	4	Pre-excavation view of hearth 420 and fill 431	Е	10/09/2019		
2409	4	Pre-excavation view of 410 under hearth 420	S	10/09/2019		

Frame	Area	Description	Facing	Date
2410	4	Pre-excavation view of 410 under hearth 420	N	10/09/2019
2411	4	Pre-excavation view of 410 under hearth 420	Ν	10/09/2019
2412	4	Pre-excavation view of 410 under hearth 420	Ν	10/09/2019
2413	4	Pre-excavation view of 410 under hearth 420	W	10/09/2019
2414	4	Pre-excavation view of 410 under hearth 420	W	10/09/2019
2415	4	Pre-excavation view of 410 under hearth 420	W	10/09/2019
2416	4	Pre-excavation view of 410 under hearth 420	S	10/09/2019
2417	4	Pre-excavation view of 410 under hearth 420	S	10/09/2019
2418	4	Pre-excavation view of 410 under hearth 420	NE	10/09/2019
2419	4	Pre-excavation view of 410 under hearth 420	NE	10/09/2019
2420	4	Pre-excavation view of 410 under hearth 420	NE	10/09/2019
2421	4	Pre-excavation view of 410 under hearth 420	NE	10/09/2019
2422	4	Pre-excavation view of 410 under hearth 420	NE	10/09/2019
2423	4	Pre-excavation of rig and furrow in relation to hearth	NW	10/09/2019
2424	4	Pre-excavation of rig and furrow in relation to hearth	SE	10/09/2019
2425	4	Pre-excavation of rig and furrow in relation to hearth	SE	10/09/2019
2426	4	Mid-excavation of hearth after removal of 412, 413 and 414	Ν	11/09/2019
2427	4	Mid-excavation of hearth after removal of 412, 413 and 414	Ν	11/09/2019
2428	4	Mid-excavation of hearth after removal of 412, 413 and 414	Ν	11/09/2019
2429	4	Working shot of hearth and rig and furrow	NW	11/09/2019
2430	4	Working shot of hearth and rig and furrow	NW	11/09/2019
2431	4	Working shot of hearth and rig and furrow	SE	11/09/2019
2432	4	Stone setting 418 with upright stones	Ν	11/09/2019
2433	4	Stone setting 418 with upright stones	Ν	11/09/2019
2434	4	Stone setting 417 with upright stones	Ν	11/09/2019
2435	4	Stone setting 417 with upright stones	Ν	11/09/2019
2436	4	Stone setting 431 with cluster of stones	Ν	11/09/2019
2437	4	Stone setting 431 with cluster of stones	Ν	11/09/2019
2438	4	Stone setting 432 with cluster of stones	Ν	11/09/2019
2439	4	Stone setting 432 with cluster of stones	Ν	11/09/2019
2440	4	Line of stone settings along edge of hearth	S	11/09/2019

Frame	Area	Description	Facing	Date
2441	4	Line of stone settings along edge of hearth	S	11/09/2019
2442	7	Trench 7, east-facing section through bank 7002	W	11/09/2019
2443	7	Trench 7, east-facing section through bank 7002	W	11/09/2019
2444	7	Trench 7, east-facing section through bank 7002	W	11/09/2019
2445	7	Trench 7, east-facing section through bank 7002	W	11/09/2019
2446	7	Trench 7, east-facing section through bank 7002	W	11/09/2019
2447	7	Trench 7, east-facing section through bank 7002	W	11/09/2019
2448	7	Trench 7, east-facing section through bank 7002	W	11/09/2019
2449	7	Trench 7, east-facing section through bank 7002	W	11/09/2019
2450	4	Hearth 410 - cleaned up with small features	NE	11/09/2019
2451	4	Hearth 410 - cleaned up with small features	NE	11/09/2019
2452	4	Hearth 410 - cleaned up with small features	NE	11/09/2019
2453	4	Hearth 410 - cleaned up with small features	NE	11/09/2019
2454	4	Hearth 410 - cleaned up with small features	NE	11/09/2019
2455	4	Kubiena samples of 406, 409, 403 in north- facing section	S	11/09/2019
2456	4	Kubiena samples of 406, 409, 403 in north- facing section	S	11/09/2019
2457	4	Kubiena samples of 406, 409, 403 in north- facing section	S	11/09/2019
2458	4	Kubiena samples of hearth 412, 413, 414	W	11/09/2019
2459	4	Kubiena samples of hearth 412, 413, 414	W	11/09/2019
2460	4	Kubiena samples of hearth 412, 413, 414	W	11/09/2019
2461	4	Kubiena samples of hearth 412, 413, 414	W	11/09/2019
2462	4	Mid-excavation of hearth 606 and lower kerb	W	11/09/2019
2463	4	Mid-excavation of hearth 606 and lower kerb	W	11/09/2019
2464	4	Mid-excavation of hearth 606 and lower kerb	Ν	11/09/2019
2465	4	Mid-excavation of hearth 606 and lower kerb	E	11/09/2019
2466	4	Mid-excavation of hearth 606 and lower kerb	E	11/09/2019
2467	4	Mid-excavation of hearth 606 and lower kerb	S	11/09/2019
2468	4	Mid-excavation of hearth 606 and lower kerb	S	11/09/2019
2469	4	East-facing section of hearth 606	W	11/09/2019
2470	4	South-facing section of rig and furrow	N	12/09/2019
2471	4	South-facing section of rig and furrow	N	12/09/2019
2472	4	Bank of upper citadel 402	W	12/09/2019
2473	4	Bank of upper citadel 402	NW	12/09/2019
2474	4	Bank of upper citadel 402	NW	12/09/2019
2475	4	Bank of upper citadel 402	NE	12/09/2019

Frame	Area	Description	Facing	Date
2476	4	Postholes either side of hearth 410	W	12/09/2019
2477	4	Postholes either side of hearth 410	W	12/09/2019
2478	4	Postholes either side of hearth 410	Ν	12/09/2019
2479	4	Postholes either side of hearth 410	Ν	12/09/2019
2480	4	Natural subsoil 433 and 434 under hearth 410	W	12/09/2019
2481	4	Natural subsoil 433 and 434 under hearth 410	W	12/09/2019
2482	4	East-facing section through hearth 410, (412, 413, 414, 415)	W	12/09/2019
2483	4	East-facing section through hearth 410, (412, 413, 414, 415)	W	12/09/2019
2484	4	East-facing section through hearth 410, (412, 413, 414, 415)	W	12/09/2019
2485	4	Layer 444 under 406 in northwest corner of Trench 4	W	12/09/2019
2486	4	Layer 444 under 406 in northwest corner of Trench 4	W	12/09/2019
2487	4	Layer 444 under 406 in northwest corner of Trench 4	N	12/09/2019
2488	4	Layer 444 under 406 in northwest corner of Trench 4	N	12/09/2019
2489	4	Layer 444 under 406 in northwest corner of Trench 4	Ν	12/09/2019
2490	4	Layer 444 under 406 in northwest corner of Trench 4	Ν	12/09/2019
2491	4	Edge of inner part of citadel bank 402	E	12/09/2019
2492	4	Edge of inner part of citadel bank 402	Е	12/09/2019
2493	4	Possible stakeholes in 406 or animal burrowing	W	12/09/2019
2494	4	Possible stakeholes in 406 or animal burrowing	S	12/09/2019
2495	4	Possible stakeholes in 406 or animal burrowing	S	12/09/2019
2496	4	North facing section of Trench 4 (left - right)	S	13/09/2019
2497	4	North facing section of Trench 4 (left - right)	S	13/09/2019
2498	4	North facing section of Trench 4 (left - right)	S	13/09/2019
2499	4	North facing section of Trench 4 (left - right)	S	13/09/2019
2500	4	North facing section of Trench 4 (left - right)	S	13/09/2019
2501	4	North facing section of Trench 4 (left - right)	S	13/09/2019
2502	4	North facing section of Trench 4 (left - right)	S	13/09/2019
2503	4	East-facing section of Trench 4, 2019 edge	W	13/09/2019
2504	4	South-facing section of Trench 4, 2019 edge (left - right)	N	13/09/2019
2505	4	South-facing section of Trench 4, 2019 edge (left - right)	N	13/09/2019
2506	4	South-facing section of Trench 4, 2019 edge (left - right)	N	13/09/2019

Frame	Area	Description	Facing	Date
2507	4	South-facing section of Trench 4, 2019 edge (left - right)	N	13/09/2019
2508	4	South-facing section of Trench 4, 2019 edge (left - right)	Ν	13/09/2019
2509	4	South-facing section of Trench 4, 2019 edge (left - right)	Ν	13/09/2019
2510	4	South-facing section of Trench 4, 2019 edge (left - right)	Ν	13/09/2019
2511	4	South-facing section of Trench 4, 2019 edge (left - right)	Ν	13/09/2019
2512	4	South-facing section of Trench 4, 2019 edge (left - right)	Ν	13/09/2019
2513	4	West-facing end of Trench 4 with bank 402	E	13/09/2019
2514	4	West-facing end of Trench 4 with bank 402	Е	13/09/2019
2515	4	South-facing section of bank 402	N	13/09/2019
2516	4	Bank 402	E	13/09/2019
2517	4	Bank 403	Е	13/09/2019
2518	4	Post-excavation of Trench 4	E	13/09/2019
2519	4	Post-excavation of Trench 4	E	13/09/2019
2520	4	Post-excavation of Trench 4	E	13/09/2019
2521	4	Post-excavation of Trench 4	E	13/09/2019
2522	4	Post-ex sondage in Tr 4 - possible degraded turf wall	-	13/09/2019
2523	4	Post-ex sondage in Tr 4 - possible degraded turf wall	-	13/09/2019
2524	4	Post-ex sondage in Tr 4 - possible degraded turf wall	-	13/09/2019
2525	4	Post-ex sondage in Tr 4 - possible degraded turf wall	-	13/09/2019
2526	4	Post-ex sondage in Tr 4 - possible degraded turf wall	-	13/09/2019
2527	4	Post-ex sondage in Tr 4 - possible degraded turf wall	-	13/09/2019
2528	4	Post-excavation of Bank 402	-	13/09/2019
2529	4	Post-excavation of Bank 403	-	13/09/2019
2530	4	Post-excavation of Bank 404	-	13/09/2019
2531	4	Post-excavation of Bank 405	-	13/09/2019
2532	4	Post-excavation of Bank 406	-	13/09/2019
2533	4	Post-excavation of Bank 407	-	13/09/2019
2534	4	Backfilled Trench 4	-	14/09/2019
2535	4	Backfilled Trench 4	-	14/09/2019
2536	4	Backfilled Trench 4	-	14/09/2019
2537	4	Backfilled Trench 4	-	14/09/2019
2538	4	Backfilled Trench 4	-	14/09/2019
2539	4	Backfilled Trench 4	-	14/09/2019
2540	4	Backfilled Trench 4	-	14/09/2019
2541	4	Backfilled Trench 6	-	14/09/2019

Frame	Area	Description	Facing	Date
2542	4	Backfilled Trench 6	-	14/09/2019
2543	4	Backfilled Trench 6	-	14/09/2019
2544	4	Backfilled Trench 6	-	14/09/2019
2545	4	Backfilled Trench 7	-	14/09/2019
2546	4	Backfilled Trench 7	-	14/09/2019
2547	4	Backfilled Trench 7	-	14/09/2019
		Camera 1		
1630	6	Pre-excavation shots of Trench 6	SE	03/09/2019
1631	6	Pre-excavation shots of Trench 6	SE	03/09/2019
1632	6	Pre-excavation shots of Trench 6	SE	03/09/2019
1633	6	Pre-excavation shots of Trench 6	SE	03/09/2019
1634	6	Pre-excavation shots of Trench 6	SE	03/09/2019
1635	6	Pre-excavation shots of Trench 6	SE	03/09/2019
1636	6	Working shots of volunteers in Trench 6	Ν	05/09/2019
1637	6	Working shots of volunteers in Trench 6	Ν	05/09/2019
1638	6	Working shot of large stone in 602 in Sondage 7	SE	05/09/2019
1639	6	Working shot of large stone in 602 in Sondage 7	SE	05/09/2019
1640	6	Working shot of large stone in 602 in Sondage 7	NE	05/09/2019
1641	6	Working shot of large stone in 602 in Sondage 7	NE	05/09/2019
1642	7	Working shot of Trench 7 - Topsoil and bank	W	05/09/2019
1643	7	Working shot of Trench 7 - Topsoil and bank	W	05/09/2019
1644	7	Working shot of Trench 7 - Detail of bank 7002	Ν	05/09/2019
1645	7	Working shot of Trench 7 - Detail of bank 7002	Ν	05/09/2019
1646	7	Working shot of Trench 7 - Bank 7002	E	05/09/2019
1647	7	Working shot of Trench 7 - Bank 7002	E	05/09/2019
1648	7	Working shot of Trench 7 - Bank 7002	W	05/09/2019
1649	7	Working shot of Trench 7 - Bank 7002	W	05/09/2019
1650	6	Working shot of Trench 6 - Stone structure 605	W	05/09/2019
1651	6	Working shot of Trench 6 - Stone structure 605	W	05/09/2019
1652	6	Working shot of Trench 6 - Stone structure 605	SE	05/09/2019
1653	6	Working shot of Trench 6 - Stone structure 605	SE	05/09/2019
1654	6	Working shot of Trench 6 - Stone structure 605	NW	05/09/2019
1655	6	Working shot of Trench 6 - Stone structure 605	NW	05/09/2019

Frame	Area	Description	Facing	Date
1656	6	Working shot of Trench 6 - Stone structure 605	NW	05/09/2019
1657	6	Working shot of Trench 6	Various	06/09/2019
1658	6	Working shot of Trench 6	Various	06/09/2019
1659	6	Working shot of Trench 6	Various	06/09/2019
1660	6	Working shot of Trench 6	Various	06/09/2019
1661	6	Working shot of Trench 6	Various	06/09/2019
1662	6	Working shot of Trench 6 - Hearth 606	SE	06/09/2019
1663	6	Working shot of Trench 6 - Hearth 606	NE	06/09/2019
1664	6	Working shot of Trench 6 - Sondage 1	SE	06/09/2019
1665	6	Working shot of Trench 6 - Sondage 1	SE	06/09/2019
1666	6	Mid-excavation shot of Sondage 3	NE	07/09/2019
1667	6	Mid-excavation shot of Sondage 3	NE	07/09/2019
1668	6	Mid-excavation shot of Sondage 3 - Hearth 605	NW	07/09/2019
1669	6	Mid-excavation shot of Sondage 3 - Hearth 605	NW	07/09/2019
1670	6	Mid-excavation shot of Sondage 3 - Hearth 605	SE	07/09/2019
1671	6	Mid-excavation shot of Sondage 3 - Hearth 605	SE	07/09/2019
1672	6	Mid-excavation shot of Sondage 3 - Hearth 605	NE	07/09/2019
1673	6	Mid-excavation shot of Sondage 3 - Hearth 605	NE	07/09/2019
1674	6	W-facing section of Hearth 605	NW	07/09/2019
1675	6	W-facing section of Hearth 605	NW	07/09/2019
1676	6	W-facing section of Hearth 605	NW	07/09/2019
1677	7	General shot of Trench 7	N	07/09/2019
1678	7	General shot of Trench 7	Ν	07/09/2019
1679	7	General shot of Trench 7, 7002	E	07/09/2019
1680	7	General shot of Trench 7, 7002	E	07/09/2019
1681	7	General shot of Trench 7, 7002	W	07/09/2019
1682	7	General shot of Trench 7, 7002	W	07/09/2019
1683	6	Working shot of Trench 6 - Sondage 2	NE	07/09/2019
1684	6	Working shot of Trench 6 - Sondage 2	NE	07/09/2019
1685	6	Working shot of Trench 6 - Sondage 2	NE	07/09/2019
1686	6	Working shot of Trench 6 - Sondage 2	NE	07/09/2019
1687	6	Working shot of Trench 6 - Sondage 2	NE	07/09/2019
1688	6	Working shot of Trench 6 - Sondage 2	NE	07/09/2019
1689	6	General shot of volunteers working Va		07/09/2019
1690	6	General shot of volunteers working Variou		07/09/2019
1691	6	General shot of volunteers working	Various	07/09/2019
1692	6	Mid-excavation shot of Sondage 1	NE	07/09/2019
1693	6	Mid-excavation shot of Sondage 1	NE	07/09/2019

Frame	Area	Description	Facing	Date
1694	6	Mid-excavation shot of Sondage 1	N	07/09/2019
1695	6	Mid-excavation shot of Sondage 1	N	07/09/2019
1696	6	Mid-excavation shot of Sondage 1	SW	07/09/2019
1697	6	Mid-excavation shot of Sondage 1	SW	07/09/2019
1698	6	Mid-excavation shot of Sondage 1	SW	07/09/2019
1699	6	Mid-excavation shot of Sondage 1	SW	07/09/2019
1700	6	Mid-excavation shot of Sondage 1	SE	07/09/2019
1701	6	Mid-excavation shot of Sondage 1	SE	07/09/2019
1702	6	Mid-excavation shot of Sondage 1	SE	07/09/2019
1703	6	Southeast-facing section of Hearth 605, Sondage 3	NW	10/09/2019
1704	6	Southeast-facing section of Hearth 605, Sondage 3	NW	10/09/2019
1705	6	Southeast-facing section of Hearth 605, Sondage 3	NW	10/09/2019
1706	6	Southeast-facing section of Hearth 605, Sondage 3	NW	10/09/2019
1707	6	South-facing section of Hearth 605, Sondage 3	N	10/09/2019
1708	6	South-facing section of Hearth 605, Sondage 3	N	10/09/2019
1709	6	South-facing section of Hearth 605, Sondage 3	Ν	10/09/2019
1710	6	South-facing section of Hearth 605, Sondage 3	Ν	10/09/2019
1711	6	Post-excavation view of Hearth 605	E	10/09/2019
1712	6	Post-excavation view of Hearth 605	E	10/09/2019
1713	7	Post-excavation view of possible pit 7006	W	10/09/2019
1714	7	Post-excavation view of possible pit 7006	W	10/09/2019
1715	7	Post-excavation view of possible pit 7006	W	10/09/2019
1716	7	Working shot of Trench 7	W	10/09/2019
1717	7	Working shot of Trench 7	W	10/09/2019
1718	7	Working shot of Trench 7 with bank 7002 and 7003	Ν	10/09/2019
1719	7	Working shot of Trench 7 with bank 7002 and 7003	Ν	10/09/2019
1720	7	Working shot of Trench 7 with bank 7002 and 7003		10/09/2019
1721	7	Working shot of Trench 7 with bank 7002 and 7003	E	10/09/2019
1722	7	Working shot of Trench 7 with bank 7002 and 7003	S	10/09/2019
1723	7	Working shot of Trench 7 with bank 7002 and 7003	S	10/09/2019
1724	7	Working shot of Trench 7 with bank 7002 and 7003	W	10/09/2019
1725	7	Working shot of Trench 7 with bank 7002 and 7003	W	10/09/2019

Frame	Area	Description	Facing	Date
1726	7	Working shot of deposit 7013	Various	12/09/2019
1727	7	Working shot of deposit 7013	Various	12/09/2019
1728	7	Working shot of deposit 7013	Various	12/09/2019
1729	7	Working shot of deposit 7013	Various	12/09/2019
1730	7	Working shot of deposit 7013	Various	12/09/2019
1731	7	Working shot of deposit 7013	Various	12/09/2019
1732	7	Working shot of deposit 7013	Various	12/09/2019
1733	7	Working shot of deposit 7013	Various	12/09/2019
1734	7	Working shot - removal of 7013	Various	12/09/2019
1735	7	Working shot - removal of 7013	Various	12/09/2019
1736	7	Working shot - removal of 7013	Various	12/09/2019
1737	7	Working shot - removal of 7013	Various	12/09/2019
1738	6	Mid-excavation shot of Sondage 1 with hearth 606	NE	12/09/2019
1739	6	Mid-excavation shot of Sondage 1 with hearth 606	NE	12/09/2019
1740	6	Mid-excavation shot of Sondage 1 with hearth 606	NE	12/09/2019
1741	6	Mid-excavation shot of Sondage 1 with hearth 606	NE	12/09/2019
1742	6	Mid-excavation shot of Sondage 1 with hearth 606	Ν	12/09/2019
1743	6	Mid-excavation shot of Sondage 1 with hearth 606	Ν	12/09/2019
1744	6	Mid-excavation shot of Sondage 1 with hearth 606	SW	12/09/2019
1745	6	Mid-excavation shot of Sondage 1 with hearth 606	SW	12/09/2019
1746	6	Mid-excavation shot of Sondage 1 with hearth 606	SW	12/09/2019
1747	6	Mid-excavation shot of Sondage 1 with hearth 606	S	12/09/2019
1748	6	Mid-excavation shot of hearth 606 showing base 617	Ν	12/09/2019
1749	6	Mid-excavation shot of hearth 606 showing base 617	Ν	12/09/2019
1750	6	Voided kubiena in 612, hearth 606	Ν	12/09/2019
1751	6	Voided kubiena in 612, hearth 606	Ν	12/09/2019
1752	6	Voided kubiena in 612, hearth 606	Ν	12/09/2019
1753	6	Kubiena location in 612 - hearth 606	Ν	12/09/2019
1754	6	Kubiena location in 612 - hearth 606	Ν	12/09/2019
1755	6	Kubiena location in 612 - hearth 606	Ν	12/09/2019
1756	6	Mid-excavation shots of Sondage 2 showing 614 and 615	NE	12/09/2019
1757	6	Mid-excavation shots of Sondage 2 showing 614 and 615	NE	12/09/2019
1758	6	Mid-excavation shots of Sondage 2 showing 614 and 615	NW	12/09/2019

Frame	Area	Description	Facing	Date
1759	6	Mid-excavation shots of Sondage 2 showing 614 and 615	NW	12/09/2019
1760	6	Mid-excavation shot of Sondage 2 - 614 and 615	SW	12/09/2019
1761	6	Mid-excavation shot of Sondage 2 - 614 and 615	NW	12/09/2019
1762	6	Mid-excavation shot of Sondage 2 - 614 and 615	NE	12/09/2019
1763	6	Detail of 615 - Sondage 2	SE	12/09/2019
1764	6	Detail of 615 - Sondage 2	SE	12/09/2019
1765	6	Detail of 614 (possible hearth) - Sondage 2	SE	12/09/2019
1766	6	Detail of 614 (possible hearth) - Sondage 2	SE	12/09/2019
1767	6	Southeast-facing section view of Sondage 2	NW	12/09/2019
1768	6	Southeast-facing section view of Sondage 2	NW	12/09/2019
1769	6	Southeast-facing section view of Sondage 2	NW	12/09/2019
1770	6	Southeast-facing section view of Sondage 2	NW	12/09/2019
1771	6	Southeast-facing section view of Sondage 2	NW	12/09/2019
1772	7	Working shots of charcoal 7012 removal	Various	12/09/2019
1773	7	Working shots of charcoal 7012 removal	Various	12/09/2019
1774	7	Working shots of charcoal 7012 removal	Various	12/09/2019
1775	7	Working shots of charcoal 7012 removal	Various	12/09/2019
1776	7	Working shots of charcoal 7012 removal	Various	12/09/2019
1777	7	Working shots of charcoal 7012 removal	Various	12/09/2019
1778	6	Mid-excavation of hearth 606 and 619	Е	12/09/2019
1779	6	Mid-excavation of hearth 606 and 619	Е	12/09/2019
1780	6	Mid-excavation of hearth 606 and 619	Е	12/09/2019
1781	6	Mid-excavation of hearth 606 and 619	Ν	12/09/2019
1782	6	Mid-excavation of hearth 606 and 619	N	12/09/2019
1783	6	Mid-excavation of hearth 606 and 619	N	12/09/2019
1784	6	Mid-excavation of hearth 606 and 619	W	12/09/2019
1785	6	Mid-excavation of hearth 606 and 619	W	12/09/2019
1786	6	Mid-excavation of hearth 606 and 619	W	12/09/2019
1787	6	Mid-excavation of hearth 606 and 619	S	12/09/2019
1788	6	Working shot of Chris and hearth 606	S	12/09/2019
1789	6	Mid-excavation of hearth 606 and 619	S	12/09/2019
1790	6	Mid-excavation of hearth 606 and 619	S	12/09/2019
1791	6	Trench 6 - Sondage 3 - Post-excavation	Various	13/09/2019
1792	6	Trench 6 - Sondage 3 - Post-excavation	Various	13/09/2019
1793	6	Trench 6 - Sondage 3 - Post-excavation Variou		13/09/2019
1794	6	• • • • • • • • • • • • • • • • • • •		13/09/2019
1795	7	Detail shot of slag, hearth, in deposit 7013	Various	13/09/2019
1796	7	Detail shot of slag, hearth, in deposit 7013	Various	13/09/2019
1797	7	Detail shot of slag, hearth, in deposit 7013	Various	13/09/2019

Frame	Area	Description	Facing	Date
1798	7	Detail shot of slag, hearth, in deposit 7013	Various	13/09/2019
1799	7	Detail shot of slag, hearth, in deposit 7013	Various	13/09/2019
1800	7	Detail shot of slag, hearth, in deposit 7013	Various	13/09/2019
1801	7	Detail shot of slag, hearth, in deposit 7013	Various	13/09/2019
1802	7	Detail shot of slag, hearth, in deposit 7013	Various	13/09/2019
1803	7	Detail shot of slag, hearth, in deposit 7013	Various	13/09/2019
1804	6	Post-excavation shots of Sondage 3 - Trench 6	NE	13/09/2019
1805	6	Post-excavation shots of Sondage 3 - Trench 6	SE	13/09/2019
1806	6	Post-excavation shots of Sondage 3 - Trench 6	SE	13/09/2019
1807	6	Southeast-facing section of Sondage 3 - Trench 6	NW	13/09/2019
1808	6	Southeast-facing section of Sondage 3 - Trench 6	NW	13/09/2019
1809	6	Southeast-facing section of Sondage 3 - Trench 6	NW	13/09/2019
1810	6	Southeast-facing section of Sondage 3 - Trench 6	NW	13/09/2019
1811	6	Southeast-facing section of Sondage 3 - Trench 6	NW	13/09/2019
1812	6	Southwest-facing section of Sondage 3 - Trench 6	NE	13/09/2019
1813	6	Southwest-facing section of Sondage 3 - Trench 6	NE	13/09/2019
1814	6	Working shot of volunteers	Various	13/09/2019
1815	6	Working shot of volunteers	Various	13/09/2019
1816	6	Hearth 617 prior to removal of stone	N	13/09/2019
1817	6	Hearth 617 prior to removal of stone	Ν	13/09/2019
1818	6	Hearth 617 prior to removal of stone	E	13/09/2019
1819	6	Hearth 617 prior to removal of stone	E	13/09/2019
1820	6	Hearth 617 prior to removal of stone	NW	13/09/2019
1821	6	Hearth 617 prior to removal of stone	NW	13/09/2019
1822	6	Hearth 617 prior to removal of stone	NW	13/09/2019
1823	6	Hearth 617 prior to removal of stone	W	13/09/2019
1824	6	Hearth 617 prior to removal of stone	W	13/09/2019
1825	6	Floating stones 611 prior to removal	NW	13/09/2019
1826	6	Floating stones 611 prior to removal	SW	13/09/2019
1827	6	Floating stones 611 prior to removal	SW	13/09/2019
1828	6	Floating stones 611 prior to removal		13/09/2019
1829	6	Floating stones 611 prior to removal S		13/09/2019
1830	6	Northwest-facing section of baulk - Sondage 2	SE	13/09/2019
1831	6	Northwest-facing section of baulk - Sondage 2	SE	13/09/2019

Frame	Area	Description	Facing	Date
1832	6	Northwest-facing section of baulk - Sondage 2	SE	13/09/2019
1833	6	Northwest-facing section of baulk - Sondage 2	SE	13/09/2019
1834	6	Northwest-facing section of baulk - Sondage 2	SE	13/09/2019
1835	6	Northwest-facing section of baulk - Sondage 2	SE	13/09/2019
1836	6	Baulk removed showing 603	SE	13/09/2019
1837	6	Baulk removed showing 603	SE	13/09/2019
1838	6	Baulk removed showing 603	NW	13/09/2019
1839	6	Baulk removed showing 603	NW	13/09/2019
1840	6	Baulk removed showing 603	NW	13/09/2019
1841	6	Baulk removed showing 603	Ν	13/09/2019
1842	6	Baulk removed showing 603	Ν	13/09/2019
1843	6	Hearth 617 and occupation layer 618	N	13/09/2019
1844	6	Hearth 617 and occupation layer 618	Ν	13/09/2019
1845	6	Detail of hearth 617	Ν	13/09/2019
1846	6	Detail of hearth 617	Ν	13/09/2019
1847	6	Detail of hearth 617	W	13/09/2019
1848	6	Detail of hearth 617	W	13/09/2019
1849	6	Detail of hearth 617	W	13/09/2019
1850	6	Post-excavation of Sondage 1, Trench 6	NW	13/09/2019
1851	6	Post-excavation of Sondage 1, Trench 6	N	13/09/2019
1852	6	Post-excavation of Sondage 1, Trench 6	N	13/09/2019
1853	6	Post-excavation of Sondage 1, Trench 6	SE	13/09/2019
1854	6	Post-excavation of Sondage 1, Trench 6	SE	13/09/2019
1855	6	Post-excavation of Sondage 1, Trench 6	SE	13/09/2019
1856	6	Post-excavation of Sondage 1, Trench 6	SE	13/09/2019
1857	6	Detail of hearth 617	SE	13/09/2019
1858	6	Detail of hearth 617	SE	13/09/2019
1859	6	Hearth 617 and 618	NE	13/09/2019
1860	6	Hearth 617 and 618	N	13/09/2019
1861	6	Hearth 617 and 618	N	13/09/2019
1862	6	Hearth 617 and 618	E	13/09/2019
1863	6	Hearth 617 and 618	E	13/09/2019
1864	6	Hearth 617 and 618	N	13/09/2019
1865	6	Hearth 617 and 618	N	13/09/2019
1866	6	Hearth 617 and 618	W	13/09/2019
1867	6	Hearth 617 and 618	W	13/09/2019
1868	6	Hearth 617 and 618	S	13/09/2019

APPENDIX 3: DRAWING REGISTER

Drawing No.	Sheet No.	Trench	Details	Scale
2017-4		1	Section of trench 1 (to be joined to S facing section drawing #5)	01:20
2017-5		1	South facing section of east end of Trench 1 (to join to S facing section drawing #4)	01:10
2017-6		1	North facing section of feature [017]	01:10
2017-7		1	Plan of Trench 1	01:20
2017-8		1	Plan of Trench 1 Post- Excavation	01:20
2017-9		1	Plan (post-ex) overlay of dr#8 east end of Trench 1, showing pits	01:20
2018-10	13, 16, 17	1	Overlays for Trench 1 plan	01:20
2018-11	14	1	Section of middle bank	01:10
2018-12	15	1	Section of lower bank/track	01:10
		2		
		2		
		2		
		2		
		3		
		3		
		3		
	1			
401	19	4	Plan of Trench 4	01:20
402	20	4	Overlay of plan #401 – platform	01:20
403	21	4	Overlay of plan #401 - hearth	01:20
404	22	4	N-facing section of Trench 4	01:20
405	23	4	Mid-ex plan Trench 4 2019	01:20
406	24	4	Post-ex overlay of #405 - hearth	01:20
407	25	4	Post-ex overlay of #405 - stone settings	01:20
408	26	4	S-facing section of Trench 4 2019	01:20
409	26	4	N facing section of Trench 4 2019	01:20
410	26	4	E-facing section of hearth [410]	01:10
411	26	4	E-facing section of hearth posthole settings	01:10
412	26	4	W-facing section of hearth postholes	01:10
501	11	5	Post-excavation plan of Trench 5	01:20
502	12	5	East facing section of Trench 5	01:10
601	9	6	Plan of Sondage 1 in Trench 6	01:20

Drawing No.	Sheet No.	Trench	Details	Scale
602	9	6	Profile of West facing section and Sondage 3	01:20
603	10	6	South facing section of Trench 6	01:20
604	1	6	Mid-ex plan of sondage 3 showing hearth [605]	01:20
605	2	6	SE-facing section of slot in sondage 3 showing hearth [605]	01:10
606	3	6	Mid-excavation plan of sondage 1	01:20
607	4	6	Mid-ex plan of hearth [606]	01:20
608	2	6	SE-facing section of sondage 3	01:10
609	5	6	Post-excavation plan of sondage 2 showing 614 and 615	01:20
610	6	6	NW-facing section of sondage 2	01:10
611	7	6	Post-ex plan of trench 6	01:20
612	8	6	SW facing section of Trench 6	01:10
613	8	6	SE facing of Trench 6	01:10
614	8	6	S facing section of hearths [606] and [617]	01:10
2019-1		7	Plan of Trench 7	01:20
2019-1		7	Plan of Trench 7	01:20
2019-2	18	7	East facing section through Trench 7	01:20

APPENDIX 4: FINDS REGISTER

Finds No.	Trench	Context No.	Description
	Trench 1	L	
1001	1	2	Pointed quartz (worked)
1002	1	2	Possible polishing stone
1003	1	2	Collection of quartz
1004	1	2	Animal Bone
1005	1	2	Bone (burnt, fragments) and clay fragments
1006	1	10	Bone/charcoal
1007	1	2	Bone
1008	1	2	Possible pot
1009	1	2	Possible coarse stone tool/quern
1010	1	2	Bone
1011	1	002/004	Ingot Mould
1012	1	2	Coarse stone tool
1013	1	10	Animal Bone
1014	1	2	Possible worked stone/hammerstone
1015	1	2	Iron Nail?
1016	1	15	Bone
1017	1	2	Possible design on stone- natural?
1018	1	2	Burnt bone
1019	1	10	Natural cobble
1020	1	10	Rock crystal; worked?
1021	1	10	Possible coarse stone tool
1022	1	24	Natural pebble
1023	1	24	Burnt bone
1024	1	24	Natural pebble
1025	1	24	Possible pounder
1026	1	24	Fractured stone. Natural?
1027	1	31	Natural stone
	Trench 2		
201	2	202	Flint debitage
202	2	202	Flint debitage
203	2	202	Flint debitage
204	2	202	Clay pipe x2 fragments
205	2	202	Possible whetstone?
206	2	202	Small sherd of pottery
207	2	202	Stone mould fragment
208	2	202	Crucible rim sherd
209	2	202	Flint debitage
210	2	202	Possible polishing pebble
211	2	202	Slag fragments x2

Finds No.	Trench	Context No.	Description
212	2	202	Fe object- very corroded
213	2	202	Flint debitage
214	2	202	Rim glazed pottery
215	2	202	Fragment of stone with metal working surface
216	2	202	Flint debitage
217	2	202	Coin 1952?
218	2	202	3 x flint debitage (different types)
219	2	202	Shotgun cartridge
220	2	202	Disc shaped pebble
221	2	202	Possible whetstone?
222	2	204	2 buckets of small rounded stones, possible slingshots
	Trench 3		
301	3	302	Modern (?) Iron Object
302	3	302	Modern (?) Iron object
303	3	302	Possible small pounder
304	3	304	Rounded stone, flat edge at top of [304] collapse amongst soil (302)
305	3	305	Bone- small fragments
306	3	305	Possible vitrified material- slag?
307	3	305	Slag material
308	3	305	Iron Object
309	3	305 (base just above (308)	Iron object
310	3	305 (base just above (308)	Saddle quern reused as stone mould
311	3	305 (base just above (308)	Polisher?
312	3	305 (base just above (308)	Possible grinding/rubbing stone?
313	3	305 (base just above (308)	Stone mould fragments/ saddle quern- same as SF312
314	3	306	Sharpening stone
315	3	305	Circular worn (?) stone
316	3	308 (at base of [304])	Fragment of bone interface (306)/(308)
317	3	302	Heavily corroded iron object
318	3	306 (interface over (308))	Heat affected/vitrified material
319	3	305	Bone fragments
320	3	308	Stone- worked?

Finds No.	Trench	Context No.	Description			
321	3	305	Vitrified/slag material			
322	3	306	Worked stone?			
	Trench 4					
401	4	401	Disc-shaped spindle whorl; marking out lines noted			
402	4	401	Possible worked stone- heavily worn			
403	4	401	Slag pieces (x7)			
404	4	401	Polished bone? Multiple pieces			
405	4	401	Jaw and teeth & teeth			
406	4	401	Ceramic			
407	4	401	Possible slag/crucible x2 fragments			
408	4	401	Quartz scraper			
409	4	401	Quartz debitage			
410	4	401	Pb bead			
411	4	401	Slag			
412	4	401	Bone, possible claw/tusk/horn			
413	4	401	Worked? Stone			
414	4	401	Stone- metal working accretion?			
415	4	401	Large red deer antler			
416	4	401	3 large bags of bone, assorted			
417	4	401	Fish vertebrae			
418	4	401	Crucible (?) fragment			
419	4	401	Polished red stone			
420	4	401	Bone? – claw/tusk/horn			
421	4	401	Crucible fragment			
422	4	401	Vitrified stone			
423	4	401	Metal? Nail			
424	4	401	Stone- metal working, vitrification, crucible?			
425	4	401	Teeth			
426	4	401	Gaming piece?			
427	4	401	Iron fragment?			
428	4	401	Worked quartz fragment			
429	4	401	4 large bags of assorted animal bone			
430	4	401	Slag			
431	4	401	Iron working slag?			
432	4	401	Miscellaneous items- bone- from sieve			
433	4	401	Misc bone			
434	4	401	Slag			
435	4	401	Polished stone			
436	4	401	Tooth			
437	4	401	1 large bag of animal bone			
438	4	401	Burnt clay?			
4039	4	401	Crucible stand - circular round based hollow on one face			

Finds No.	Trench	Context No.	Description
4040	4	401	Crucible sherd
4041	4	401	3 leather strips
4042	4	401	Probable Nail (unusual corrosion: looks like a handle but think this is just corrosion)
4043		401	Mould fragment
4044	4	401	E-ware sherd
4045	4	401	Iron object; unidentified
4046	4	401	Leather strip
4047	4	401	Low-density glassy slag (?heavily vit ceramic)
4048	4	401	Poss whestone frag; rejoins with SF 4063
4049	4	401	Intact nails ?modern
4050	4	401	Crucible sherd, glassy residue on exterior
4051	4	401	Flint blade
4052	4	401	Mould fragment?
4053	4	401	Schist pebble; geo id
4054	4	401	Unusual but natural stone
4055	4		Animal teeth
4056	4	401	Knife blade fragment
4057	4	401	3 x Plano-convex cake frag; 1 x ore
4058	4	401	Natural water-rounded quartzite pebble, very smoothed and polished in patches
4059	4	401	Worked schist; edge of perforation
4060	4	401	Decorated bi-conical spindle whorl
4061	4	401	Nails
4062	4	401	Handle? Or Fitting? With rivet in situ
4063	4	401	Possible whetstone
4064	4		Burnt bone
4065	4	402	Natural: stone collected as whetstone but looks natural
4066	4	402	Mould fragment
4067	4	402	Agate
4068	4	402	Quartz
4069	4	402	Small bag-shaped crucible fragment, full profile. ?silver
4070	4	402	Probable whetstone
4071	4	402	Unclassified iron slag
4072	4		Animal tooth
4073	4	402	Flint
4074	4	402	Half disc-shaped spindle whorl
4075	4	402	Flint
4076	4	403	Base sherd and rim sherd (non joining); 2 crucibles
4077	4	403	White opaque glass gaming piece or inset (plano- convex in section)
4078	4	403	Mould fragment - brooch/ring

Finds No.	Trench	Context No.	Description
4079	4	403	Crucible base
4080	4	403	Hammerstone/anvil
4081	4	403	Amorphous mould fragment
4082	4	403	Natural? Collected as whetstone but looks natural
4083	4	403	Nail
4084	4	403	Quartz
4085	4	403	Possible quern fragment
4086	4	403	Mould fragment?
4087	4	403	Slide key in two fragments
4088	4	403	Crucible sherds, including spout (not ness. From same crucible)
4089	4	403	Mould fragment?
4091	4	403	Rim of large crucible, spall of second
4091	4	403	Mould fragments?
4092	4	403	Chert, bit of core
4093	4	403	Mould fragments?
4094	4	403	Flint chips and flakes
4095	4		Burnt bone and teeth
4096	4	403	Small oval pebbles; probable gaming pieces
4097	4	403	Small shear blade arm
4098	4	401	Quartz
4099	4	403	Knife blade, substantially intact
4100	4	403	Mould fragment - key mark?
4101	4	403	Mould fragments?
4102	4	403	Unclassified iron slag
4104	4	401	Crucible spout, residues
4105	4	403	Smoother
4106	4	403	Heavily corroded iron object; unidentified
4107	4	402	Crucible/mould fragments
4108	4	403	E-ware sherd
4109	4	403	Mould fragments?
4110	4	403	Small baggy crucible base, globules adhering ?silver
4111	4	401	Mould fragments?
4112	4	401	E-ware sherd
4113	4	403	Fine crucible fragment
4114	4	403	Mould fragment - pin
4115	4		Animal tooth
4116	4	403	2 Fragments bi-conical blue glass bead; anglo-saxon
4117	4	403	Mould fragments?
4118	4	403	Flint scraper fragment
4119	4	403	Crucible rim sherd
4120	4	403	Probable nails

Finds No.	Trench	Context No.	Description
4121	4	403	Knife tip
4122	4	403	Large, tall, crucible sherd, glassy residue on exterior
4123	4	404	Mould fragment - brooch?
4124	4	403	Crucible sherd
4125	4	403	Intact conical ferrule
4126	4	403	Fe fragment, broken. Unidentified
4127	4	406	Robust tapering iron bar, Chisel?
4128	4	403	Rim sherds (not joining) of crucible
4128	4	403	E-ware sherd
4129	4	403	Fine tapering iron strip, soldered on to pointed tip of second strip
4130	4	406	Flint
4131	4	403	Crucible spout, black/red residues
4132	4	403	Knife blade fragment
4133	4	403	Mould fragments?
4135	4	403	Mustard yellow beaker glass sherd; anglo-saxon
4136	4	403	Possible E-ware rim sherd & amorphous ?mould fragment
4137a	4	403	Unclassified iron slag
4137B	4	403	Fe object
4138	4	403	Large baggy crucible sherd, full profile, residues on exterior
4139	4	403	Knife blade fragment
4140	4	403	Tiny hemispherical crucible, substantial proportion surviving
4141	4	401	Modern drawn wire fence fragment
4142	4	403	Flint
4143	4	409	Possible whetstones
4144	4	411	Possible socketed tool or spearhead
4145	4	409	Crucible sherd
4146	4	409	Mould fragment?
4147a	4	409	L-shaped bracket/hook
4147b	4	409	Natural water-rounded pebble
4148	4	411	E-ware sherds
4149	4	411	Disc-shaped stone, ?worked
4151	4	411	Bar whetstone
4152	4	403	Mould fragments?
4153	4	403	Stone pebble, probable gaming piece.
4154	4	406	E-ware sherd; residues
4156	4		Burnt bone and teeth
4157	4	Unstratified	Ingot mould; unfinished
4159	4	407	Natural; collected as quern
4160	4	406 burrow)	Mould fragment - pin

inds No.	Trench	Context No.	Description
4161	4	401	Fe - slag
4162	4	409	St - Possible gaming piece or charm?
4163	4	406	Slate object - whetstone
4164	4	401	Possible stone gaming piece?
4165	4	401	Ce - crucible
4166	4	401	Flint
4167	4	401	Stone sling shot?
4168	4	406	Degraded whetstone
4169	4	401	Flint
4170	4	406	Stone pot lid
4171	4	403	St? - clay lining?
4172	4	403	St - Ring? Bracelet?
4173	4	401	Assorted material from topsoil
4174	4	403	Fe nail (x-ray)
4175	4	403	Ce - crucible fragment x 2 (Join)
4176	4	403	Stone - mix
4177	4	403	St - gaming piece?
4178	4	403	St - gaming piece
4179	4	403	St - gaming piece?
4180	4	403	Ce - pin mould fragment
4181	4	403	St?
4182	4	402	Metal blade - Fe angled backed?
4183	4	402	Stone with wear?
4184	4	402	Animal bone from within bank
4185	4	403	St - rounded gaming piece?
4186	4	403	Ceramic fragment
4187	4	403	Clay mould fragment
4188	4	403	Small metal fragment
4189	4	403	Ceramic fragment mould?
4190	4	403	Ce - Crucible fragment
4191	4	403	Worked stone
4192	4	403	Crucible stand/stone mould
4193	4	403	Dice? Glazed?
4194	4	403	Slag
4195	4	403	Ce - clay fragment
4196	4	403	Glass fragment
4197	4	403	Iron blade fragment
4198	4	403	Iron blade fragment
4199	4	403	Vitrified material
4200	4	403	Ce - crucible fragment
4201	4	403	Ce - crucible fragment
4202	4	403	Ce - clay fragments

Finds No.	Trench	Context No.	Description
4203	4	403	Crucible base
4204	4	403	Clay mould fragment
4205	4	403	Crucible rim
4206	4	403	E-ware handle and fragments
4207	4	403	Iron nail
4208	4	403	Small Quartz pebble
4209	4	403	Whetstone?
4210	4	403	Iron nail
4211	4	403	Iron fragment
4212	4	403	Slag
4213	4	403	St - gaming piece
4214	4	403	Whetstone
4215	4	403	Slag
4216	4	403	Iron object
4217	4	403	St - broken smoother
4218	4	403	Stone with clay? adhered
4219	4	403	Possible quern fragment?
4220	4	403	Stone polisher?
4221	4	403	Possible whetstone - weathered
4222	4	403	Rounded stones
4223	4	403	Natural stone with linear weathering pattern
4224	4	403	Possible whetstone
4225	4	403	St - Spindle whorl
4226	4	403	Whetstone or polisher?
4227	4	403	Whetstone?
4228	4	403	Halved rounded pebbles x 3
4229	4	403	Ceramic crucible
4230	4	403	Slag
4231	4	403	Glazed pottery (probably from the plough furrow)
4232	4	403	Probable natural stone but needs geology ID
4233	4	403	Vitrified material - possible crucible??
4234	4	419	Fe object (needs x-ray)
4235	4	403	Gaming piece
4236	4	403	Two mould fragments
4237	4	403	Whetstone
4238	4	419	Slag
4239	4	403	Ce - crucible
4240	4	403	Iron object
4241	4	403	Fe - ard?
4242	4	403	Ce - crucible (base and side)
4243	4	403	St - Gaming piece
4244	4	403	St - ingot mould

Finds No.	Trench	Context No.	Description
4245	4	403	St - possible pot lid?
4246	4	412	Smithing slag
4247	4	412	Vitrified material - possible mould?
4248	4	403	Fe - possible blade?
4249	4	403	Iron obect (rivetted?)
4250	4	403	Iron knife
4251	4	403	Slag
4252	4	403	Whetstone?
4253	4	413	Antler
4254	4	403	Possible ingot mould
4255	4	403	Nail?
4256	4	403	Mould fragment
4257	4	403	Gaming piece
4258	4	403	Whetstone(s)?
4259	4	403	Crucible or stone
4260	4	412	Bone - possible implement?
4261	4	403	Metal object, Fe
4262	4	403	Metal blade? Fe
4263	4	406	St - pot lid? (animal burrow)
4264	4	406	Bronze casting? Or Iron slag
4265	4	429	Modified stone
4266	4	403	Slingshots?
4267	4	403	L-shaped metal object
4268	4	402	Animal bone within baulk
4269	4	429	Possible whetstone
4270	4	403	Gaming piece?
	Trench 5		
501	5	501	Opaque green glass bead fragment; anglo-saxon
502	5	501	Natural. Pebble
503	5	502	Whetstone; 2 fractured stones
504	5	502	Saddle quern/grinding stone
505	5	501	Perforated weight; intact
	Trench 6		
601	6	601	Ceramic fragment – possible E-ware, rim sherd
602	6	601	Flint
603	6	601	Roman gaming piece fragment
604	6	601	Natural smooth pebbles; collected as gaming pieces but probably natural
605	6	601	Mould fragment?
606	6	601	Unclassified iron slag
607	6	601	Small spherical pebbles. ??gaming pieces
608	6	601	Fine rim of crucible

Finds No.	Trench	Context No.	Description
609	6	601	19th/early 20th C disc-shaped button
610	6	601	Fine circular-sectioned shank, hooked at one end. Pin?
611	6	601	Flint worked
612	6	601	Crucible rim
613	6	601	Hooked terminal of fine fitting & nail shank
614	6	601	Half disc-shaped spindle whorl
615	6	601	Small crucible sherd
616	6	601	Rim of fine crucible
617	6	601	Ingot mould (schist - same as outcrop); broken across mould matrix
618	6	601	Unclassified iron slag
619	6	601	Crucible spall; red residue on ext.
620	6	601	Yellow/red glass cylindrical bead fragment; anglo- saxon
621	6	U/S	Coarse stone tool
622	6	601 (SE side)	Metal ring
623	6	601 (SE side)	Ceramic - possible E-ware
624	6	601	Slag
625	6	601 (NW side)	Ceramic - possible crucible fragment
626	6	601	Slingshot stone?
627	6	601	Worked flint?
628	6	601	Whetstone
629	6	601	Metal nail/pin
630	6	601	Coarse stone tool?
631	6	601	Slag
632	6	601	Ceramic - crucible fragment
633	6	601	Ceramic - mould fragment? (sondage 1)
634	6	601	Metal pin (sondage 1)
635	6	601	Quartz crystal (sondage 3)
636	6	601	Metal pin
637	6	601	Possible whetstone fragment (sondage 3)
638	6	601	Fe - slag
639	6	601	Quartz pebble
640	6	601	Ce - crucible
641	6	602	Coarse stone tool
642	6	601	Metal nail
643	6	601	Ceramic rim sherd
644	6	601	Possible coarse stone tool
645	6	601	Clay mould (Sondage 1, near hearth 606)
646	6	601	Metal object (sondage 3, near hearth 605)
647	6	601	Metal object - chisel?

Finds No.	Trench	Context No.	Description
648	6	601	Stone tool
649	6	601	Metal object (sondage 3, near hearth 605)
650	6	601	Slag
651	6	612	Burnt flint
652	6	601	Metal object - tool? (Near hearth 605)
653	6	601	Slag/corroded metal
654	6	601	Metal tool - blade?
655	6	602	Quartz pebble
656	6	613	Metal object
657	6	602	Possible crucible? Stone?
658	6	603	Flint
659	6	601	Chert
660	6	601	Slag
661	6	602	Metal object - iron
662	6	602	Metal object
663	6	609	Smithing hearth bottom - slag
664	6	602	Slag
665	6	601	Glass
666	6	601	Polished stone tool
667	6	601	Slag
668	6	601	Quartz pebble
669	6	601	Crucible fragment?
	Trench 7		
7001	7	7001	Slag
7002	7	7001	Ceramic (Possible E-ware)
7003	7	7001	Ceramic
7004	7	7001	Ceramic
7005	7	7001	Ceramic
7006	7	7001	Ceramic
7007	7	7001	Slag
7008	7	7001	Slag with possible decoration
7009	7	7001	Ceramic
7010	7	7001	Slag
7011	7	7001	Ceramic
7012	7	7001	Ceramic
7013	7	7001	Ceramic
7014	7	7001	Ceramic
7015	7	7001	Slag
7016	7	7001	Ceramic
7017	7	7001	Slag
7018	7	7001	Slag
7019	7	7001	Ceramic (Possible E-ware)

Finds No.	Trench	Context No.	Description
7020	7	7001	Possible wet stone
7021	7	7001	Worked quartz
7022	7	7001	Slag
7023	7	7001	Ceramic
7024	7	7001	Slag
7025	7	7001	Ceramic
7026	7	7001	Quartz
7027	7	7001	Ceramic
7028	7		VOID
7029	7		VOID
7030	7	7001	Ceramic
7031	7	7001	Quartz
7032	7	7001	Slag
7033	7	7001	Ceramic
7034	7	7001	Decorated Ceramic
7035	7	7001	Quartz core
7036	7	7001	Ceramic
7037	7	7001	Ceramic
7038	7		VOID
7039	7	7001	Ceramic
7040	7	7001	Ceramic
7041	7	7001	Ceramic
7042	7	7001	Ceramic
7042 (Double)	7	7001	Ceramic
7043	7		VOID
7044	7		VOID
7045	7	7001	Ceramic
7046	7	7001	Ceramic
7047	7	7001	Ceramic
7048	7	7001	Ceramic & Slag
7049	7	7001	Fired clay
7050	7	7001	Ceramic
7051	7	7003	Slag
7052	7	7001	Ceramic
7053	7	7001	Metal crucible
7053 (Double)	7	7003	Ceramic
7054	7	7005	Slag
7055	7	7003	Ceramic
7056	7	7005	Bone
7057	7	7005	Slag with grove
7058	7	7011	Charcoal

Finds No.	Trench	Context No.	Description
7059	7	7005	Ceramic possible mould
7060	7	7005	Ceramic possible mould
7061	7	7005	Slag with residue
7062	7	7005	Ceramic
7063	7	7005	Fired Clay
7064	7	7011	Slag
7065	7	7011	Interesting stone
7066	7	7005	Slag
7066 (Double)	7	7012	Slag\mould
7067	7	7013	Slag
7068	7	7013	Fired clay
7069	7	7013	Stone
7070	7	7013	Fired clay
7071	7	7012	Charcoal
7072	7	7012	Slag
7073	7	7005	Slag
7074	7	7001	Slag
7075	7	7001	Quartz
7076	7	7005	Fired clay & Slag
7077	7	7013	Possible crucible
7078	7	7013	Crucible
7079	7	7013	Hearth lining
7080	7	7013	Hearth lining
7081	7	7013	Hearth lining
7082	7	7013	Hearth lining
7083	7	7013	Ceramic
7084	7	7008	Slag
7085	7	7013	Slag
7086	7	7013	Worked quartz
7087	7	7013	Hearth lining
7088	7	7013	Slag
7089	7	7013	Slag
7090	7	7013	Hearth lining
7091	7	7013	Slag hearth lining
7092	7	7013	Slag hearth base

APPENDIX 5: SAMPLES REGISTER

Context No.	Area	Quantity (litres)
	Trench	n 1
15	1	1 X 10L
18	1	1 X 10L
19	1	1 X 10L
25	1	1 X 10L
	Trench	n 2
202	2	2 X 10L
204 (burnt base)	2	1 X 10L
210	2	1 X 10L
	Trench	n 3
310 (S of T3)	3	2 X 10L
310 (within slot)	3	2 X 10L
311	3	1 x 10L (100% sample)
312 (S of [304])	3	2 X 10L
313	3	1 X10L
314	3	1 X 5L (100% sample)
315	3	1 x 10L
	Trench	n 4
407	4	1 x 10L
409	4	1 x 10L
411	4	1 x 10L
411	4	1 x 10L
411	4	1 x 10L
413	4	1 x 10L
412	4	1 x 10L
414	4	1 x 10L
403	4	2 x 10L
419 (Deposit associated with secondary hearth 420)	4	1 x 10L
409	4	1 x 10L
412 (upper hearth fill)	4	1 x 10L
412	4	1 x bag (animal bone)

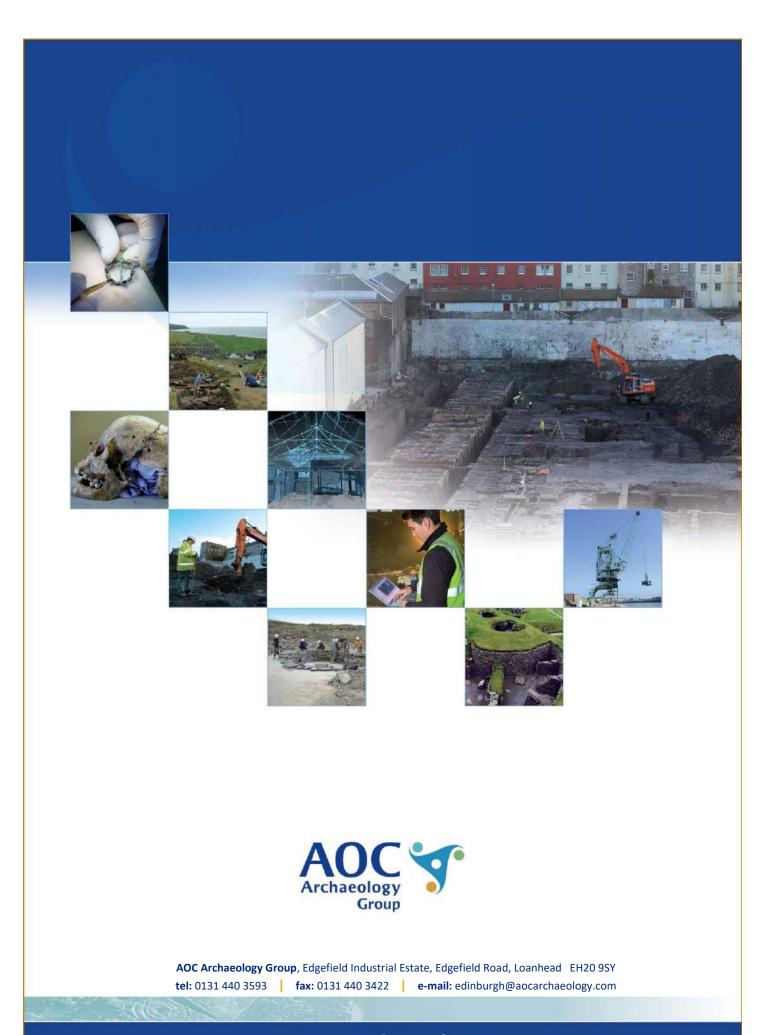
Context No.	Area	Quantity (litres)
403 (from		4 40
layer over hearth)	4	1 x 10L
413 (mid hearth layer)		1 x 10L
414 (lower hearth fill)	4	1 x 10L
409	4	1 x bag (animal bone)
403	4	1 x tub (animal bone)
416	4	1 x 10L
409 - 406	4	Special Sample - Kubiena 1
403 - 409	4	Special Sample - Kubiena 2
414 - 415	4	Special Sample - Kubiena 3
413 - 414	4	Special Sample - Kubiena 4
	Trench	n 6
612	6	Special Sample - Kubiena 5
609 (Sondage 3)	6	1 x 10L
607	6	1 x 10L
602 (NE of hearth 606)	6	1 x 10L
612	6	3 x 10L
602 (SE of hearth		
606)	6	1 x 10L
613	6	1 x 10L
621	6	1 x 10L
620	6	1 x 10L
618	6	1 x 10L
623	6	1 x 10L
601	6	1 x bag (animal bone)
	Trench	
7003	7	2 X 10L
7007	7	1 X 5L
7011	7	2 X 10L
7013	7	5 X 10L

APPENDIX 6: 'DISCOVERY AND EXCAVATION IN SCOTLAND' REPORT

LOCAL AUTHORITY:	Perth and Kinross
PROJECT TITLE/SITE NAME:	Kings Seat Community Archaeology Project
PROJECT CODE:	23917-3
PARISH:	Dunkeld and Dowally
NAME OF CONTRIBUTOR:	Cathy Maclver, Martin Cook, Andy Heald, David Strachan, Yvonne Robertson
NAME OF ORGANISATION:	AOC Archaeology, Perth and Kinross Heritage Trust, Dunkeld and Birnam Historical Society
TYPE(S) OF PROJECT:	Excavation
NMRS NO(S):	NO04SW 19
SITE/MONUMENT TYPE(S):	Fort
SIGNIFICANT FINDS:	Stone moulds; clay moulds; glass beads; E-ware pottery; crucible fragments; iron objects; iron blade; iron shear arm; iron slide key; spindle whorls.
NGR (2 letters, 8 or 10 figures)	NO 0093 4303
START DATE (this season)	2 September 2019
END DATE (this season)	14 September 2019
PREVIOUS WORK (incl. DES ref.)	DES 2018. Volume 19. Page 162.
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	King's Seat Hillfort (NGR: NO 0093 4303; NMRS: NO04SW19; PKHER: MPK5444; Scheduled Monument: 1598), also known as 'The Fort of the Caledonians', is located on the summit of King's Seat, a key geographical feature in the landscape, located on a bend on the north side of the River Tay. The forts defences are comprised of a central citadel occupying the summit of the hill and a series of ramparts enclosing lower terraces. The citadel measures about 35m by 22m within what are probably the remains of a thick wall. The entrance is located to the north and there appears to have been a track dropping down to a lower terrace on the west. This track and the terrace are edged by a rampart reduced to a stony bank up to 4m in thickness by 0.4m in height, its south end resting on the lip of a precipitous cliff. Below this terrace, on the west, the approach to the fort is partially blocked by three rampart-like features, which form a flight of terraces levelled into the slope. King's Seat Hillfort sits on exposed bedrock of the Ben Ledi Grit Formation, Metasandstone.
	Scheduled monument consent was granted in principle for three seasons of excavation and seven trenches on the site, three of which were excavated in 2017 and two in 2018. Trench 2-3 were completed in 2017. Trench 1 and 5 were completed in 2018. In the final season of excavation in 2019 the team completed the excavation of Trench 4, 6 and 7. From September 2 nd to 14 th , 2019, three trenches were opened at Kings Seat. Trench 4 was extended to 6m by 11m. A smaller section of this had been opened and the topsoil removed in 2017. Within this mixed layer were large quantities of animal bone, fragments of teeth, claws and horns in addition to crucible fragments and other evidence of metal working. In 2018 this upper thick deposit of undifferentiated topsoil was removed across the trench and 100% sieved. It was found to contain many more crucible

	fragments, stone ingot moulds, a glass bead, vessel glass and substantial deposits of animal bone, horn and teeth. A small stone platform was identified which measured c. 3m by 1.5m and had in situ burning remains on its surface. A stone kerbed hearth setting was also identified within the concentration of ash and animal bone and could relate to a larger structure in this area. A radiocarbon date confirmed the ash and animal bone rich material at the base of the hearth dated to 550-645 cal AD Excavation in 2019 continued to reveal the hearth measured 2m by 0.9m and confirmed at least two phases of construction and rebuild. It was recorded within remains of a probable rectangular structure at least 6m wide defined by a line of stone settings on the west and a spread of material outside this that might relate to a degraded turf bank. To the east remains of later spade dug rig and furrow had truncated the other edge of the structure. The cultivation most likely relates to a later small-scale market garden or cultivation plot taking advantage of the south facing slope and the well drained, fertile soil.
	Trench 6 was opened and the topsoil removed. Within this mixed rooty layer were fragments of E-ware ceramic, glass beads and glass gaming pieces or inserts. At around 0.4m deep across the trench an occupation horizon was identified characterised by spreads of stone and charcoal rich deposits with metal-working waste such as slag, clay moulds and crucible fragments. Two separate stone hearths were identified within the trench, presumably within structures or buildings, although the extent of these was hard to define within the extent of the trench. The lack of substantial animal bone and presence of metal-working debris suggests that the middle terrace on the hill has been a workshop or craft activity area. Work in 2017 investigated the banks that enclose this terrace and material from a posthole at the back of the inner upper bank enclosing the mid-terrace dated to 435-642 cal AD indicating construction in the early historic period rather than reuse of a pre-existing feature.
	Trench 7 was 2m by 5m and placed to investigate the lower D-shaped enclosure wall on the east of the site. The section here revealed that a substantial bank visible above the ground consisted of large boulders and earth with a large rough kerb on the inner and outer edge. On the interior of the bank a flat terrace contained an occupation deposit with sherds of e-ware ceramic, metal objects and metal working waste. A discrete dump of metal working waste containing a large amount of slag and hearth base was identified deposited against the interior of the bank.
	The artefacts recovered from across the site imply that there has been a significant and extensive phase of early historic activity at the King's Seat. Spindle whorls, glass beads, vessel glass, crucible fragments, clay and stone moulds and iron objects including blades all imply craft and domestic activities were taking place on this site. Many of the objects in the finds assemblage would not be out of place on other high status enclosed sites dating to the early historic period. Initial radiocarbon dates reinforce this interpretation and suggest an early historic origin for the construction of the enclosure on this site. A programme of further excavation and post-excavation analysis, including further radiocarbon dating will help define the chronology, phasing and activity at the site.
PROPOSED FUTURE WORK:	Post-excavation programme, research and publication.
CAPTION(S) FOR ILLUSTRS:	1: Hearth setting identified on the middle terrace
	2: Volunteers in Trench 4 revealing the structure in the upper citadel
SPONSOR OR FUNDING BODY:	National Lottery Heritage Fund, The Gannochy Trust, and the Griffin and Calliachar Community Fund
ADDRESS OF MAIN CONTRIBUTOR:	AOC Archaeology, Edgefield Road Industrial Estate, Loanhead EH20 9SY

EMAIL ADDRESS:	<u>cathy.maciver@aocarchaeology.com</u>
ARCHIVE LOCATION (intended/deposited)	NRHE



www.aocarchaeology.com