

ARCHAEOLOGICAL SERVICES

DURHAM UNIVERSITY

on behalf of
Swaledale and Arkengarthdale Archaeology Group



West Hagg Site 103 Swaledale, North Yorkshire archaeological excavation

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1. Summary

The project

- 1.1 This report presents the results of archaeological excavations conducted by the Swaledale and Arkengarthdale Archaeology Group (SWAAG) with the support of Archaeological Services Durham University, and forming part of *The Swaledale Project: 7000 Years of a Landscape and its People*. The works comprised the excavation of several areas within a Romano-British settlement at Hagg Plantation, West Hagg Farm, Swaledale.

Results

- 1.2 The works have demonstrated that a significant archaeological resource is present on the site, including secure, stratified, datable deposits.
- 1.3 The excavations have demonstrated that the site comprises a later Romano-British settlement which was not abandoned until the late 4th century. No evidence was identified for continuation beyond this period. As only later stratification was examined, it is not possible to state when the site was established. No significant evidence indicating occupation earlier than the later Romano-British period was identified.
- 1.4 Several distinct areas of stone paving were identified in different parts of the site. One of these (Trench 2) contained the remains of a circular structure 7m in diameter, with an entrance demarcated by an unusual stone sill. A similar sill was present in a second area of paving, which may indicate that a similar structure was present here. No postholes or definitive evidence for stone or turf walls was identified. The second area of paving was positioned outside the enclosure bank, in an area previously identified as a possible annexe to the enclosure. Two other large areas of paving were also identified within the enclosure which may reflect the location of further structures.
- 1.5 The enclosure wall visible as an earthwork and through geophysics was partly exposed. In the south-west, a short section of stone bank was identified. The east facing of the eastern enclosure wall was also identified. Short sections of walling outside the main enclosure were identified.
- 1.6 An assemblage of plant macrofossils and charcoal was indicative of the domestic use of the site in the Romano-British period, including the use of spelt wheat and barley, and the exploitation of wild foods. A small assemblage of animal bone was found, of which cattle was identifiable to species.
- 1.7 A small assemblage of medieval, post-medieval and modern artefacts and material was recovered from the topsoil. A medieval arrowhead was also identified. 152 sherds of Roman-period ceramics were identified, almost exclusively dating towards the end of this period. Other Roman artefacts uncovered included parts of a glass bangle, bottle and bead, part of a jet ring, part of shale bangle, iron tools, a copper alloy ingot fragment and decorated strip, and an unusual late Roman quernstone.

2. Project background

Location (Figure 1)

- 2.1 The site is located south-west of the Hagg Plantation at West Hagg, below the southern end of Fremington Edge, in the parish of Reeth, Fremington and Healaugh (NGR SE 05670 99015).

Objective

- 2.2 The objective of the excavation was to identify, excavate and record significant archaeological features within the settlement site, exposing any archaeological remains at its abandonment phase.

Methods statement

- 2.3 The works were preceded by a methods statement (PC12.224) which was submitted to the National Park Authority in advance of the works.

Dates

- 2.4 The excavation of trenches 1-3 was undertaken initially between the 16th and 27th of July 2012. An extension to Trench 2 and the excavation of Trench 4 was undertaken between the 5th and 9th of November. A report was produced on these (Archaeological Services Report 3101). A further two week season took place between 10th-21st June 2013, excavating Trenches 6-9. This report incorporates the results of all of this work.

Personnel

- 2.5 The fieldwork was supervised by Stephanie Piper and Tony Liddell. This report was prepared by Tony Liddell, and edited by Peter Carne. Graphics were by Tony Liddell and Linda Bosveld. Specialist reporting was conducted by Helen Drinkall (lithics), Alex Croom and Paul Bidwell (Roman pottery), Gemma Cruikshanks (iron), Dr Fraser Hunter (copper alloy, glass, shale, jet), John Cruse (quern), and Jennifer Jones (conservation and other finds). Palaeoenvironmental assessment and report preparation were conducted by Dr Carrie Drew, with sample processing undertaken by Janet Beveridge. The Project Manager was Peter Carne.

Archive/OASIS

- 2.6 The site code is **WHF12**, for **West Hagg Farm 2012**. The archive is currently held by Archaeological Services Durham University and will be transferred to the Reeth Museum in due course. Archaeological Services Durham University is registered with the **Online AccesS to the Index of archaeological investigationS project (OASIS)**. The OASIS ID number for this project is archaeol3-145761.

Acknowledgements

- 2.7 Archaeological Services is grateful for the assistance of the landowners, David Clarke and Brenda Price, and the National Park Authority in facilitating this scheme of works.

3. Landuse, topography and geology

- 3.1 At the time of the investigations, the site was in use as pasture.
- 3.2 The site has a mean elevation of approximately 258m OD.

- 3.3 Swaledale lies within the Askrigg Block, formed by limestone, shale and sandstone laid in near-horizontal strata. Glacial drift deposits lie above rock, forming terraces of gravels, clay, limestone and sandstone. The underlying solid geology of the Hagg Plantation Settlement comprises Visean-Namurian limestone with subordinate sandstone and argillaceous rocks of the Alston Formation to the east, with Visean Middle Limestone overlain by Devensian glaciofluvial sheet deposits of sand and gravel in the west (Countryside Commission 1998).

4. Circumstances of the project

- 4.1 *The Fremington Project* was established by the Swaledale and Arkengarthdale Archaeology Group (SWAAG). The project's aim was to study the archaeological landscape at Hagg Farm, near Reeth in Swaledale, and the adjacent Sorrel Sykes and Marrick Priory Farm. The landscape was thought to comprise 9 settlements within a co-axial field system, and to be of later prehistoric/Roman date (Laurie *et al* 2010). SWAAG subsequently established *The Swaledale Project: 7000 Years of a Landscape and its People*. This project aimed in part to give chronological depth to the landscape, by a series of further works. As part of this project, Archaeological Services Durham University provided support, training and supervision to SWAAG for a series of archaeological works on several sites.
- 4.2 An earthwork survey of site 103 had been produced by SWAAG as part of the original scheme of works (Laurie *et al* 2010), recording the traces of several possible platforms and associated banks. A geophysical survey of the site was undertaken in May 2011, comprising both earth resistance and geomagnetic survey (Archaeological Services 2011). The survey supplemented the earthwork survey, confirming the probable presence of the earthwork enclosure, with an entrance to the south, house platforms within, and potentially two 'annexes' detected to the south-east and south-west of the main enclosure, along with anomalies potentially representing small-scale industrial activity or stock management (Figures 2-3).
- 4.3 No intrusive works are known to have been conducted at the site prior to these excavations reported here. However, a sherd of black-burnished ware had been recovered from a molehill on the site, suggesting possible Romano-British activity. An excavation by SWAAG (Trench 5) took place on the mound forming the east boundary of the site in May 2013 (SWAAG 2013). This noted a series of undated features which were interpreted as either 19th century or geological; these works are outside the scope of this report.
- 4.4 The regional research framework (Roskams & Whyman 2007) contains an agenda for archaeological research in the region. In this instance, the archaeological resource addresses a number of agenda items, specifically Agenda Item 2.6 *The Romano-British Period*.

5. The excavation

Introduction

- 5.1 The scheme of works comprised the excavation of 8 trenches. All excavation was undertaken by hand.

Trench 1 (Figures 4, 5, 14-17)

- 5.2 This trench was roughly T-shaped, and measured approximately 15m by 3m on its long axis, with the short axis measuring approximately 6m by 4m. The overall area of the trench was c.67m². This trench was located on the eastern edge of the settlement, over the edges of platforms 103/08 and 103/09 as defined in the earthwork survey (Laurie *et al* 2010). The geophysical survey had identified a strong dipolar anomaly in this area, which was interpreted as possibly reflecting industrial activity. The anomaly was not identified during the excavation. The long axis of the trench ran across the level platform area, from an earthwork bank on the western side, to the base of the hill on the eastern side. The short axis headed downhill from this platform to the south.
- 5.3 Natural subsoil was not identified in the trench.
- 5.4 Stone flagging was identified across the northern level platform area [F105, F115; average height 259.75m OD]. This was defined by the earthwork bank on the western side [F102] and the base of the slope on the eastern side [F104].
- 5.5 The flagging comprised large stone flags, with dimensions varying from 0.03m to 1.4m across. The surface was broadly level, with some possible subsidence in places which may indicate an unstable foundation. Some of the flags were cracked, which may be indicative of exposure to the elements, reflect the use of the area, or have been caused by the deposition of rubble post-abandonment (below).
- 5.6 On the southern edge of the platform, where the ground level sloped away to the south, a stone door-sill [F111: 1.65m long by 0.52m wide] was incorporated into the flagged surface. This sill incorporated a rebate carved into the stone, indicating the door opening to the north-east. On the north side of the rebate two small circular holes had been cut into the stone, which may have acted as pivots or held dropping bolts. To the south of this was a further series of stone flags, heading downhill to the south [F110], also incorporating both large flags (with dimensions up to 1.2m across) and smaller stones. This may have formed part of a path leading up to the door-sill.
- 5.7 The presence of the door-sill may indicate that a round-house was present, the floor of which was later incorporated into a larger yard surface. Some of the variation in the stone surface may reflect earlier features, for example foundations of wooden features associated with a round-house that were later paved over; however, no excavation of the surface was conducted. No evidence for the walls of a round-house structure was identified, although this could have been removed if the structure was removed to create a wider yard surface. It is also possible that the sill is not in its original position, and was reused when the area was paved.
- 5.8 The slope defining the eastern edge of the flagged area comprised a loamy soil matrix incorporating stone rubble [F104] which had partially eroded downslope over the edge of the flagging and path; no evidence for a revetment wall was identified. This rubble formed a second break of slope or bank along the eastern edge of the trench extension. The soil and rubble bank on the western side [F102] continued as a clear earthwork to the north beyond the excavation; to the south it is less clear, reflecting the variation in topography here and a probable entrance, although it may swing around to the east.

- 5.9 Over the flagged surface [F115] was a thin deposit of a dark brown silty clay [113]; this contained iron nails, lumps of fired clay and Roman pottery. Similar material [114; up to 0.4m thick] was sporadically present over the potential stone path to the south. These deposits may have formed after the surfaces ceased to be used.
- 5.10 Over the silt was a substantial deposit of rubble, in a dark brown sandy clay matrix [112], again containing Roman pottery sherds and fired clay pieces. It is possible that the rubble was deliberately deposited to level up this area, but there is no evidence for later occupation of the area. The material also continued downslope over the potential path.
- 5.11 A thin layer of mid grey-brown silty clay subsoil [103] lay across the trench, averaging 0.04m thick, and contained clinker, local traditional ware pottery sherds, iron nails and part of a blue glass Roman bangle. Sealing the subsoil was topsoil [101], averaging 0.14m thick, which contained modern glass sherds, post-medieval and modern ceramics and the occasional sherd of black burnished pottery. The context was known to be heavily disturbed and churned up on a yearly basis by sheep (David Clark, *pers. comm.*).

Trench 2 (Figures 6, 7, 18-21)

- 5.12 Trench 2 was originally laid out as 22m by 4m in July 2012, and was extended to the north-west during the course of the works; it was further extended to the north-west in November 2012. The final area was c.151m². The trench ran across the southern enclosure bank, a flat platform area immediately to the north, and up the edge of the slope to the rear (Figure 7, Profile 4).
- 5.13 At the top of the southern slope large stones formed a revetment for the platform to the north [F206], and the enclosure boundary visible in the geomagnetic data. Below this, an orange-brown silty clay was identified [208] beneath a thick rubble and soil layer [207] which banked up against the revetment. This material may have originated from structures at the top of the slope; it produced finds which included late Roman pottery sherds (AD 360+) and iron nails. An 11th-13th century AD barbed arrowhead was found within [208], and is considered to be intrusive.
- 5.14 Immediately to the north of the revetment was an area of stone paving [F205]. This contained slabs up to 0.56m in width, and sloped down slightly to the south-west, where they were further apart, which may indicate some slipping downhill. The paving may be part of a path running around part of the interior of the enclosure bank, or the floor of a structure. Defining the northern edge of this was a short segment of a rubble bank [F212]; this averaged 1.12m wide. This curved to the south-west, where it was less obvious. The paving [F205] may have continued to the west of the bank as F215. It is possible that paving continued under the bank, as the bank was not excavated, and it could also be connected with the paving to the north [F204]. The rubble bank was contiguous with a further bank F210, which averaged 1.67m wide, from which it is primarily distinguished by a change in level. However, these may be the same feature.
- 5.15 The rubble bank [F210] defined the southern edge of a circular area of paving slabs, across the centre of the platform area. It was unexcavated, and it is possible that the paving extended beneath it. At its northern extent, it was below a rubble deposit [F202] which defined the slope to the rear of the platform. This material partially

spread over the paving, and may have partially formed as a result of hill wash and tumble downslope. A Bronze Age flint scraper and late Roman pottery was recovered from this deposit.

- 5.16 At the south-western edge of the stone paving, a light yellow-brown sandy clay was present [211], and no paving or stone banks were recorded. This material contained post-medieval pottery sherds on its surface, but was unexcavated. It is not known if there are further stone features here at an unexposed depth, or if the area was disturbed.
- 5.17 On the northern edge of the paving, beneath the rubble [F202], a small area of grey-blue clay [219] was uncovered. This was unexcavated but could have been an undisturbed natural deposit.
- 5.18 The full extent of the circular paved surface was exposed around the majority of its circumference, although more could have been present to the south and east. The paved area had a diameter of c.7m. A door-sill was present on the north-eastern edge [F225], similar to that in Trench 1. The surface [F204] was constructed of stone flags, similar in size and layout to those in Trench 1 [F105], with dimensions of up to 1.5m across. Larger slabs were positioned centrally to the building, and also near the door-sill, perhaps reflecting the entrance and the hearth, although there was no evidence for burning over the stones. Four slabs were raised (and later replaced) and the deposits beneath sampled [216, 217, 223, 224]. Deposit [216] was a smooth silty clay containing small amounts of fired clay as well as a sherd of late gritty reduced ware pottery, dating to the 3rd century AD or later. Deposit [217], again a smooth silty clay, contained little more than a few pieces of charcoal. Context [223] also contained trace amounts of charcoal as well as uncharred seeds and vegetative material; [224] contained cracked burnt stones, fired clay, trace charcoal, uncharred seeds and vegetative matter. Secure, stratified contexts therefore exist below the current flagged floor, and the pottery from [216] gives us a *terminus post quem* of the 3rd century AD for the construction of the flagged surface.
- 5.19 The door-sill [F225: 1.7m long and 0.5m wide] held an inset groove 0.03m wide creating a central rebate running the long axis of the sill. There was a possible pivot point (0.05m in diameter) on the interior side at the northern end, suggesting a side-pivoting door opening inwards.
- 5.20 A thin deposit of dark grey-black silty clay was located over part of the southern half of the roundhouse floor. This deposit [209; 0.1m thick] contained small sherds of Roman pottery as well as a small amount of charcoal, cinder, calcined bone, fired clay and a charred wheat grain, indicative of general domestic waste. Next to this was a gritty silty clay approximately 1.3m in diameter, paler in colour than the surrounding matrices. This deposit [218] contained three notable Roman-period iron artefacts; a pruning hook, a nail and a back-handled knife. The sample from this deposit contained cracked burnt stones and charcoal. The cracked burnt stones were also present in a deposit on the western edge of the floor [222: 0.65m in diameter], which contained charcoal, fired clay and small pottery sherds. Cracked stones such as these could be from hearths or used as pot-boilers.
- 5.21 A sondage was excavated against the south-western edge of the open area (north-east facing; 0.38m wide and 6.9m long, to a maximum depth of 0.45m). This

identified two thin laminates of clay [220, 221] beneath deposit 218, which produced remains of barley, wheat, hazel, grasses and a charred rose/apple fruitstone.

- 5.22 Subsoil [203] (hillwash), a grey-brown silty clay, lay across the trench, thicker at the southern part of the trench. It contained late Roman ceramics (AD 370+), a late Roman blue glass bead, two iron nails, two iron fittings, a section of a collared hopper disc hand quern (dated to AD 370+), part of a late Roman jet ring, copper strips, cattle bone and teeth as well as clinker. The subsoil was in turn sealed by topsoil [201].

Trench 3 (Figure 22)

- 5.23 Trench 3 was located just north of the possible main entrances to the overall enclosure. The trench was 3m long by 1m wide with its long axis angled north-west/south-east.
- 5.24 Natural substrate, a dark grey compact clay [305] was found at a height of 257.23m OD. Over this was a deposit of dark grey silty clay [304], 0.20m thick and containing late Roman pottery. Above this was a 0.08m thick deposit of light brown silty clay [303]. This deposit covered the south-eastern half of the trench, thinning towards its north-western extent where the enclosure bank was present; this bank may be the origin of the material.
- 5.25 The trench was sealed by a 0.05m thick deposit of subsoil [302], containing cinder, which was under a 0.30m thick deposit of topsoil [301].

Trench 4 (Figures 8 & 23)

- 5.26 Trench 4 was located in the northern extent of the area surveyed via geophysics, over what on the surface appeared to be a possible trackway leading up the side of the walled woodland at the northern extent of the site. The trench was 6.8m long by 2m wide, with its long axis angled north-east / south-west.
- 5.27 Natural substrate was not found in this trench. A rubble bank [F403] was found on the southern slope of the trench, extending 2m into the trench and also continuing beyond the excavation to the south. The bank was comprised of small stones, similar in nature to stone bank [F102] in Trench 1. The top of the bank was relatively flat and may have been used as a surface. The bank was defined on the northern edge by a stone revetment [F402], with the facing stones forming the edge of a channel approximately 1.8m wide. Parallel to this revetment, and forming the other side of the channel, was a further revetment wall, of similar construction [F409]. Beyond this was a well-packed cobbled surface [F405].
- 5.28 The channel formed by the two revetment walls was excavated to a maximum depth of 0.3m (from the top of wall [F402]). At the base of the excavation was a relatively compact stone and soil layer, which was not excavated. Towards the centre of the channel, an arrangement of smaller stones was considered a candidate for post-packing (0.19m in diameter and 0.22m deep). The centre was excavated (407), which contained a friable brown loam containing charcoal, cinder and uncharred seeds.
- 5.29 Over these deposits, the channel was filled with a thin deposit of yellow-brown compact silty clay [404], approximately 0.10m thick. This deposit contained coarse

pebbles, flecks of charcoal and small pieces of daub, as well as one sherd of abraded black burnished ware, dated to AD 225 or later. Above this and continuing north over cobbled surface [F405] was a 0.15m thick deposit of silty-clay subsoil [401].

- 5.30 The trench was covered by a deposit of silty clay topsoil and turf [400] approximately 0.05m thick.

Trench 5

- 5.31 This trench was excavated by SWAAG on the top of the glacial mound forming the east boundary of the site in May 2013 (SWAAG 2013). This noted a series of undated features which were interpreted as either 19th century or geological; these works are outside the scope of this report.

Trench 6 (Figures 9, 24-25)

- 5.32 Trench 6 was positioned at the northern edge of the settlement platform, at the base of the substantial slope rising to the north. The trench was 10m by 4m (maximum), with a 2m by 2m extension to the south, with an area of approximately 39m².
- 5.33 Natural substrate, a mixed blue and orange clay [609] was identified in the southern extension (259.08m OD). Overlying this was a sticky yellow clay [604], c.0.10m thick containing pottery and glass finds. Fractured sandstone was identified across the central part of the trench, which may have been cut to make a flat platform (c.23m²). The surface has been extended west by lying sandstone slabs (F603) over a further c. 8m² area; the surface extended west beyond the trench limits but not to the south, their southern edge being identified in the trench. The slabs were bedded in a yellow-brown sandy clay [611].
- 5.34 Two potential features [F605; F607] cut into the natural clay were on excavation found to be animal burrows.
- 5.35 Over the stone platform was a rubble deposit [602], thought to be slippage from the hillside to the north. This deposit averaged between 0.10-0.30m thick, deepening to the trench's northern extent. This deposit continued beyond the trench to the north and west.
- 5.36 Over the whole trench was a deposit of mid yellow-brown silty clay subsoil [601], 0.10m thick, sealed in turn by a 0.10m thick layer of topsoil and turf [600].
- 5.37 Romano-British ceramics were uncovered from [601], [602] and [604], as well as iron objects and a sherd of blue Roman glass. This trench also produced cinder [609], coal [606, 608 and 611] and possibly the remains of kindling [606] suggesting the location of a fire in close proximity.

Trench 7 (Figures 11, 26-31)

- 5.38 Trench 7 extended Trench 4 to the north-east and south-west. To the south-west it also joined with Trench 1. The trench aimed to clarify the nature of the walling and channel in Trench 4, the eastern enclosure bank of the main enclosure platform, and to aid in interpreting the relationship between the wall and the rubble bank [F102] unearthed in Trench 1. The area of excavation (including Trenches 1 and 4) was c.163m².

- 5.39 The facing of the northern revetment wall exposed in Trench 4 [F409] may have continued c.0.3m to the south-east, before turning sharply to the north-east and out of the excavated area, as it did not continue across the trench. The base of the channel therefore ended here, adjoining a wider cobbled area [705].
- 5.40 The facing of the southern revetment wall in Trench 4 [F402] was traced continuing for c.4m to the north-west, curving slightly, with the rubble bank also recorded on its south-western side [F701]. This may indicate the continuation of the channel to the north-west, although the northern side of the channel was not exposed here.
- 5.41 The wall facing also continued south-east of Trench 4 for 1.76m, before turning sharply south-west for a further 14.18m. At this point, the wall curved west for 1.26m, and ran beneath rubble bank [F102] exposed in Trench 1. The rubble bank was partially excavated, and the width of the wall was exposed, measuring 0.95m thick, with the western face also faced but uneven and disturbed. The western face was not exposed elsewhere in the trench, and may have been present under the rubble surface that was partially exposed along its length [F702; F403]. The eastern face was relatively even and up to 0.4m high.
- 5.42 To the exterior of the wall facing was a crudely cobbled surface [705; 714], contiguous with the base of the northern channel [408]. This spread north-west beyond the edge of the excavation; it was not exposed all the way south to Trench 1.
- 5.43 The southern edge of the cobbles [F705] was demarcated by a possible wall /stone bank or revetment [F716] extending into the trench from the east and terminating 1.7m from Wall F701 to the west, although a line of larger stone continued towards the wall. The 'facing' of this comprised the occasional larger crudely-placed stones and a rubble core, totalling 2.6m long by 2.4 wide.
- 5.44 The southern edge of this wall / bank demarcated a large pit, the north-western and western edges of which were formed by the edge of the cobbles, which continued downwards a short distance over the edge into the pit [F715]. This feature was excavated in its north-west corner and was 0.15m deep, with a flat base, cut into the bedrock. This was filled with a dark loam and shattered bedrock [708]. The other edges of this feature were not identified.
- 5.45 At the southern end of the excavations, the flagged surface exposed in Trench 1 was identified continuing for 6m to the north [F709; F710]. There was some change in the character of the flagging at the northern extent of the exposed area, where the stones were smaller, but the area exposed here was small. A short length of a possible linear cut was recorded running north-west / south-east through the surface [F706]. This was 1.1m wide and 0.20m deep, with vertical sides and a flat base cut into the bedrock, and backfilled with a dark grey, loose silty clay [707].
- 5.46 Extending across nearly the whole trench above the archaeological surfaces was a thick band of rubble subsoil [704], probably the same as rubble deposit [112] in Trench 1. This was sealed by a 0.075m thick layer of topsoil and turf.
- 5.47 Roman ceramics were found in deposits [700], [704] and [708], and rubble deposit [704] also produced a section of jet bangle of Roman date.

Trench 8 (Figures 10 & 32)

- 5.48 Trench 8 was positioned at the base of a scoop towards the centre of the enclosure. The trench was 4m by 5m with a 2m by 2m extension on the south-east corner, giving an overall area of c.23.5m².
- 5.49 Natural substrate was a mid-brown silty clay [802; 805]. Overlying this was a thin deposit of grey clay [806], onto which a stone slab surface had been laid, 5.9m in width. This surface [F804] had a well-defined linear edge to the north, but the edge was poorly defined in the southern extension to the trench, where it may have collapsed. The surface sloped up slightly to the north and continued out of the trench to the west and east. The surface may have been internal or external to a structure.
- 5.50 On the northern edge of the surface was a bank of rubble. This bank [F803] formed the northern edge of the scooped platform, and butted against the flagged surface, suggesting that the bank and surface are contemporary.
- 5.51 Over surface [F804] and bank [F803] was a c.0.10m thick deposit of mid-brown silty subsoil [801], over which was a 0.13m thick deposit of topsoil and turf [800].
- 5.52 Deposits [801] and [806] contained Roman pottery sherds.

Trench 9 (Figures 11 & 33)

- 5.53 Trench 9 was located across the smaller of the supposed entrances into the settlement. The trench was 2m by 1m and 0.25m deep.
- 5.54 At 257.924m OD, a mid-brown silty sand [902] was revealed. Over this were a series of stones, mainly flat paving slabs. These were not contiguous across the trench and have been interpreted as stone rubble, a collapsed wall and paving. The small size of the trench precludes definitive interpretation.
- 5.55 Over this was a 0.12m thick deposit of mid yellow-brown sandy silt subsoil [901], sealed in turn by a 0.10m thick layer of topsoil and turf [900].

6. The artefacts

Post-medieval and undateable pottery

- 6.1 Seven sherds of 19th or early 20th century pottery (35g wt) came from four contexts, [101], [103], [201] and [700], including fragments of plain and transfer printed white ware, colour glazed ware and mocha ware.
- 6.2 Very small fragments of undateable pottery or fired clay came from environmental sample <1>, from context [209], and sample <2>, from context [216].

Roman pottery

Summary

- 6.3 The site produced 152 Roman sherds weighing 1732g (Table 1; Figure 12). Apart from a few sherds of samian there is nothing to suggest occupation before the late Roman period (and it is possible that the samian was still in use in this period).

6.4 The assemblage includes two mortaria rims of the 3rd or 4th-century. One is a battered hammerhead in an orange fabric, buff on exterior, with wide grey core, with trituration grits of purple/black iron slag, with rare red pebble and pink quartz, context [600, 601]. Mortaria in this fabric were made at Cantley, Doncaster and in the Catterick area in the third and fourth centuries (Hartley 2002, 356-7, fabrics MB11-12; Tomber and Dore 1998, CAN WS and CTR WS); an example with a similar rim from Catterick has a suggested 3rd-century date (Hartley 2002, 387, no. M37). The other mortarium sherd is a Mancetter-Hartshill hammerhead rim, with a drilled repair hole, from context [708].

6.5 The black burnished ware comes from both Dorset and from a northern site, possibly Rossington Bridge (Tomber and Dore 1998, ROS BB 1) or Catterick (Busby et al 1996) and includes a body sherd from a flanged bowl in context [600] that dates to the late third century or later. A late date is also supported by the sherds of calcite-gritted ware, although the presence of the two samian sherds suggests there was also some earlier occupation. In addition to the pottery described above there was a small sherd from a crucible in context [704], used in non-ferrous metal-working.

Fabrics

Samian

6.6 There were a few small sherds of samian, which were in very poor condition with little of the slip surviving.

Black burnished ware

6.7 Hard, dark grey or black fabric; with inclusions of abundant quartz. Surfaces slipped and burnished (C3-4). The black burnished ware comes from both Dorset and from a northern site, possibly Rossington Bridge (Tomber and Dore 1998, ROS BB 1) or Catterick (Busby et al 1996) and includes a body sherd from a flanged bowl [600] that dates to the late third century or later.

Local traditional ware

6.8 A handmade fabric originally used in the Iron Age, with production continuing into the Roman period. Almost all the sherds from the site came from Trench 2 and were generally found associated with late 4th-century pottery ([203], [208]). It seems unlikely these sherds are residual Iron Age material, but rather evidence that the fabric continued to be used into the late Roman period.

Calcite-gritted ware

6.9 Although this fabric was first used in the Iron Age, it is likely all the material here is of Roman date. Most, if not all of it, probably dates to the late 4th century, and most is found here in contexts with pottery dating to the late 4th century or later (eg. [203], [208], [218]). There are no examples of the early squared everted rims. The assemblage included six Huntcliff-type rims dating to after c.360 ([203], [208], [218], unstratified).

Crambeck ware

6.10 There were only three sherds of reduced ware, from three different vessels. There were slightly more pieces of parchment ware, including a mortarium of c.270+ and two hemispherical bowls of c.370+, showing that occupation continued until the end of the Roman period.

Micaceous grey ware

- 6.11 A soft sandy mid to dark grey ware, sometimes with buff core, with plentiful mica inclusions, including mica plates visible on the surface. Possibly equivalent to Catterick fabric R3B (Bell and Evans 2002, 353). There were two rims, from a cooking pot and a plain-rimmed bowl with external groove.

Cantley tradition

- 6.12 Orange fabric, grey core with buff exterior and trituration grits of purple/black iron slag. Assemblage included 5 rims, including two mortaria. Mortaria of this fabric were made at Cantley, Doncaster and in the Catterick area in the third and fourth centuries (Hartley 2002, 356-7, fabrics MB11-12; Tomber and Dore 1998, CAN WS and CTR WS); an example with a similar rim from Catterick has a suggested third-century date (Hartley 2002, 387, no. M37).

Mancetter-Hartshill tradition

- 6.13 Mortaria manufactured at Mancetter and Hartshill (Warwickshire). Wheel-thrown fine-textured fabric, very hard and creamy-white, with a grey core; inclusions of fine quartz and occasional red-brown and white particles; gritted with either quartz and red-brown sandstone. Produced from the 2nd to 4th centuries AD; extensive distribution in midlands and northern England.

Crucible

- 6.14 In addition to the pottery described above there was a small sherd from a crucible in context [704], used in non-ferrous metal-working.

Context	Sherd nos	Latest pot	Date
u/s	3	Cal grit Huntcliff-type; Cram PA bowl	370+
U/S	4	LTW quartz rich; cal grit rim; cal grit base	270+
101	1	BB1	R
103	1	LTW	IA+
104	3	cal grit	IA+
106	5	samian	R
107	3	cal grit, mic GW	R
108	2	Cram RE flanged bowl; Cram PA type 6 mortarium	270+
112	2	cal grit, mic GW	R
113	3	cal grit, mic GW	R
201	1	samian	R
202	3	cal grit, mic GW	R
203	37	Cram PA bowl; Huntcliff type rims x 3	370+
205	1	LTW	IA+
207	1	cal grit	IA+
208	13	cal grit Huntcliff-type rim	360+
209	2	unknown oxidised	R
210	1	Cram RE	270+
211	2	cal grit	R
216	1	late gritty reduced ware	C3+
218	18	cal grit – Huntcliff-type	360+
222	9	cal grit	R
404	2	BB1 obtuse angle lattice	225+
600	9	CAN WS type mortarium	270+
601	1	CAN WS type mortarium	C3-C4
604	7	cal grit	270+
700	2	BB1 other	R

Context	Sherd nos	Latest pot	Date
704	9	sam CG	C2+
708	1	MAH WH type mortarium	C3-C4
801	1	unk OW	R
802	1		C2+
806	1	FW	C2+

Table 1: Spot dating

Key: BB1: Black burnished ware type 1 | cal grit: calcite-gritted ware | CAN WS: Mortaria, Cantley tradition | Cram PA: Crambeck parchment ware | Cram RE: Crambeck reduced ware | CW: Cream ware | IA+: Iron Age or later | Late grit: Late gritty ware | LTW: local traditional ware | mic GW: micaceous grey ware | MAH WH: Mortaria, Mancetter-Hartshill type | R: Roman | Sam CG: Samian

Lithics analysis

Summary

- 6.15 The assemblage comprises a scraper from context [202], and two burnt flints from context [201], however, the latter show no signs of working.

Results

- 6.16 The assemblage has only one man made artefact, a well-made scraper from context [202]. Flint and chert fragments are found in several contexts [214, 201, 203, 211], but these appear to be of natural origin, or too damaged by post-depositional processes such as ploughing, to be identified as having been worked. One point to note, however, is that context [201] does contain two fragments of burnt flint, although as above, these show no signs of human working.
- 6.17 The scraper from [202] is made on high quality, non-cortical, dark brown/ grey flint. It has slight damage to both the distal and proximal end, as well as to the right dorsal edge. Low-angled, invasive, parallel retouch is present along the left edge of the dorsal surface (Dimensions: L=19.20mm, W=13.74mm, Th=3.10mm).
- 6.18 Context [604] produced two water-worn, sandstone pebbles which may have been used as smoothers. These are round to oval, 76 & 105mm diameter and fit well in the hand. Each has one face which feels smoothed, with abraded and flattened surface grains. No other signs of use were detected, however. A more convincing smoother stone was recovered from sample <13> from context [608]. This is smaller (58mm diam) and in a very fine sandstone, mottled brown/cream in colour. It has irregularly shaped facets on each face which are flattened and have become glossy through use. Such stones were used in various domestic and craft activities, such as linen smoothing. They have a very long history and are not easily dated.

Discussion

- 6.19 When considering the lack of associated artefacts, the scraper was most likely been brought to the site as part of an existing toolkit rather than knapped *in situ*. The form is unfortunately undiagnostic, but it could date to the Neolithic or Bronze Age.

Animal bone analysis

- 6.20 A very small collection of animal bones was recovered. The finds from contexts [209] and [216] were tiny and undiagnostic for identification to either element or species. The fragments from context [216] appear to have been heat affected. Context [203] produced a fragment of mandibular cattle molar 1, with two further tooth enamel

fragments likely to have originated from the same specimen. The tooth was in very poor condition, with the surface too incomplete for accurate aging. The tooth appears to have been fully erupted and commencement of wear on the enamel to expose the dentine was noted. The proximal end of a cattle radius in fair condition was also present in context [203]. The proximal epiphysis was fused to the shaft, indicating an individual of over a year-18 months in age. No butchery marks were evident on the bone. Context [203] also contained a fragment of immature bird femur, of a wild species. Context [704] also produced bone fragments, but were in poor condition with degraded surfaces and dentine decay, indicating that the soil in which they were deposited has not been conducive to the preservation of animal bone. The only species identified was cattle, with large and robust bones and teeth which have survived as recognisable fragments: a proximal radius with the epiphysis fused, one mandibular molar 1 or 2 at Grant's (1982) tooth wear stage k, enamel fragments from another cattle mandibular molar and a small shaft fragment from a cattle metatarsal.

- 6.21 Four contexts contained tiny fragments of bone in the sample residues. Unidentifiable calcined fragments are present in contexts [606] and [608]. Context [611] produced tiny indeterminate fragments including charred and calcined examples. Context [711] contained a small fragment of tooth enamel and unidentifiable bone fragments.

Glass

- 6.22 Nine fragments of glass were recovered from four contexts and unstratified. Context [101] had a piece of modern clear vessel glass, and a piece of modern green bottle glass was found unstratified. Context [103] had two pieces of clear modern vessel glass and five fragments of modern green bottle glass. A fragment of Roman glass was also retrieved from context [604]. Context [700] had 8 broken fragments of mirrored glass. These are 19th century to modern.
- 6.23 **SF1:** A fragment of Roman glass bangle also came from context [103]. Glass bangle, type 3 I (Kilbride-Jones 1938, 389; Price 1988, 352); translucent dark blue with inlaid marginal white lines and white 'pot hooks'; two survive, on alternating sides of the bangle's outer edge. Heavily worn. Ends rounded off by abrasion after breakage, implying secondary use. Subsequently, relatively recent damage is reflected in clean 'chips' removed from the ends. L 35, W 7.5, H 13.7 mm; internal D 65-70 mm (15% survives). This is one of the less common variants of this typical Romano-British find. Several are known from northern England; examples from dated contexts suggest a late 1st / early 2nd century AD date (Price 1988, 352; Price & Cottam 2000, 292). Given that the West Hagg evidence is otherwise late Roman, it seems that this bangle survived as an heirloom (or, given its reworked nature, more likely in fragmentary form as an amulet) for two centuries or more after its production. Such glass bangle fragments regularly saw long lives, with some surviving into medieval contexts (e.g. in early medieval burials at Norton (Co Durham) and Barhobble (Wigtownshire); Price 1988, 345; Cormack 1995, 72, fig 36.1).
- 6.24 **SF5:** A fragmentary segmented cylindrical pale translucent blue glass bead came from context [203], with three surviving segments; tapers to the end, which shows some use-damage. Form slightly squashed, probably in the crimping process when the segments were formed. Predominantly a late Roman type (Guido 1978, 91-3). L 8.5, D 3.8 x 5, perforation D 1.5 mm.

- 6.25 **2013 SF9(iii)**: A single sherd of blue-green glass (SF9) representing a horizontal rim with rounded edge and the start of the neck (diameter 60-65 mm) was recovered from context [604]. Its colour is consistent with a Roman date and the form suggests it is the rim of a Roman glass bottle, of a type common in the first-second centuries AD (Price & Cottam 1998, 191-8), though examples survived in use beyond this.
- 6.26 This sherd shows bands of wear on the edge and top which would be most unusual on a bottle rim. Given its form, it is extremely unlikely that this was a base sherd - see Price & Cottam 1998, fig 3.1-14 for typical base forms which do not resemble this sherd. Thus, the wear is likely to derive from secondary use and suggests it has been reused after breakage, perhaps as a gaming counter (although the fragment is too small to be dogmatic about the specific use). Dimensions 33 x 17 x 7.5 mm.

Quern analysis

Summary

- 6.27 The quern (SF16 from context [203]) was identified as an upper stone from a 'Collared Hopper' Disc Hand Quern. The context has been dated by ceramics to 370+AD.

Results

- 6.28 **SF16**: c.20% fragment, mostly broken radially. The upper surface is roughly peck-dressed flat (with 10-15mm diam, 3mm deep impressions), gently convex, rising to a neatly dressed, round profiled, hopper collar. The peck-dressed hopper is convex. The grinding surface is smoothly worn (with concentric markings), concave (by an unspecified amount) and its outer 200mm is flat. Dimensions of the stone : Diam c.550mm: Height, Rim 50mm, Collar 65mm: Hopper width 100mm, Depth 40mm: Feed-pipe diam, c.80mm: Wt 5.93kg (estimated intact wt c.30kg).

Lithology

- 6.29 Sandstone, fine to medium grained, with sparse coarse grains (quartz pebbles up to 9mm length): Gritstone.

Discussion

- 6.30 The rounded collar on the hopper rim (this quern's chief distinguishing feature) has been recorded on only 29 of the 5,000+ querns in the Yorkshire Quern Survey (YQS) archive. Of these examples, 12 also have a radial slot cut into their upper surface, enabling a vertical handle to be fitted. As no other type of handle fitting is currently known, we are probably safe to assume that all 'collared hopper' querns originally had similar radial slots. They are generally made from local stone, usually described as Millstone Grit or gritstone.
- 6.31 In just three of the English examples, the handle slot is also surrounded by a moulding, similar to that around the hopper rim. Euan McKie (*pers comm*) has identified three similar examples of this type in Scotland, which he has named after the published quern from Taprain Law, East Lothian (Close-Brooks, 1983, 214) which he dates to the 2nd/3rd centuries AD. In our remaining nine English examples, the radial slot lacks any such mould. We are currently unclear about either the chronological or geographical significance of this slot moulding.
- 6.32 The diameters of collared hopper querns range between 350-550mm, spanning the full range expected from a hand-powered quern (see Table 2 below). With only 10-

15% of its circumference surviving, the diameter of SF16 can only be a best estimate. Although we lack any information on its handle type, its characteristic profile (with the upper surface roughly parallel to its grinding surface), is shared with six other English examples in the diameter range 480-550mm.

- 6.33 Comparative studies have indicated that hand querns rarely exceed 30-35kg in weight or 550mm in diameter (Cruse & Heslop, in press). SF16 is thus a very large hand quern and it is little worn, having lost little weight through use and possessing one of the thickest rims for its diameter.
- 6.34 The distribution of collared hopper querns is quite interesting. Their English core area appears to be delimited by Wharfedale, Ribblesdale and Swaledale, with no examples being found east of Dere Street. Of the smaller and medium diameter stones (between c.350-450mm), we have an example from Castleford fort (Cool & Philo 1998, 61, SF 2668) dated to 85AD and another photographed at the 1906-7 excavations at Melandra Castle (Hammett, 1908, 321), a fort abandoned by 140AD (Bidwell & Hodgson 2009, 95). Thus, whilst the smaller querns have been found in and around the Early Roman auxiliary forts in the Pennine military area, the larger examples in Table 2 come from a more restricted range of later Roman contexts. These are sited along and just to the west of Dere Street, occurring in both civil and military sites. Such sites have also have yielded a considerable number of millstones, suggesting that in later Roman times, a significant volume of corn grinding took place along this corridor.
- 6.35 Against this background, the presence of SF16 in Upper Swaledale, far from the Roman road system, is somewhat anomalous. By 370AD, there is little evidence from the Portable Antiquities Scheme that a coin-based economy still operated in this area (Collins 2012, 59), so the quern may well have been obtained by either barter or theft, from somewhere along Dere Street, perhaps from around Catterick fort.

Site	Diam mm	Radial Slot	Date	Site Type	YQS no
Piercebridge	c.480	-	-	Fort	1066
Dishforth (A1)	480	-	250-400	Civil?	3263
Dalton Parlours	495	-	200-400	Villa	2167
Catterick	510	Moulded	u/s	Fort	3273
Dalton Parlours	525	-	200-400	Villa	2178
Adel	540	No mould	-	Vicus	2029
West Hagg Fm	550	-	370+	Native	5286

Table 2: Collared hopper querns

Iron objects

- 6.36 X-radiography of the iron assemblage showed that much of it comprised modern nails and screws. There were 28 revealed as nails or nail fragments and screws, coming from contexts [600], [601] & [700]. Six of the 28 were 19th century to modern screws, three from [600] and three from [601]. One nail is clearly a wire nail of modern date, but most are too corroded or fragmentary for dating. Other probably recent material includes a hasp fragment and four hinge or plate fragments from [600].

Possible medieval and post-medieval objects

- 6.37 Eight wrought iron objects were analysed (summarised in Table 3) which cannot be closely dated, although most are likely to be medieval or post-medieval. The

assemblage comprises a knife/harrow tine, ?punch, domed stud, ring, three horseshoe fragments (one of which may be a boot seg) and part of a cog. There was also a medieval arrowhead. Apart from the arrowhead, none of the objects are chronologically distinct and as most were recovered from topsoil their age remains unclear. Some, such as the horseshoes, are likely to be post-medieval. Most are typical ploughsoil finds, e.g. horseshoes, boot-plates and fittings, which are easily explained as casual losses by people working in the field, or through rubbish being spread on the fields as fertiliser.

Type	Object	Context
Tool	Knife /Harrow tine? SF1	600
	Punch? SF7	604
Fitting	Stud SF8	700
	Ring SF5	600
Other	Horseshoe SF3, SF4	600
	Seg/ small horseshoe SF2	600
	Cog SF6	600
	Barbed arrowhead SF10	208

Table 3: Summary of later ironwork from West Hagg Farm

- 6.38 **SF10** (Figure 13, 3): Barbed arrowhead. One side of the triangular head is missing, as is the tip of the remaining barb and end of circular socket. Socketed barbed arrowheads are a Medieval type, with parallels from the 11th to 13th centuries AD (Halpin 2008, 111; Museum of London 1993, 65-70). Total L 56; barb L (incomplete) 49, T 3; socket ext. D 8.5, int. D 5.5. Context 208: thick rubble layer on outside of enclosure embankment.

The remaining artefacts are listed in Appendix 3.

Romano-British objects

- 6.39 Twelve iron objects were recovered consistent with a Romano-British date; these are summarised in Table 4. They comprise tools, weaponry, fittings and nails. All are. Illustrated items are described below; a full catalogue is in Appendix 3.

Context summary	Object type
103 – ‘Subsoil’	2 nails
113 - Deposit over flags, contains Late Iron Age/ Romano British pottery	2 tools (SF.3 and 4)
203 – ‘Subsoil’	Decorative fitting (SF.8), fitting (SF.9), 2 nails
208 - Thick rubble layer outside enclosure embankment	Barbed arrowhead (SF.10)
211 - Deposit relating to stone-robbing, contains post-medieval pottery	Nail (SF.12)
218 - Patch of sandy clay provisionally dated to the Late Roman period	Pruning hook (SF.13), angle-backed knife (SF.14), nail

Table 4: Summary of Romano-British iron assemblage by context

- 6.40 **SF8** (Figure 13, 1): Decorative fitting. Rod tapers to a point at one end and has been longitudinally split then decoratively twisted at other end before breaking. L 96; D 5-7. Context 203: subsoil.

- 6.41 **SF13** (Figure 13, 4): Pruning hook. Rectangular-sectioned shaft expands into a broken, curved blade. The shaft flares and curves in the middle, creating an open socket, and extends slightly beyond the socket before breaking. This is an example of Manning's 'small hook' type 3 (1985, 57-8), also known as pruning hooks (Rees 1979, 461), which are primarily found from the Roman period onwards. Total L 89; blade W 17, T 2.5; bar W 9.5 x 4 to 8.5 x 4 at base; Socket ext. D 23 x 18, int. D 19.5 x 12. Context 218: patch of sandy clay.
- 6.42 **SF14** (Figure 13, 5): Knife. The rectangular sectioned tang tapers to a point and is level with the blade back, which is angled down towards the broken tip; the recent break indicates the knife is likely to have been deposited intact. The blade edge was straight but now is slightly concave towards the middle due to sharpening. Angled-back blades are more commonly found in contexts dating to the later Roman period onwards (Ottaway 1992, 563). L 78; Blade L 44, H 25, T 3; Tang H 8, T 7. Context 218: patch of sandy clay.

Discussion

- 6.43 The tools provide a glimpse of some of the activities taking place around the site. The pruning hook (SF13) could have been used for a range of agricultural tasks such as pruning, weeding and harvesting small plants (Manning 1985, 56). The small angle-backed knife (SF14) would have been used for a variety of tasks. Two tools (SFs3 and 4) could be punches or chisels, but their broken tips make assigning an exact type or function difficult; the curved form of one is unusual, and may be due to damage.
- 6.44 Weaponry is represented by a barbed, socketed arrowhead (SF10). As a medieval type with 11th-13th century parallels (Halpin 2008, 111; Museum of London 1993, 65-70), this is intrusive to its Romano-British context; by the nature of their function, arrowheads are readily intruded into earlier levels.
- 6.45 The twisted iron rod (SF8) had formed an ornamental fitting of some sort. Its decorative form is unusual and its exact function unknown. The perforated plate fragment (SF9) was also a fitting. Its sharply broken end suggests it had been cut, hinting at dismantling or recycling.
- 6.46 Nails are a common find on sites of this date, with six present in the assemblage. The only intact one (context 203a) has a curved shank, indicating it had been removed prior to deposition.
- 6.47 Aside from the arrowhead, the iron assemblage is typical of Romano-British sites.

Jet object

- 6.48 One jet item was recovered from Trench 2 [203], of late Roman date.
- 6.49 **SF7** (Figure 13, 6): Finger ring, broken in half, with lentoid-sectioned hoop (the less rounder interior with abrasion scars), decorated shoulders and protruding bezel. The surviving bezel fragment is flat-topped with a curved edge. The shoulders have two angled panels of incised decoration bordered by incised lines top and bottom. Residual facets from knife-trimming are visible on the hoop. Raised oval bezels and decorated shoulders are readily paralleled on other late Roman 'jet' rings (eg Allason-Jones 1996, 36, nos 160, 168; Allason-Jones & Miket 1984, no 7.91). Not

analysed, but the conchoidal fracture, cracking pattern and visible pores suggest it is jet. H 25.5, bezel W 10.3, hoop interior W 15.5 mm.

Shale object analysis

Results and discussion

- 6.50 A very nicely-made shale bangle fragment (SF10iii) was recovered from context [704]. The shape is a slightly asymmetrical rounded quadrangle with pronounced flat faces, the interior slightly rounded and the exterior more markedly. The faces utilise natural fracture planes; the asymmetry may arise because one face laminated in manufacture. Its regularity suggests it was lathe-turned, but it is remarkably well-finished with no toolmarks surviving to confirm the technology used, only some faint circumferential polishing scratches on the interior. The outer edges show scratching from use.
- 6.51 The rounded quadrangular section is found in the Roman period (eg Lawson 1975, fig 4.28b, 29c) but not before or after to any significant extent; the floruit of the craft in Roman Britain was in the third-fourth centuries, but there are earlier examples, and it cannot be tightly dated beyond saying it is most likely Roman. Its small internal diameter indicates it was a female ornament, as is typical for the Roman period (Allason-Jones 1996, 17). Its laminar fracture and dark grey colour identify it as shale. Dimensions 35.5mm length, 6mm width, 5.5mm height; internal diameter 50-55 mm (20% survives).

Copper alloy objects

- 6.52 Two copper alloy artefacts were recovered from the excavation, one from Trench 1 [112] and the other from Trench 2 [203].
- 6.53 **SF2:** Part-worked bar ingot fragment from [112], rectangular with a damaged rounded tip; near-square section; light hammer-marks on well-preserved surfaces; stress fractures at end. Surface EDXRF analysis indicates this is an unusual tin-copper-silver alloy, notably high in tin, and likely to represent expedient reuse of a mixture of available metals. L 37.5 x 6 x 5 mm.
- 6.54 **SF6** (Figure 13, 2): Decorated strip, removed and folded, in two non-joining fragments. Surface EDXRF analysis suggests the strips are made from brass, which was surface tinned. One original squared end survives, with a perforation to retain it and another 77 mm further along the strip. The second fragment has a further perforation. All were punched from the front; the lack of flattening of the flashing indicates it was attached to something like leather. The edges are decorated with a row of small bosses punched from the underside. One strip is folded in half; the other preserves a perpendicular bend at one end. Well-finished, with fine longitudinal polishing striations. Total L 218 mm, W 14 mm, strips 73-74 mm L. XRF: brass, surface tinned. Similar strips from Piercebridge, which had also been removed and folded, were interpreted as armour fittings from lorica segmentata, on the basis of a parallel from Newstead (Allason-Jones 2008, D11.45-46, fig D11.445, nos 358-60; Curle 1911, pl XXII), but this is an unlikely interpretation for the current find: the unflattened flashing around the perforation indicates they were fitted to a soft material like leather, not iron. However, the Piercebridge and Newstead parallels support a Roman date for these strips.

Industrial residues and lead ore

- 6.55 Context [114] had a single piece (62g wt) of semi-vitrified orange clay. Of irregular shape, the piece measures c.57 x 48 x 56mm, and has no original edges. It is of unknown date and function.
- 6.56 Two fragments (34g wt) of burnt lime-rich geology came from contexts [107] and [114]. These small pieces have no evidence of working and may have been accidentally burnt or perhaps intended for use in the manufacture of plaster or mortar. Of unknown date.
- 6.57 Pieces of undateable cinder and charred wood with a total weight of 154g came from 8 contexts and unstratified (contexts [103], [112], [201], [203], [301], [302], [303] and [304]). This small quantity of material is likely to be debris from domestic fires, probably from the burning of wood. It is not necessarily indicative of industrial activity on site.
- 6.58 Two fragments of fused fuel ash slag/shaley coal (28g wt) were recovered. These are not necessarily indicative of industrial activity and cannot be dated.
- 6.59 Pieces of lead ore (galena) came from context 204, 604 and 219. They are unprocessed with no for breaking or melting.

Building materials

Results

- 6.60 Two very small fragments (1g wt) of fired clay came from sample <14> context [606]. These are of uncertain origin and cannot be dated.

Conservation

Results

- 6.61 All metalwork was X-radiographed to determine which objects should be selected for further conservation work. Investigative conservation was conducted on 23 artefacts (2013 SF1-8, WHF12 SF1-15).
- 6.62 The iron objects were selectively air abraded to remove obscuring iron corrosion products and define diagnostic areas and/or terminals of the object, and to reveal surface detail.
- 6.63 Loose soil and surface corrosion products were removed from the copper alloy using hand tools. Surface energy dispersive X-ray fluorescence (EDXRF) analysis was conducted on the two copper alloy objects to determine the elemental composition of the alloy. The glass and jet/shale objects were surface cleaned using a mix of water/industrial methylated spirits (IMS) and conservation detergent. All conservation work was carried out under X16 magnification.
- 6.64 Following corrosion removal, the metalwork was de-greased using IMS and surface coated/consolidated with a 6% solution of Paraloid B72 (an ethyl methacrylate co-polymer) in acetone. The conserved objects were packed for medium to long term storage.
- 6.65 Photographs of the objects were taken before and after conservation and conservation records were produced.

7. The palaeoenvironmental evidence

Archive

- 7.1 The charred plant remains will be retained at Archaeological Services Durham University. The flots and residues have been scanned in their entirety with all material of palaeoenvironmental or dating value removed, and have therefore been discarded.

Summary of results

- 7.2 A small assemblages of charred plant remains were present in the samples and include evidence for the use of 6-row barley, wheat grains, spelt wheat chaff, a charred fruitstone and hazel nutshell fragments, reflecting general background waste associated with habitation within the Iron Age or Romano-British periods. Charcoal identifications suggest a diverse range of tree and shrub species was available near the site including alder, birch, heather, hazel, ash, Maloideae, cherries, oak, willow/poplar and elm. All data is presented in Table A2.2, with the specific taxa data presented in Table A2.3.

Palaeoenvironmental assessment

Methods

- 7.3 A palaeoenvironmental assessment was carried out on twenty-two bulk samples, taken from a number of features associated with features associated with a Romano-British settlement, provisionally dated to the 4th century AD. The samples were manually floated and sieved through a 500 μ m mesh. The residues were examined for shells, fruitstones, nutshells, charcoal, small bones, pottery, flint, glass and industrial residues, and were scanned using a magnet for ferrous fragments. The flots were examined at up to x60 magnification using a Leica MZ7.5 stereomicroscope for waterlogged and charred botanical remains. Identification of these was undertaken by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (1997). Habitat classifications follow Preston *et al.* (2002).
- 7.4 Where possible, charcoal fragments were identified, in order to provide material suitable for radiocarbon dating. The transverse, radial and tangential sections were examined at up to x600 magnification using a Leica DMLM microscope. Identifications were assisted by the descriptions of Schweingruber (1990) and Hather (2000), and modern reference material held in the Environmental Laboratory at Archaeological Services Durham University.
- 7.5 The works were undertaken in accordance with the palaeoenvironmental research aims and objectives outlined in the regional archaeological research framework and research agendas (Roskams & Whyman 2005; 2007; Hall & Huntley 2007; Huntley 2010).

Results

- 7.6 Burnt cracked stones were recovered from three of the contexts [218, 223 and 224] and small quantities of fired clay were noted in several of the samples. A metal object was recovered from context [218] and pot fragments were recovered from contexts [209], [216] and [222].

- 7.7 Low numbers of charred plant remains were recorded from eleven of the twenty-two samples. Charred plant remains were identified from two of the samples associated with roundhouse floor deposits. These consisted of four charred wheat grains and six charred hazel nutshell fragments from context [216] and a wheat grain in context [209]. Two other layers, [220] and [221], also contained charred plant macrofossils. Context [221] contained two spelt wheat glume bases, a grass caryopsis and a rose/apple fruitstone as well as two twisted cereal awns. These awns may derive from wild oats (*Avena fatua*), or large grasses, such as oat-grass or false oat-grass (*Helictotrichon* and *Arrhenatherum* spp), which also have characteristically twisted awns. The charred plant macrofossils from context [220] comprise two barley grains, three hazel nutshell fragments and a heath-grass caryopsis. The largest number occurred in the sample from within wall [701]. This sample included the remains of barley and spelt wheat chaff, hazel nutshell fragments and weed seeds typical of grassland and ruderal habitats such as vetches, grasses and ribwort plantain. Similar weed remains and a barley grain identified as the 6-row variety occurred in [712]. Barley chaff was recovered from [708] and a wheat grain from [611] comprised the morphological characteristics of spelt wheat (*Triticum spelta*), being bluntly rounded with an oval shape and parallel sides (Jacomet 2006). Other charred plant remains included dock and buttercup and four samples comprised hazel nutshell fragments.
- 7.8 Uncharred seeds or vegetative material including dock, sedge and bramble occur in low quantities in eighteen of the twenty-two contexts [209, 216, 218, 221, 223, 224, 407, 606, 608, 609, 611, 701, 707, 708, 711, 712, 713 and 806]. The well-drained nature of the site and the presence of modern roots suggests that these are later intrusive material.
- 7.9 Seven of the samples [contexts 209, 216, 606, 608, 611, 711 and 806], comprised small quantities of indeterminate calcined and unburnt bone.
- 7.10 Small fragments of clinker/cinder [contexts 209, 216, 221, 407, 609, 701, 707 and 708], and coal [contexts 606, 608, 611, 701 and 712] were noted in several of the samples.
- 7.11 Identified charcoal from the samples indicated that at least nine species were used at the site. Hazel, ash and Maloideae (hawthorn, apple and whitebeams including rowan) were the most frequently recorded taxa. Other species noted included oak, elm, birch, alder, willow/poplar and heather. Fragments of ash and elm from [713] comprised weak ring curvature indicating the use of large calibre branchwood or stemwood. Fragments of hazel roundwood from [606] comprising pith and bark, indicates the presence of 3-year old twigs and may represent the remains of kindling material.
- 7.12 Material suitable for radiocarbon dating is present in eighteen of the samples, although there may be insufficient weight of carbon from three of the samples [contexts 218, 223, 407 and 712].

Discussion

- 7.13 The presence of charred cereal remains alongside other waste material such as bone, fired clay and pottery indicate that the samples comprise background levels of domestic waste.

- 7.14 The presence of diagnostic remains including 6-row barley and spelt wheat, albeit in low numbers, indicates an Iron Age or Roman-British date for the deposits, as they were considered the major cereal crops in England during these periods (Greig 1991; Hall & Huntley 2007). Charred plant macrofossil assemblages for these periods are often small, particularly in the poor soils of northern England, and distinguishing between these two periods is usually not possible. Much of the cereal material is in the form of chaff suggesting the settlement at West Hagg produced at least some of their own food, though the presence of charred fragments of hazel nutshell from contexts [216] and [220] and the charred rose/apple fruitstone noted in context [221] suggest wild-gathered foods were also utilised at the site. These were probably gathered from local woodland, hedgerows and scrub, or opportunistic shrubs growing on the site.
- 7.15 Weed seed remains typical of grassy heathland and ruderal habitats and probably represent waste material from crop processing, either disposed of or used as kindling on a domestic hearth.
- 7.16 The low levels of charcoal identified from the samples may derive from fuelwood used for domestic activities, or from burnt building materials, such as timbers and wattling. The small fragment size of the charcoal and the presence of mineral inclusions may be attributed to poor taphonomy. This prevented further interpretations concerning the exploitation of woodland resources, other than which tree taxa were selected. The diversity of species identified possibly reflects a random collection of material, although the predominance of hazel, ash and Maloideae suggests that these were favoured taxa and ash was commonly recorded in rubble deposit [711]. Whether this reflects a predominance of these species in the local landscape or that these trees were specifically chosen for their properties, is unknown. Charcoal evidence for the Iron Age and Roman periods in England is sparse, as charcoal has been collected primarily for dating purposes (Huntley 2010). The lack of charcoal analyses undertaken in the region prevents comparison with other sites, however an initial charcoal assessment of a site provisionally dated to the Roman period at Boston Spa in West Yorkshire indicates many of the features comprised similar charcoal assemblages, although a greater diversity of taxa was recorded at Boston Spa (Archaeological Services 2012). Pollen evidence for north-eastern England demonstrates an expansion of woodland clearance and increase in agricultural activity during the Iron Age, and continues into the Roman period where land proportions in terms of woodland to agriculture were probably similar to the landscape today (Huntley 2010). The charcoal evidence from West Hagg suggests that local diverse woodland was still available.
- 7.17 Other sites within North Yorkshire that comprise comparable assemblages include the Romano-British/Roman site at Bedale (Archaeological Services 2009; 2013) and the Iron Age sites at Stanwick and Rock Castle (Van der Veen 1992). The low numbers of charred plant remains prevent any further interpretations.

8. References

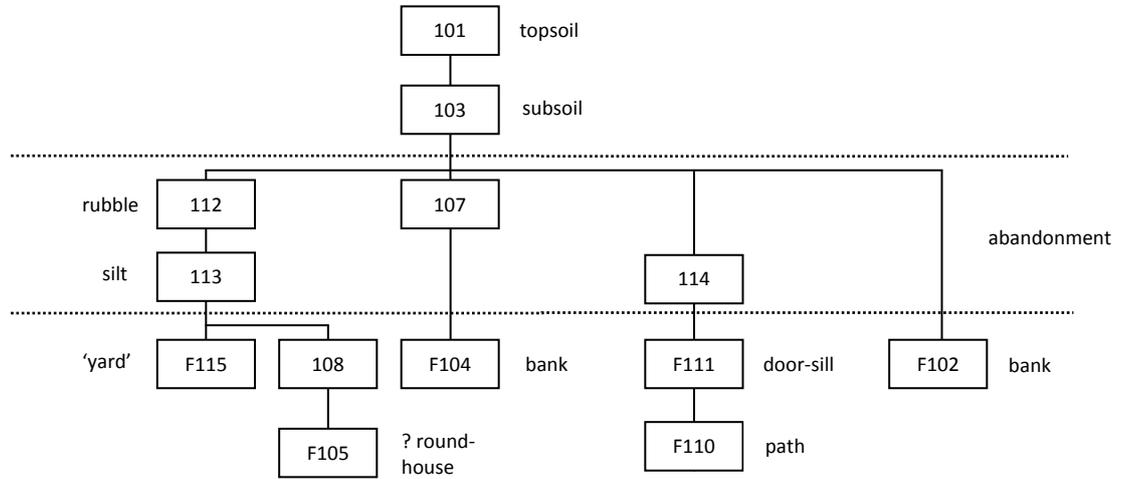
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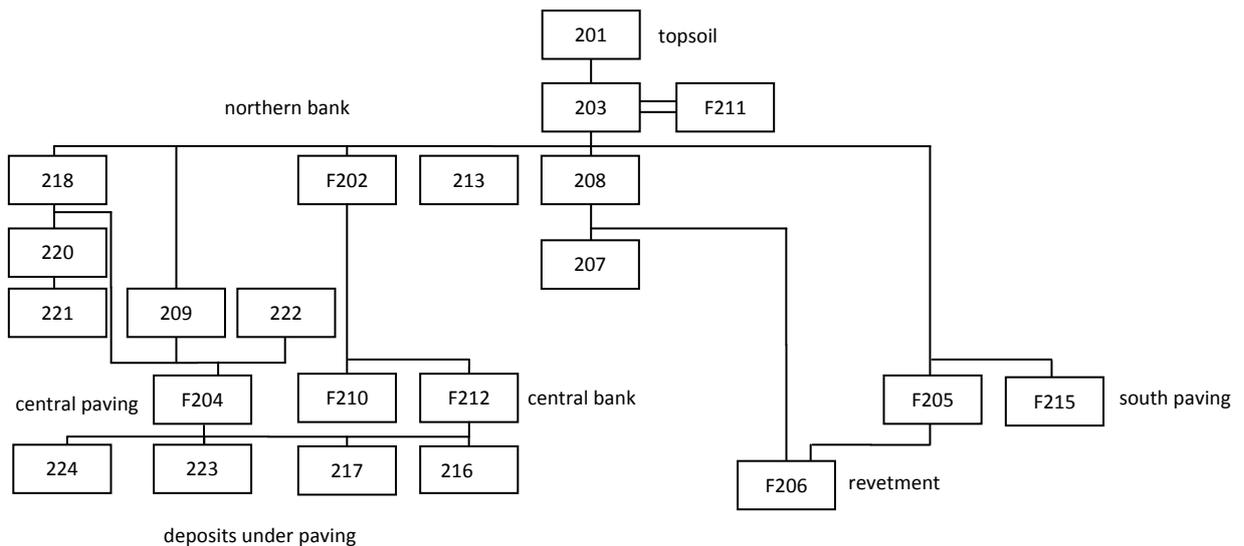
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Appendix 1: Stratigraphic matrices

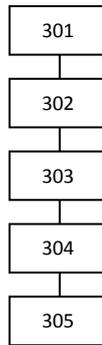
Trench 1



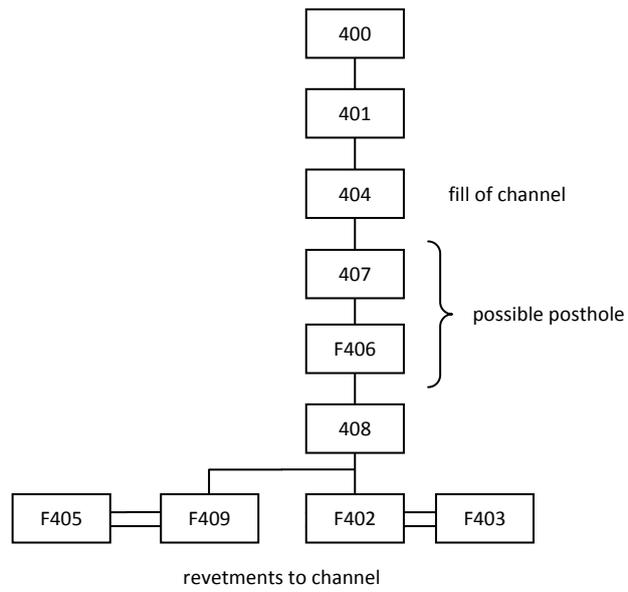
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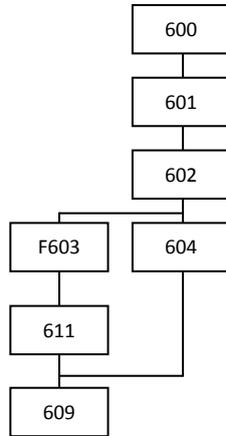
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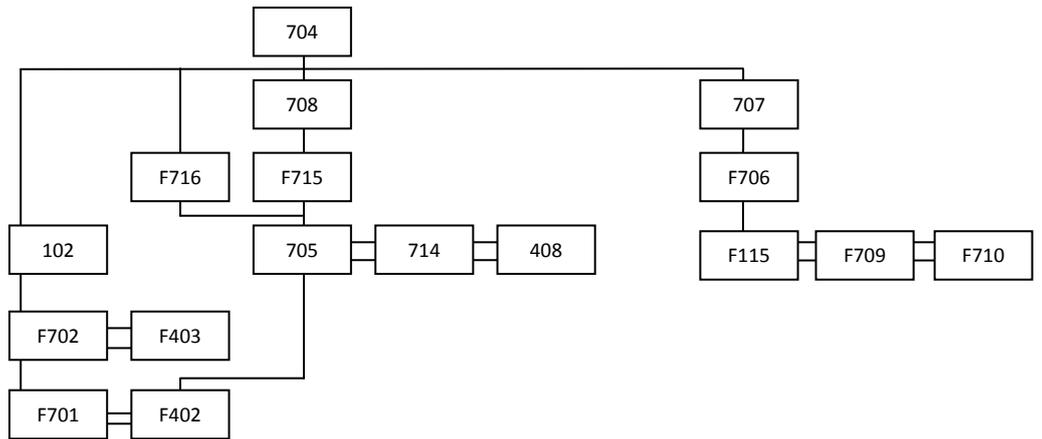
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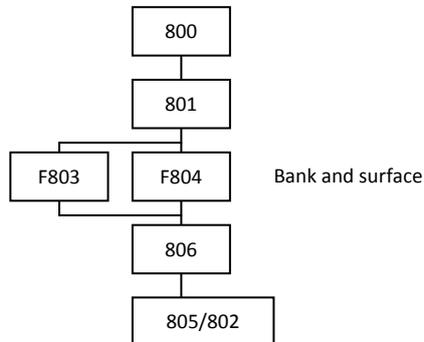
Trench 6



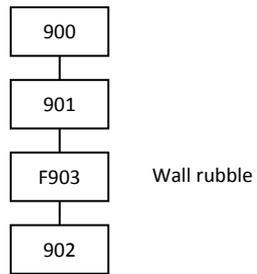
Trench 7



Trench 8



Trench 9



Appendix 2: Data tables

Table A2.1: Context data The • symbols in the columns at the right indicate the presence of finds: P pottery, B bone, M metals, F flint, I industrial residues, G glass, C ceramic burnt material, O other materials.

No	Trench	Description	P	B	M	F	I	G	C	O
101	1	Topsoil	•					•		
F102	1	Stone rubble bank								
103	1	Subsoil	•		•		•	•		
F104	1	Stone rubble bank	•							
F105	1	Roundhouse flagged floor								
106	1	Same as 104	•							
107	1	Deposit	•							
108	1	Deposit	•							
109	1	-VOID-								
110	1	Potential stone path								
F111	1	Stone door sill								
112	1	Deposit	•		•		•			
113	1	Deposit	•		•					
114	1	Deposit					•			
F115	1	Stone flagged surface								
201	2	Topsoil	•			•	•			
F202	2	Stone rubble bank	•			•				
203	2	Subsoil	•	•	•		•			
F204	2	Flagged floor								
F205	2	Flagged floor	•							
F206	2	Stone rubble bank								
207	2	Deposit under rubble	•							
208	2	Rubble	•		•					
209	2	Deposit	•	•						
F210	2	Stone rubble bank	•		•					
211	2	Deposit								
F212	2	Stone rubble bank								
214	2	Natural subsoil								
F215	2	Flagged floor?								
216	2	Deposit	•	•					•	
217	2	Deposit								
218	2	Gritty clay deposit SW of roundhouse								
219	2	Grey-blue clay deposit								
220	2	Orange-brown clay deposit								
221	2	Mottled brown blue-grey clay deposit								
222	2	Reddened sandstone area								
223	2	Sandy clay beneath roundhouse floor								
224	2	Sandy clay beneath roundhouse floor								
F225	2	Door sill								
301	3	Topsoil					•			
302	3	Subsoil					•			
303	3	Deposit					•			
304	3	Deposit					•			
305	3	Natural subsoil								
400	4	Topsoil								
401	4	Subsoil								
F402	4	Facing stones of revetment								
F403	4	Rubble bank								
404	4	Deposit								
F405	4	Cobbled surface								
F406	4	Cut for post hole								
407	4	Fill of post hole								
408	4	Base of channel								
F409	4	Facing stones of revetment								
600	6	Topsoil	•		•					

No	Trench	Description	P	B	M	F	I	G	C	O
601	6	Subsoil	•		•					
602	6	Stone bank								
F603	6	Stone paving								
604	6	Yellow clay	•		•			•		
F605	6	Cut –VOID as animal burrow								
606	6	Fill of f605–VOID as animal burrow								
F607	6	Cut –VOID as animal burrow								
608	6	Fill of 607 –VOID as animal burrow								
609	6	Natural substrate, blue clay								
610	6	Fill of f605 –VOID as animal burrow								
611	6	Bedding deposit for 603								
700	7	Topsoil and turf	•							
F701	7	Wall, same as [F402]								
F702	7	Stone deposit, same as [404]								
703	7	Stone rubble deposit								
704	7	Mix of subsoil and rubble	•							
F705	7	Cobbled surface								
F706	7	Cut								
707	7	Fill of cut [706]								
708	7	Shale and loam mix	•							
F709	7	Flagged surface (same as F115)								
F710	7	Flagged surface								
711	7	Same as [704]								
712	7	Sample of natural? From under 709								
713	7	Sample from beneath [705]								
714	7	Cobbled path								
F715	7	Cut for [708]								
F716	7	Wall / bank								
800	8	Topsoil								
801	8	Subsoil	•							
802	8	Natural substrate								
F803	8	Bank								
F804	8	Flagged surface								
805	8	Deposit								
806	8	Deposit	•							
900	9	Topsoil								
901	9	Subsoil								
902	9	Natural substrate								
F903	9	Wall								

Table A2.2: Data from palaeoenvironmental assessment

Sample	1	2	3	4	5	6	7	8	9	10	11
Context	209	216	217	210	407	220	221	222	218	223	224
Feature	Layer	Layer	Layer	Charcoal	Posthole	Layer	Layer	Hearth?	Layer	Layer	Layer
Material available for radiocarbon dating	✓	✓	✓	✓	(✓)	✓	-	-	(✓)	(✓)	-
Volume processed (l)	30	7	7	50	8	9	9	6	10	9	9
Volume of flot (ml)	800	20	5	30	80	110	55	45	190	50	30
<i>Residue contents</i>											
Bone (calcined) indet. frags	(+)	-	-	-	-	-	-	-	-	-	-
Bone (burnt) indet. frags	-	+	-	-	-	-	-	-	-	-	-
Charcoal	(+)	-	-	-	-	-	-	-	-	-	-
Cinder	(+)	-	-	-	-	-	-	-	-	-	-
Cracked stones (burnt)	-	-	-	-	-	-	-	+++	++	-	+++
Fired clay	+	+	-	-	-	-	-	++	-	-	+
Metal object	-	-	-	-	-	-	-	-	1	-	-
Pot (number of fragments)	1	1	-	-	-	-	-	13	-	-	-
<i>Flot matrix</i>											
Charcoal	+	++	+	+++	++	++	++	+	+	+	(+)
Cinder	+	+	-	-	+	-	+	-	-	-	-
Crinoids	-	-	-	-	-	-	-	-	-	(+)	-
Earthworm egg case	++	(+)	-	-	++	-	-	+	+	-	++
Insect / beetle	+	-	-	-	+	-	+	-	+	+	++
Monocot stems (charred)	-	-	-	-	-	-	(+)	-	-	-	-
Roots (modern)	++++	+	(+)	-	++	++	-	++	+++	++	+
Shell (freshwater / terrestrial)	-	-	-	-	-	-	-	+	-	-	-
Uncharred seeds	+	(+)	-	-	(+)	-	+	-	+	+	+
Vegetative material (uncharred)	-	-	-	-	-	-	-	-	+	+	+
<i>Charred remains (total count)</i>											
(c) Cerealia indeterminate twisted awn frag.	-	-	-	-	-	-	2	-	-	-	-
(c) <i>Hordeum</i> sp (Barley species) grain	-	-	-	-	-	2	-	-	-	-	-
(c) <i>Triticum spelta</i> (Spelt Wheat) glume base	-	-	-	-	-	-	2	-	-	-	-
(c) <i>Triticum</i> sp (Wheat species) grain	1	4	-	-	-	-	-	-	-	-	-
(h) <i>Danthonia decumbens</i> (Heath-grass) caryopsis	-	-	-	-	-	1	-	-	-	-	-
(t) <i>Corylus avellana</i> (Hazel) nutshell frag	-	6	-	-	-	3	-	-	-	-	-
(t) <i>Rosa / Malus</i> sp (Roses / Apple species) fruitstone	-	-	-	-	-	-	1	-	-	-	-
(x) Poaceae undiff. (Grass family) >1mm caryopsis	-	-	-	-	-	-	1	-	-	-	-

[c-cultivated; h-heathland; t-tree/shrub; x-wide niche. (+): trace; +: rare; ++: occasional; +++: common; ++++: abundant (✓) there may be insufficient weight of carbon available for radiocarbon dating].

Sample	12	13	14	15	16	17	18	19	20	21	22
Context	711	608	606	707	708	712	701	609	611	713	806
Material available for radiocarbon dating	✓	✓	✓	✓	✓	(✓)	✓	-	✓	✓	✓
Volume processed (l)	11	10	9	10	27	10	10	1	10	8	10
Volume of flot (ml)	100	50	75	150	200	25	100	3	30	100	60
<i>Residue contents</i>											
Bone (calcined) indet. frags	-	(+)	+	-	-	-	-	-	(+)	-	-
Bone (unburnt) indet. frags	+	-	-	-	-	-	-	-	++	-	++
Charcoal	-	-	-	-	-	-	-	(+)	-	+	-
Tooth (animal - enamel fragment)	1	-	-	-	-	-	-	-	-	-	-
<i>Flot matrix</i>											
Bone (calcined) indet. frags	-	-	-	-	-	-	-	-	(+)	-	-
Bone (unburnt) indet. frags	-	-	-	-	-	-	-	-	+	-	-
Charcoal	+++	+	++	+	++	+	++	(+)	++	++	++
Clinker / cinder	-	-	-	(+)	+	-	+	(+)	-	-	-
Coal	-	+	+	-	-	(+)	+	-	+	-	-
Earthworm egg case	-	-	+	+	++	-	+	-	+	+	+
Heather twigs (charred)	-	+	-	-	-	-	+	-	-	-	-
Rhizome / tuber (charred)	-	-	-	-	-	(+)	+	-	-	-	-
Roots (modern)	++	++	++	++	+++	++	++	+	++	++	++
Uncharred seeds	-	+	-	+	(+)	-	-	-	-	-	+
<i>Charred remains (total count)</i>											
(c) Cerealia indeterminate grain	-	-	-	-	-	-	1	-	-	-	-
(c) <i>Hordeum</i> sp (Barley species) grain	-	1	-	-	-	-	-	-	-	-	-
(c) <i>Hordeum</i> sp (Barley species) rachis fragment	-	-	-	-	1	-	1	-	-	-	-
(c) <i>Hordeum vulgare</i> (6-row Barley) twisted grain	-	-	-	-	-	1	-	-	-	-	-
(c) <i>Triticum cf. spelta</i> (cf. Spelt Wheat) grain	-	-	-	-	-	-	-	-	1	-	-
(c) <i>Triticum spelta</i> (Spelt Wheat) glume base	-	-	-	-	-	-	7	-	-	-	-
(r) <i>Galium aparine</i> (Cleavers) seed	-	-	-	-	-	-	1	-	-	-	-
(r) <i>Plantago lanceolata</i> (Ribwort Plantain) seed	-	-	-	-	-	7	1	-	-	-	-
(t) <i>Corylus avellana</i> (Hazel) nutshell frag.	1	-	-	-	-	1	2	-	1	-	1
(x) Apiaceae undifferentiated (Carrot family) fruit	-	-	-	-	-	-	1	-	-	-	-
(x) Poaceae undiff. >2mm (Grass family) caryopsis	1	-	-	-	1	-	6	-	-	-	-
(x) <i>Ranunculus</i> subgenus <i>Ranunculus</i> (Buttercup) achene	-	-	-	-	-	1	-	-	-	-	-
(x) <i>Rumex</i> sp (Docks) nutlet	-	-	-	-	1	-	-	-	-	-	-
(x) <i>Vicia</i> sp (Vetches) seed	-	-	-	-	-	-	1	-	-	-	-

[c-cultivated; r-ruderal; t-tree/shrub; x-wide niche. (+): trace; +: rare; ++: occasional; +++: common; ++++: abundant. (✓) there may be insufficient weight of carbon available for radiocarbon dating]

Table A2.3: Specific taxa by context

Sample	1	2	3	4	5	6	7	8	9	10	11
Context	209	216	217	210	407	220	221	222	218	223	224
<i>Alnus glutinosa</i> (Alder)	-	-	-	-	-	-	-	-	-	-	-
<i>Betula</i> sp (Birch)	-	-	-	-	-	-	-	-	-	✓	-
<i>Calluna vulgaris</i> (Heather)	-	-	-	-	-	-	-	-	-	-	-
<i>Corylus avellana</i> (Hazel)	-	✓	-	-	-	✓	-	-	-	✓	-
<i>Fraxinus excelsior</i> (Ash)	-	-	-	✓	-	✓	-	-	✓	-	-
Maloideae (hawthorn, apple, whitebeams)	-	✓	-	-	✓	-	-	-	-	✓	-
<i>Prunus</i> sp (blackthorn, wild or bird cherry)	✓	✓	✓	-	-	-	-	-	-	-	-
<i>Quercus</i> sp (Oak)	-	-	-	-	✓	✓	-	-	-	-	-
Salicaceae (Willow/poplar)	-	-	-	-	-	-	-	-	-	-	-
<i>Ulmus</i> sp (Elm)	✓	-	-	-	-	-	✓	✓	✓	-	✓
Sample	12	13	14	15	16	17	18	19	20	21	22
Context	711	608	606	707	708	712	701	609	611	713	806
<i>Alnus glutinosa</i> (Alder)	-	-	-	-	-	-	-	-	✓	-	-
<i>Betula</i> sp (Birch)	-	-	✓	-	-	-	-	-	-	-	-
<i>Calluna vulgaris</i> (Heather)	-	✓	-	-	-	-	✓	-	-	-	-
<i>Corylus avellana</i> (Hazel)	✓	-	✓	✓	-	✓	✓	-	-	-	✓
<i>Fraxinus excelsior</i> (Ash)	✓	-	-	✓	✓	✓	-	✓	-	✓	✓
Maloideae (hawthorn, apple, whitebeams)	✓	✓	✓	✓	✓	-	✓	-	✓	-	-
<i>Prunus</i> sp (blackthorn, wild or bird cherry)	-	-	-	-	-	-	-	-	-	-	-
<i>Quercus</i> sp (Oak)	-	-	-	-	-	✓	-	-	-	-	✓
Salicaceae (Willow/poplar)	-	-	-	-	✓	-	-	-	-	-	-
<i>Ulmus</i> sp (Elm)	-	-	-	-	-	-	-	-	-	✓	-

[✓ presence]

Appendix 3: Iron artefact catalogue

All measurements in mm. Abbreviations: Length, Width, Thickness, Height, Diameter.

- SF3 Tool.** Rod tapers to a rectangular-sectioned, broken tip. Some form of tool, such as a punch or small chisel but the broken tip inhibits closer identification. Very similar to SF4. L 105.5, D 8.5, Tip 8 x 7. Context [113]: thin deposit of silty clay overlying flagged surface [115] and containing Romano British pottery. X-ray 6440.
- SF4 Tool.** Intact head, slightly burred head with curved rod developing into a rectangular section towards broken tip. Unclear if curve is due to function or damage through use. The missing tip inhibits closer identification of tool type but it is likely to be a punch or small chisel. Very similar to SF3. L 122, D 12.5 to 9.5. Tr. 1, Context [113]: thin deposit of silty clay overlying flagged surface [115] and containing Romano British pottery. X-ray 6440.
- SF8 Decorative fitting.** Rod tapers to a point at one end and has been longitudinally split then decoratively twisted at other end before breaking. L 96; D 5-7. Context [203]: Subsoil. X-ray 6441.
- SF9 Fitting.** Tapering strip, broken at wide end and narrowing to a slightly bent, blunt terminal at the other. One perforation and part of a second on the broken edge indicate the strip was attached to another object. The broken edge is angular and sharp which suggests it has been cut. L 45.5, W 28.5 -14, T 6. Context [203]: Subsoil. Phase 2 ext. X-ray 6501.
- SF10 Barbed arrowhead.** One side of the triangular head is missing, as is the tip of the remaining barb and end of circular socket. Socketed barbed arrowheads are a Medieval type, with parallels from the 11th to 13th centuries AD (Halpin 2008, 111; Museum of London 1993, 65-70). Total L 56; barb L (incomplete) 49, T 3; socket ext. D 8.5, int. D 5.5. Context [208]: Thick rubble layer on outside of enclosure embankment. X-ray 6440.
- SF12 Nail.** Straight, square-sectioned shank with missing tip. Head is off-centre, flat and sub-oval. L 46; Shank 9 x 9; Head D 19 x 14.5, T 2.5. Context [211]: deposit relating to stone-robbing activity, containing post-medieval pottery sherds. X-ray 6492.
- SF13 Pruning hook.** Rectangular-sectioned shaft expands into a broken, curved blade. The shaft flares and curves in the middle, creating an open socket, and extends slightly beyond the socket before breaking. This is an example of Manning's 'small hook' type 3 (1985, 57-8), also known as pruning hooks (Rees 1979, 461), which are primarily found from the Roman period onwards. Total L 89; blade W 17, T 2.5; bar W 9.5 x 4 to 8.5 x 4 at base; Socket ext. D 23 x 18, int. D 19.5 x 12. Context [218]: patch of sandy clay. X-ray 6492.
- SF14 Knife.** The rectangular sectioned tang tapers to a point and is level with the blade back, which is angled down towards the broken tip; the recent break indicates the knife is likely to have been deposited intact. The blade edge was straight but now is slightly concave towards the middle due to sharpening. Angled-back blades are more commonly found in contexts dating to the later Roman period onwards (Ottaway

1992, 563). L 78; Blade L 44, H 25, T 3; Tang H 8, T 7. Context [218]: patch of sandy clay provisionally dated to the Late Roman period. X-ray 6492.

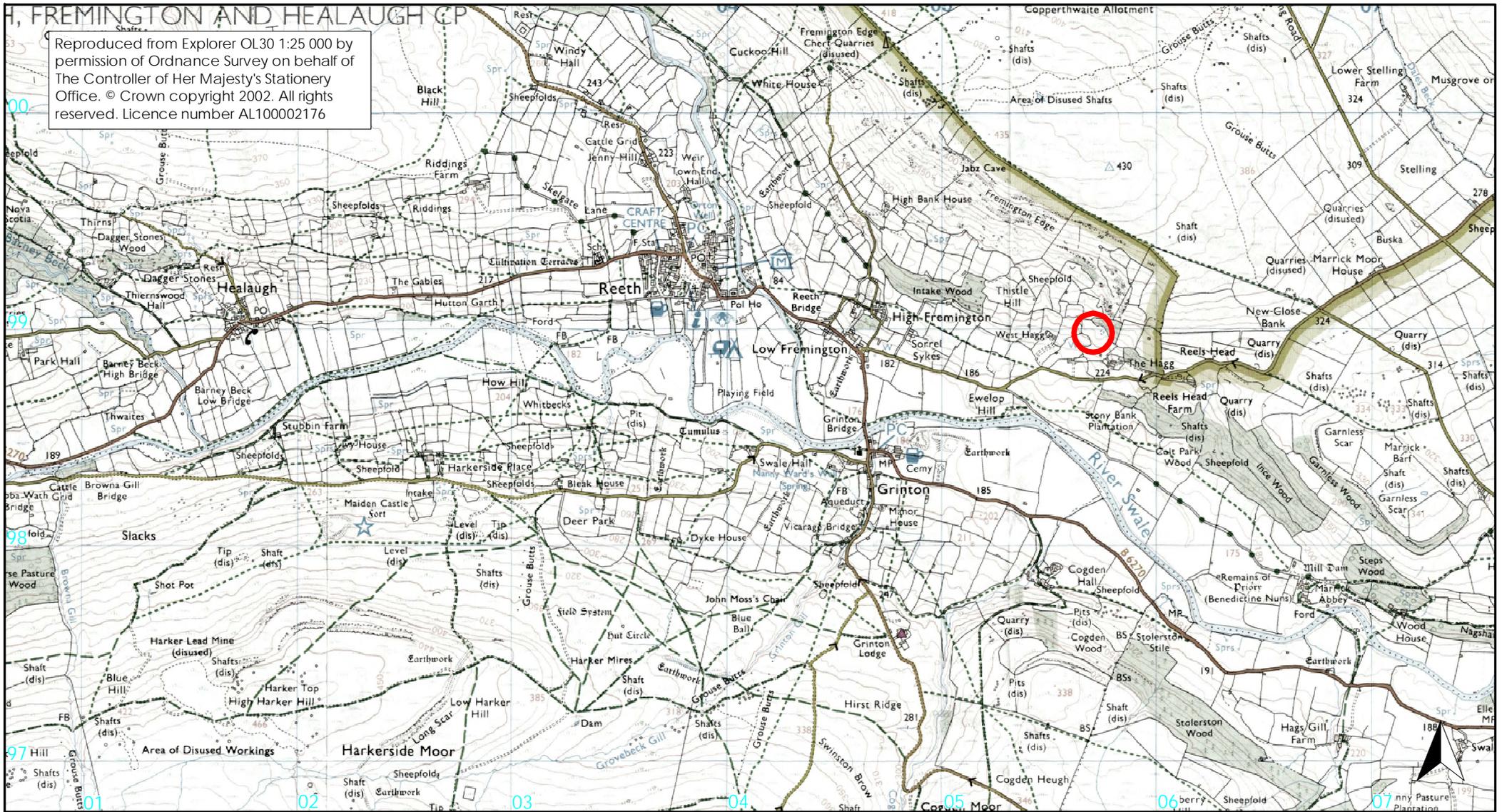
- [103] **Nail.** Head is mostly missing, as is tip. Straight, tapering square-sectioned shank. L 48, T 8.5; Head W 12, T 2.5. Context [103]: subsoil. X-ray 6440.
- [103] **Nail.** Head is either broken or very small. Straight, tapering, rectangular-sectioned shank. Tip is missing. L 67.5, Head 10 x 5; Shank 6 x 4.5 to 5.5 x 3. Context [103]: Subsoil. X-ray 6440.
- [203] **Nail.** Intact nail with rectangular-sectioned shank tapering to a wedge-tip and a flat, sub-round head. The shank is curved from being removed from wood. L 75; Shank T 8 x 6.5 to 7 x 5.5; Head 16 x 16.5. Context [203]: subsoil. X-ray 6441.
- [203] **Nail.** Flat, sub-round head with straight, rectangular-sectioned shank. Tip is missing. L 30; Shank W 7 x 6; Head W 11 x 10, T 2. Context [203]: subsoil. X-ray 6441.
- [218] **Nail head.** Small flat, sub-rectangular nail head with part of rectangular-sectioned shank. L 16; Head 7 x 5.5; Tip 3 x 2.5. Sample 6, Context [218]: patch of sandy clay.

2013 Medieval and Post-medieval artefacts

- 2013 **SF1 Knife/harrow-tine?** Rectangular-sectioned tang is bent towards the end and curves up to its missing tip. The tang steps out into rounded shoulders, wider on one side than the other. Although resembling a knife in shape, the oval section and blunt end suggest this is more likely to be a harrow-tine. Total L 80; tang L 31, H 10, T 4; blade L 49, H 21, T 5. XR 6573, context [600].
- 2013 **SF2 Boot-plate or small horseshoe.** Curved strip fragment with slightly tapered sub-square terminal and two possible rectangular perforations (only visible on X-ray). Part of one edge has spalled. Rather small for a horseshoe and could be part of a post-medieval boot-plate. L54, W 13, T 3; perforation 5 x 3. XR 6575, context [600].
- 2013 **SF3 Horseshoe.** Around half of a slender, small horseshoe with two rectangular perforations and a squared terminal. Triangular in section, creating one slightly concave side. Very plain and therefore not chronologically distinct. L 78, W 13, T 1 - 4; perforation 5 x 3. XR 6573, context [600].
- 2013 **SF4 Horseshoe.** Fragment of a slender, small horseshoe with two rectangular perforations and a squared terminal. Sub-triangular in section, creating one slightly concave side. Very similar but smaller than SF3. Very plain and therefore not chronologically distinct. L 72, W 11, T 1-2; perforation 6 x 3. XR 6574, context [600].
- 2013 **SF5 Ring.** Oval, square-sectioned ring. Iron rings had a wide range of functions, often as components of fittings and fixtures. L 29 x W 23 x T 3. XR 6573, context [600].
- 2013 **SF6 Cog?** Shallow 'C'-sectioned, curving strip, broken at both ends. There are three irregular 'U'-shaped notches on the outer edge. Possibly part of a cog or similar object. L 57, W 23, T 3; notches L 7, W 3, 9 and 12 mm apart. XR 6574, context [600].

- 2013 SF7 Bar or punch?** Intact square-sectioned bar, turning into circular-section before the slightly broken rounded tip. Undiagnostic. XR 6573, context [604].
- 2013 SF8 Stud.** Intact stud with circular domed head and straight, tapering, square-sectioned shank. The large domed head compared to the short shank indicates a decorative rather than structural function, e.g. for decorating wooden doors or boxes. XR 6574, context [700].

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site location



Figure 1: Site location

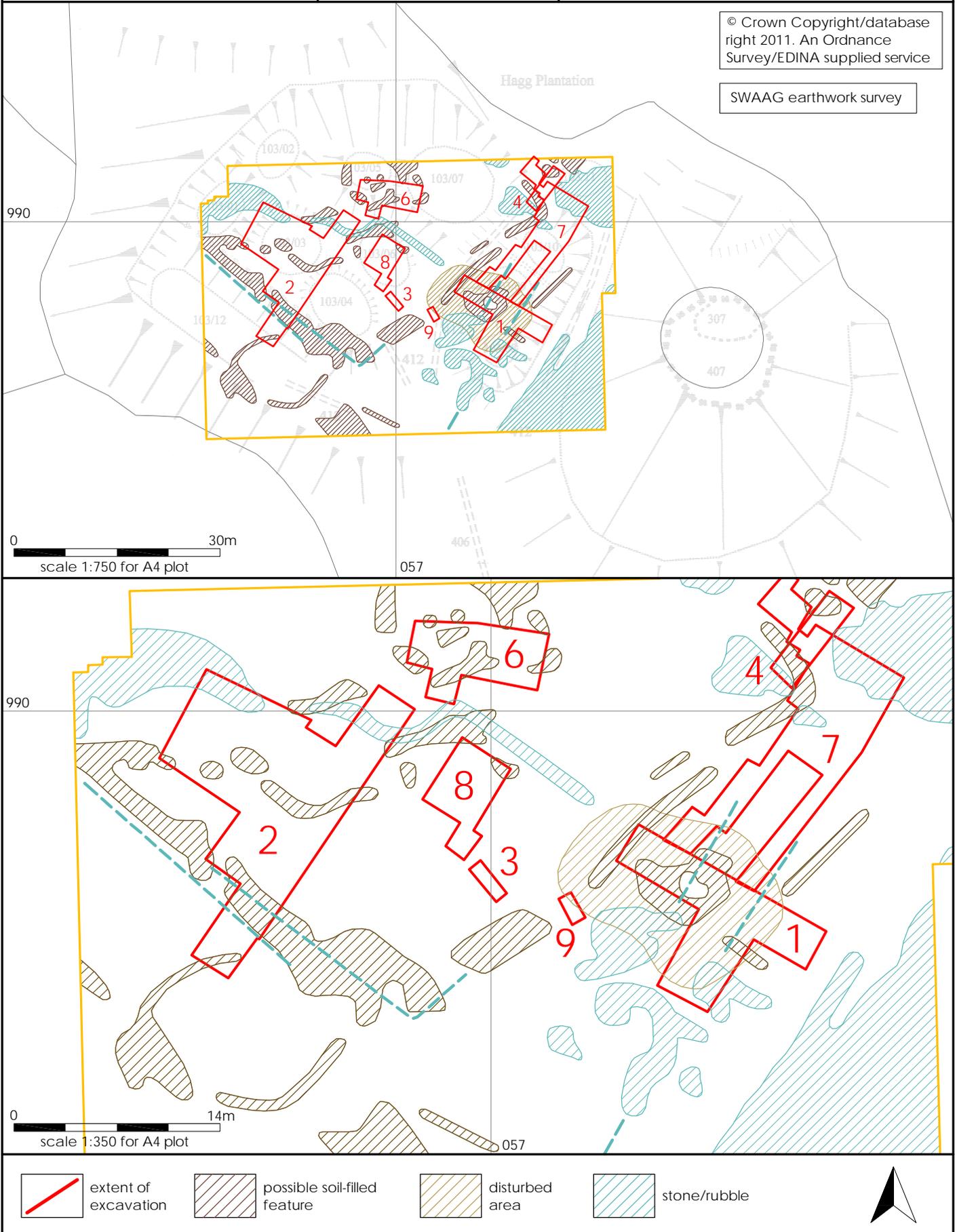
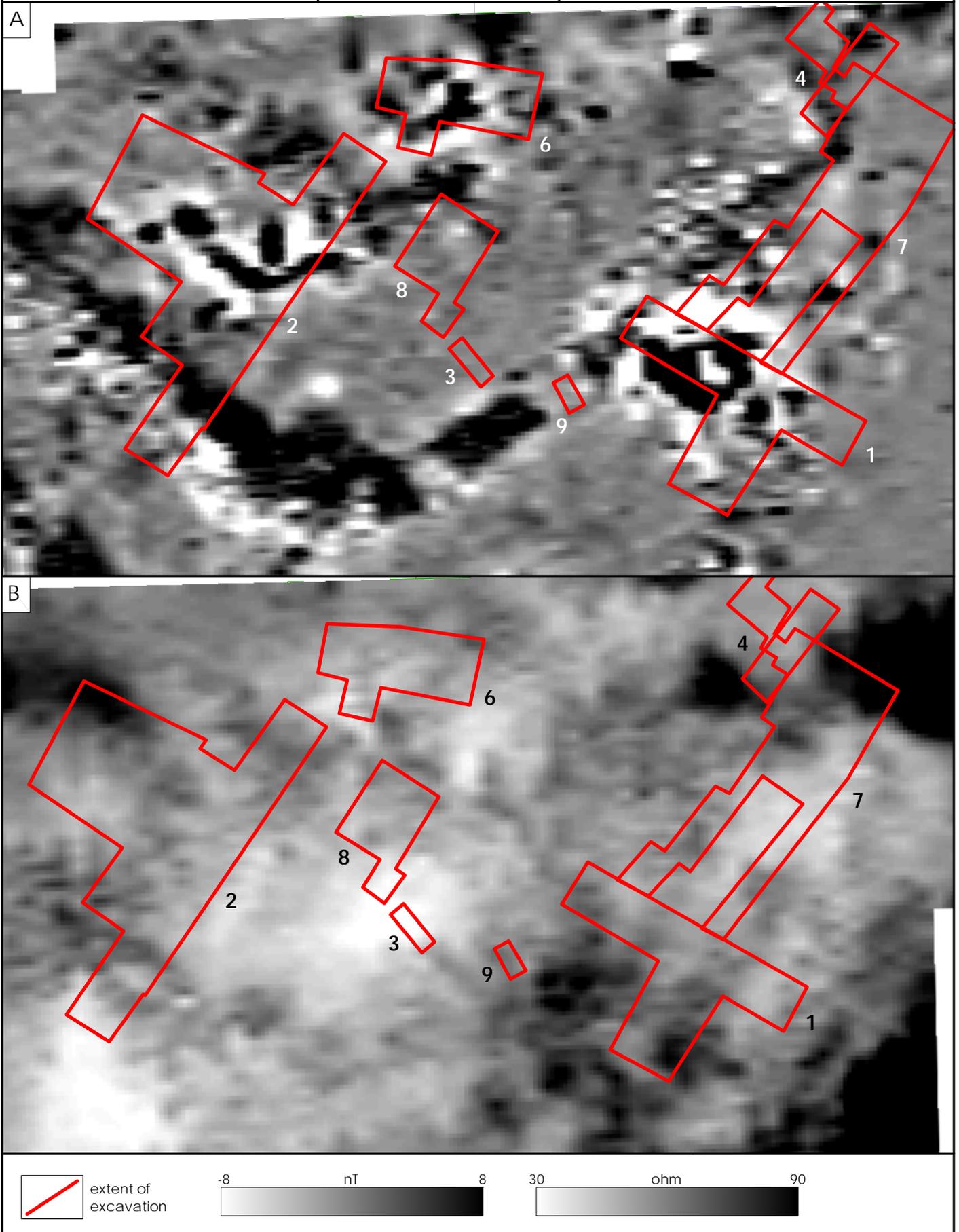


Figure 3: Location of trenches in relation to geomagnetic survey (A) and resistivity survey (B)



Profile 1

261.00m OD

NW

SE

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Figure 4: Plan of flagged surface,
Trench 1

0 2m
scale 1:50 for A3 plot

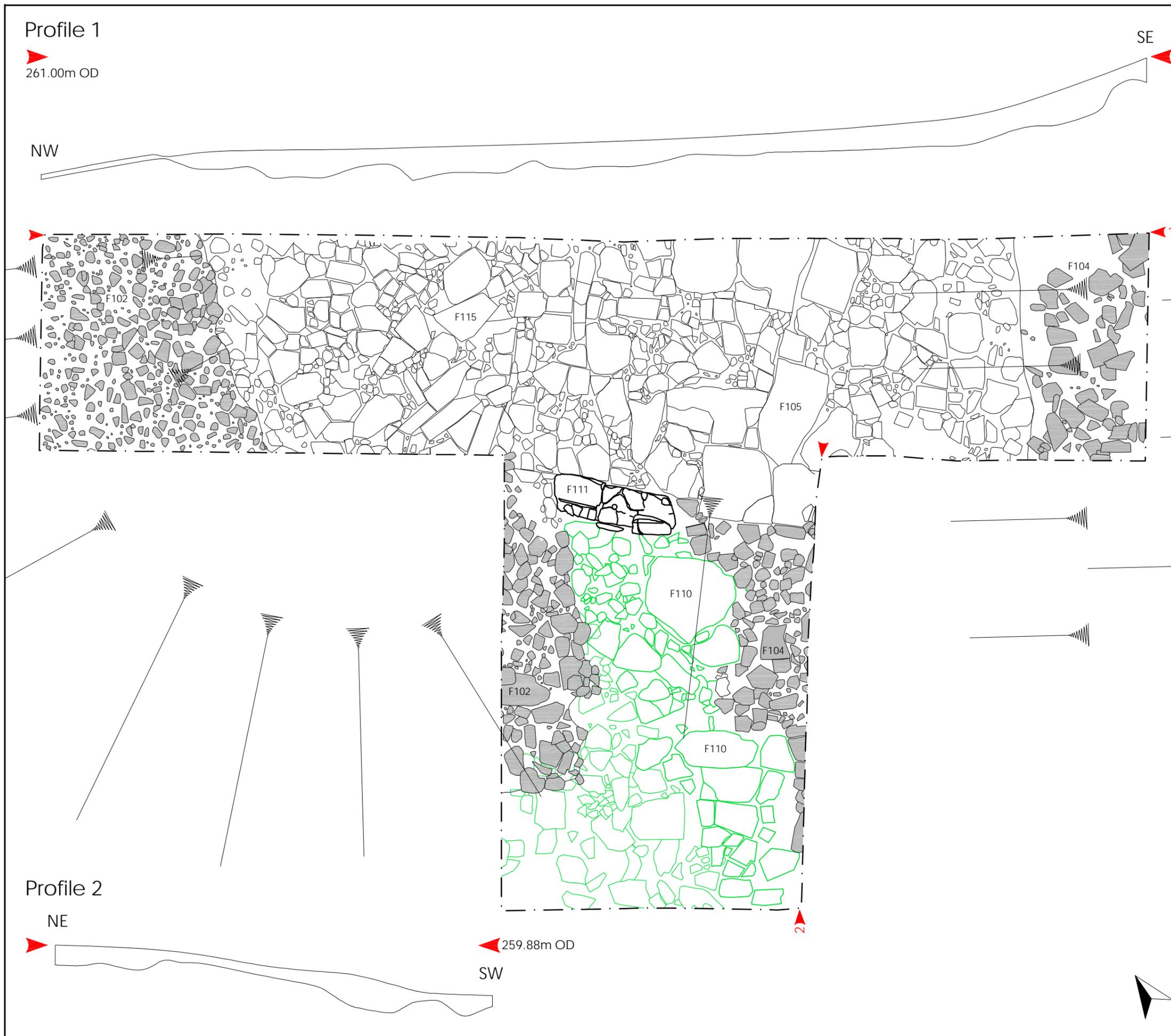
extent of excavation
profile

Profile 2

NE

259.88m OD

SW



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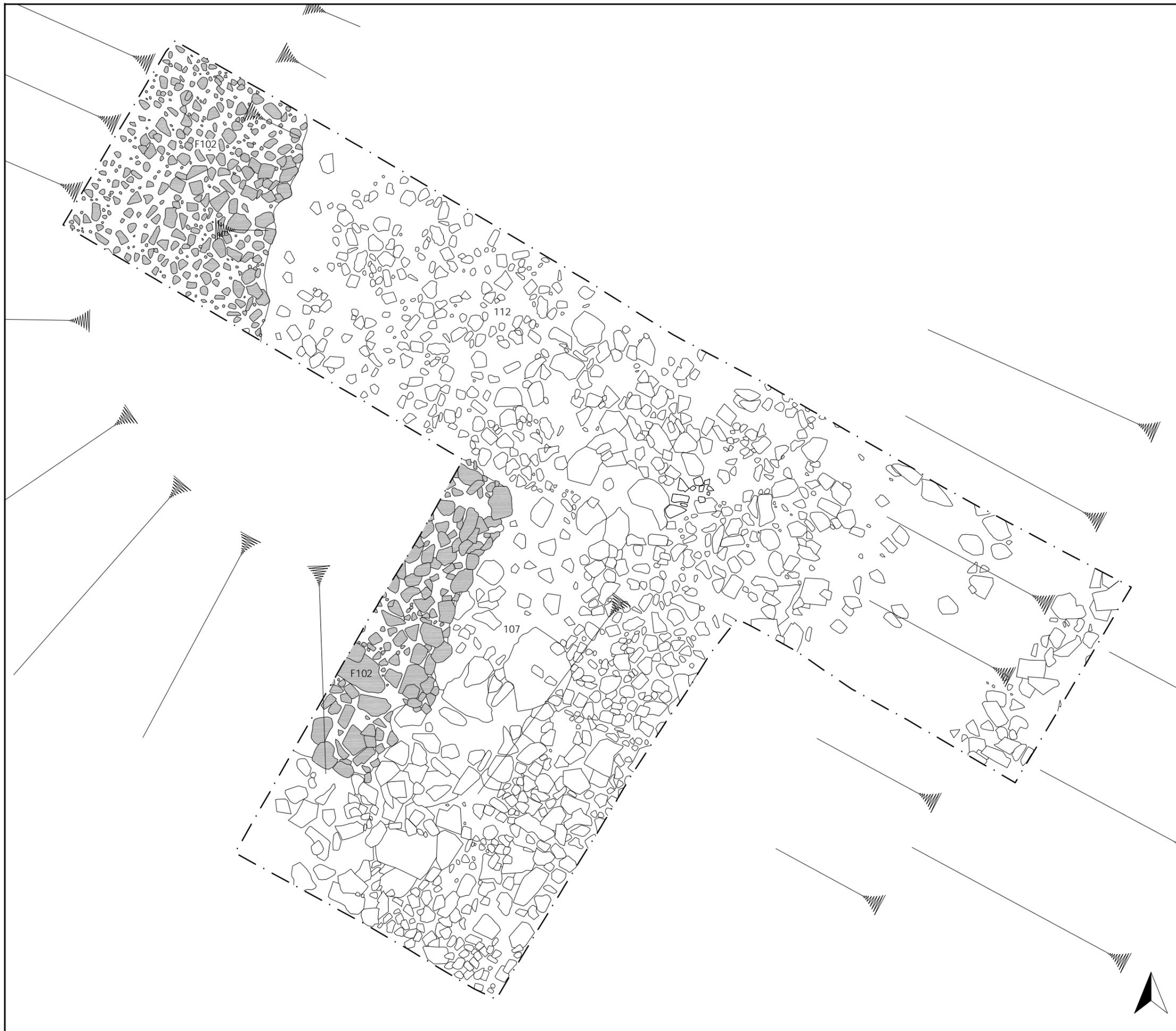
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Figure 5: Plan of the demolition phase,
Trench 1

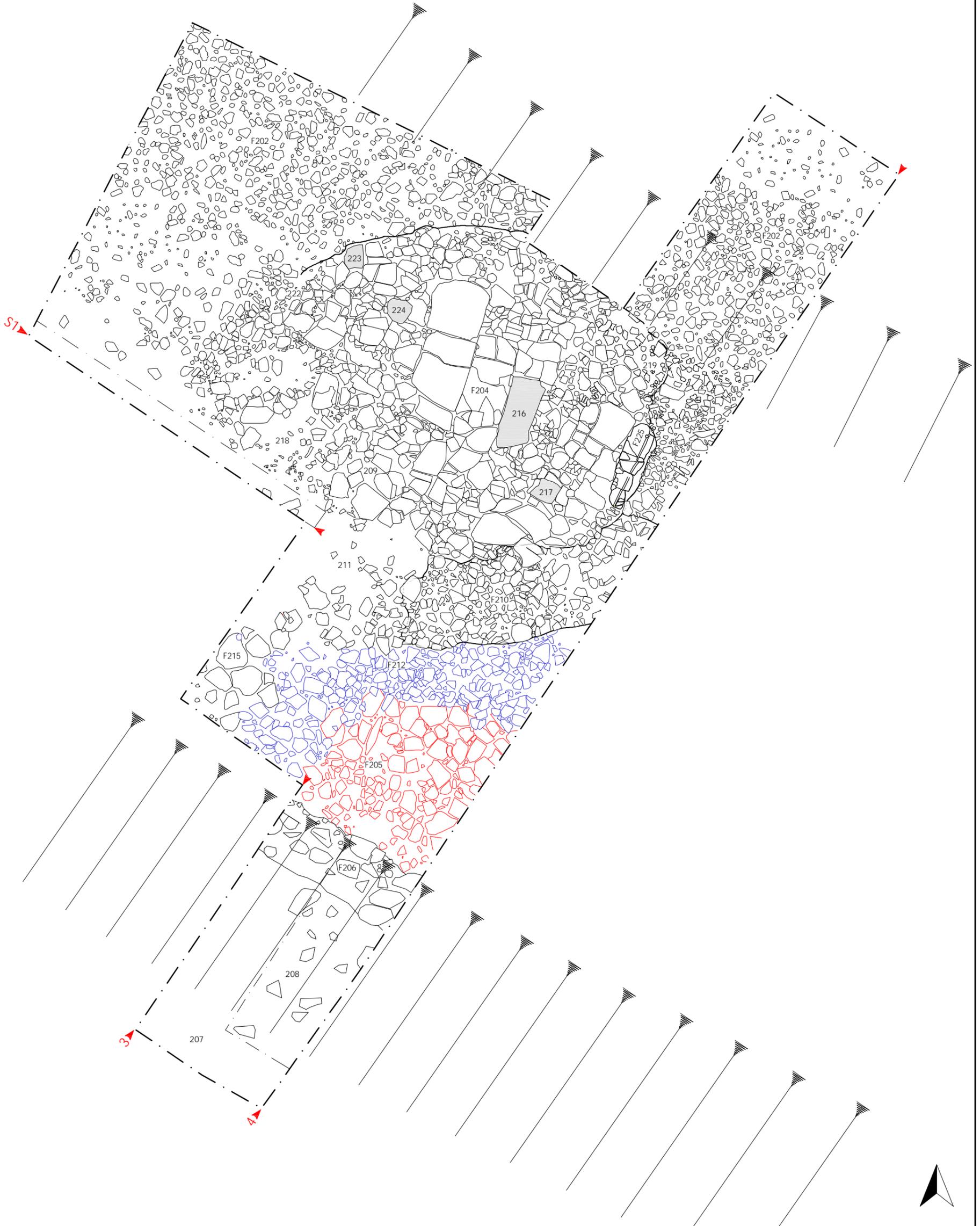
0 2m
scale 1:50 for A3 plot

 extent of excavation



extent of excavation

section / profile



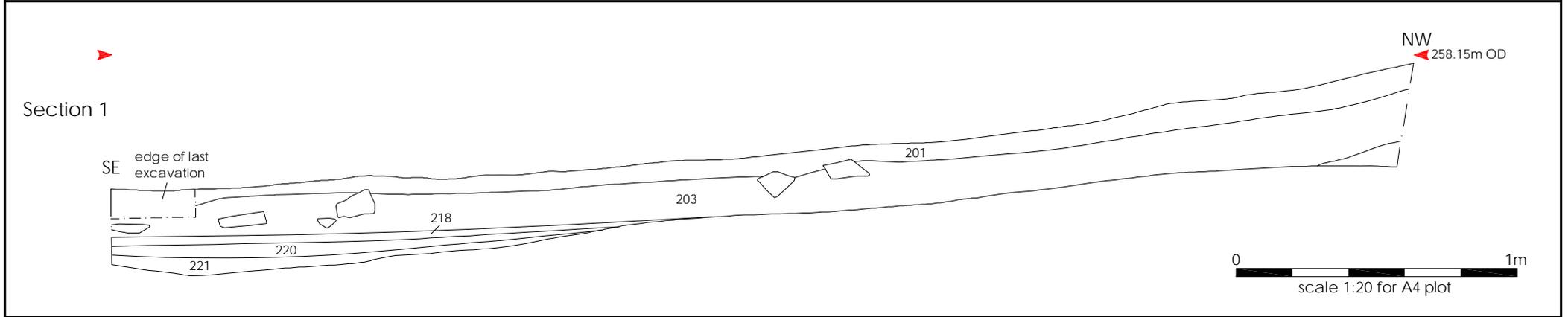
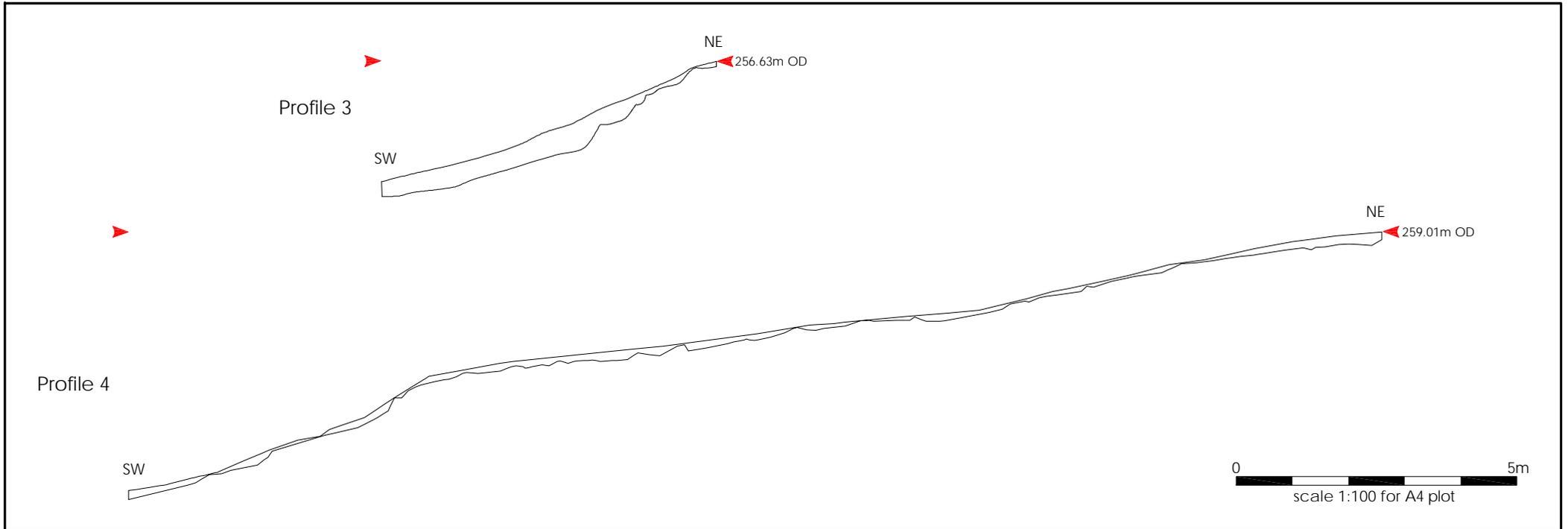
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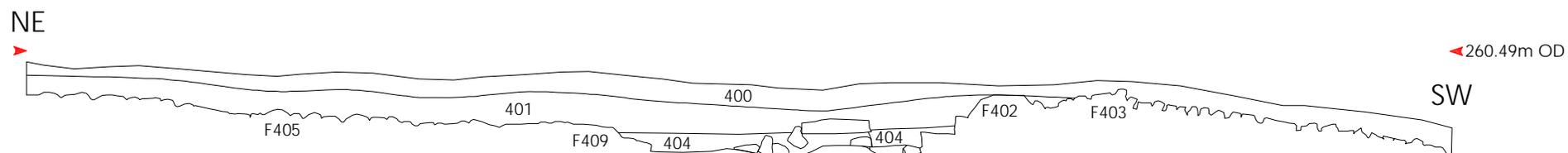
0 3m
scale 1:60 for A3 plot

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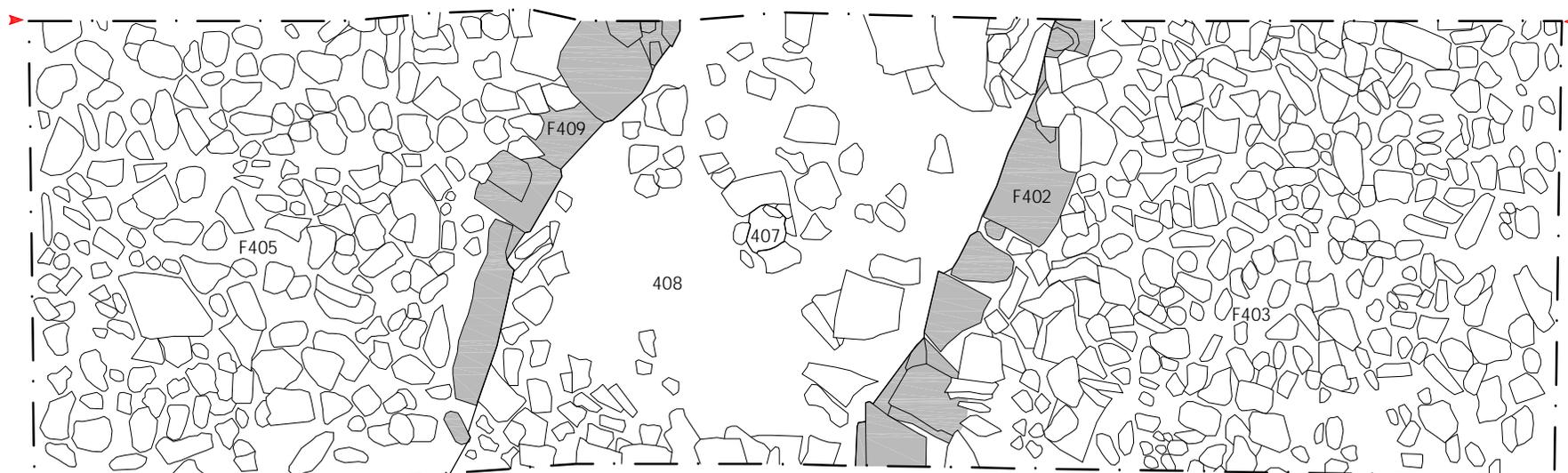
Figure 6: Plan of Trench 2



Section



Plan



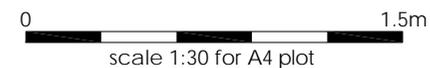
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Figure 8: Section and plan of Trench 4



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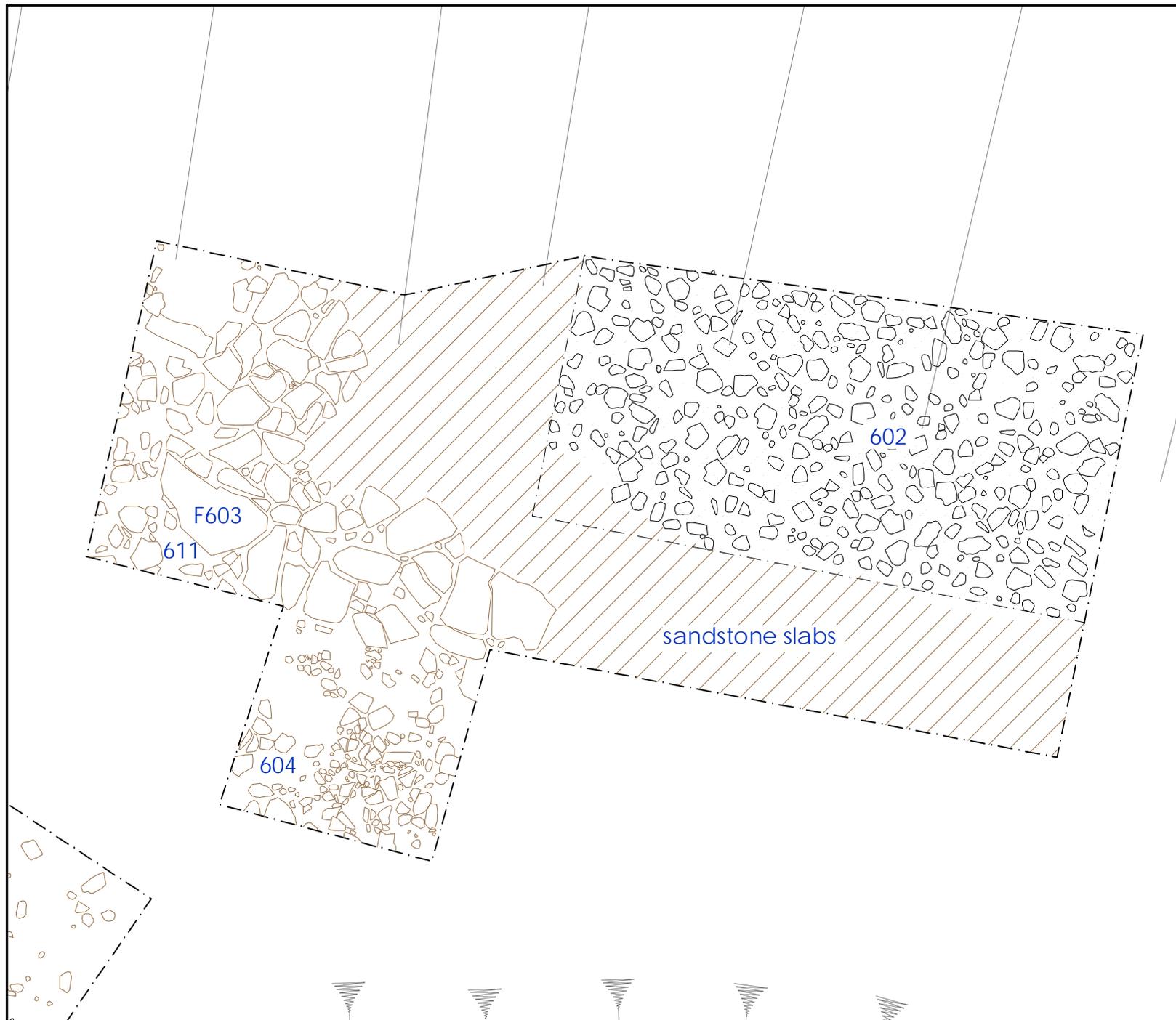
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Figure 9: Trench 6



-  extent of excavation
-  surface (flagged)
-  rubble bank/wall

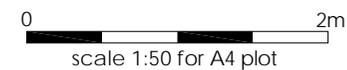


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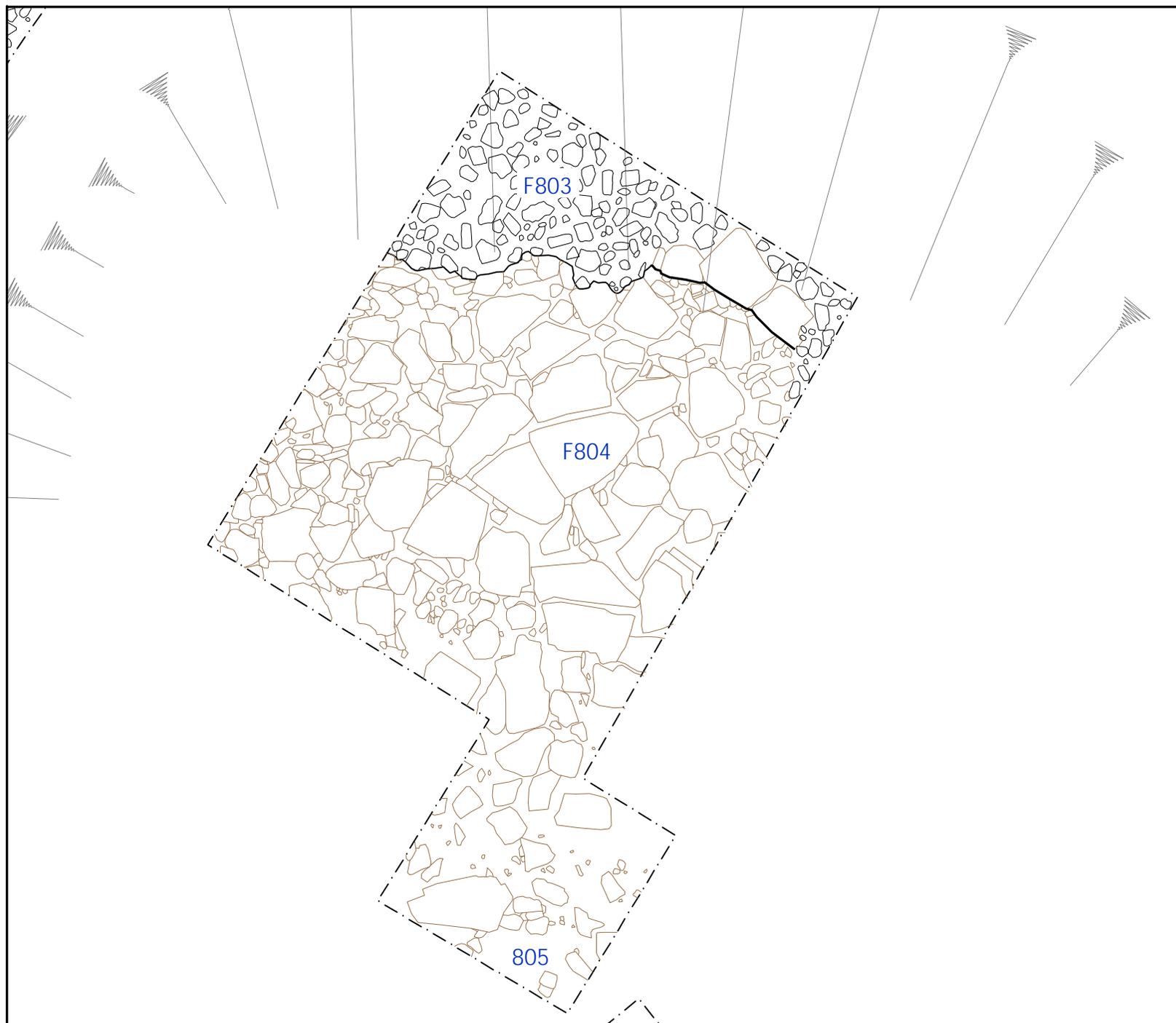
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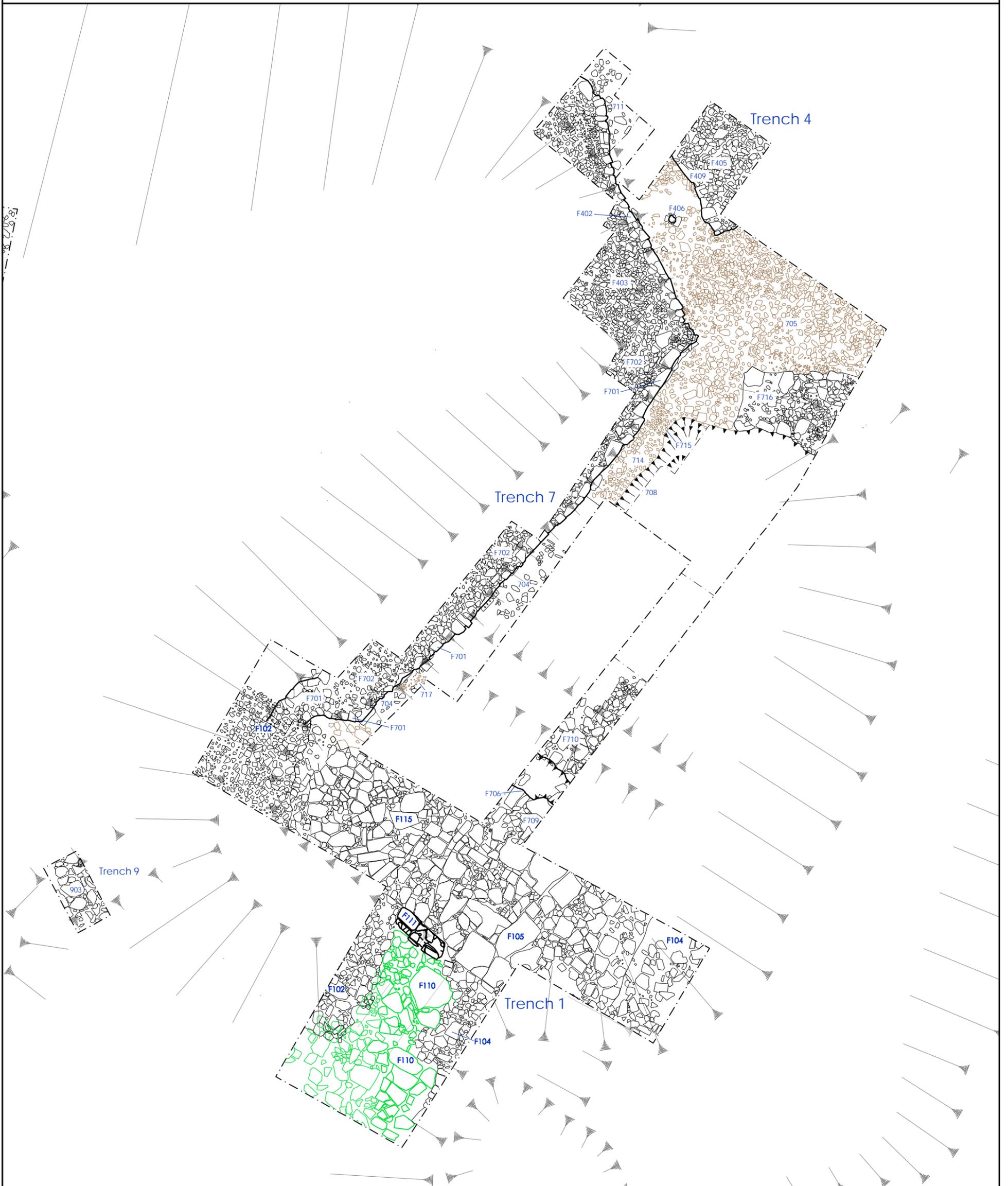
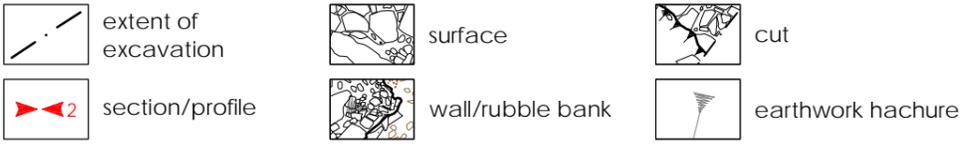
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Figure 10: Trench 8



-  extent of excavation
-  surface (flagged)
-  rubble bank/wall





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Figure 11: Trenches 1, 4, 7 & 9

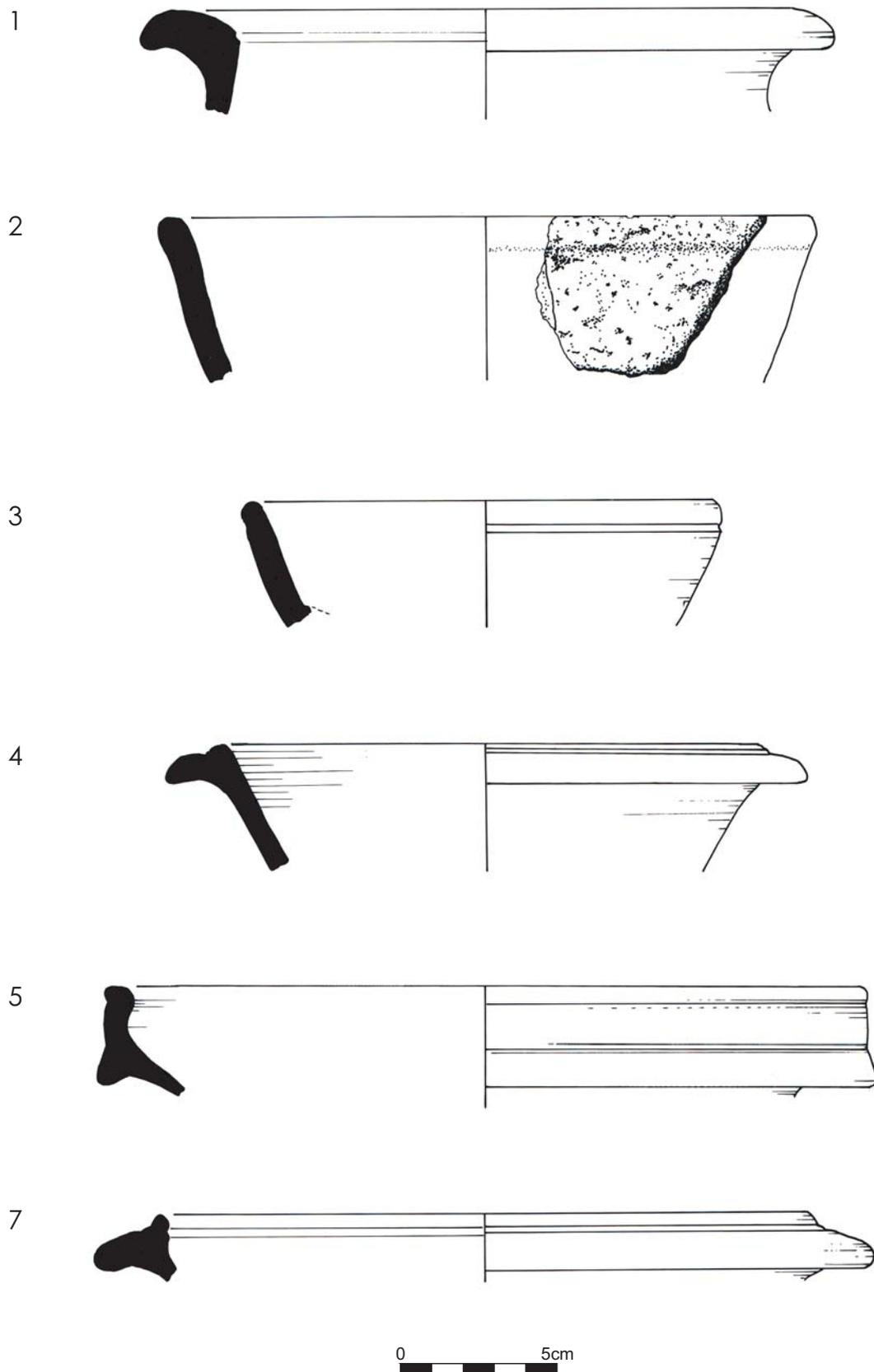


Figure 12:
Pottery: 1 - cooking pot [208], 2 - plain-rimmed bowl [113], 3 - dish [113], 4 - bowl [108], 5 -
bowl [203], 7 - mortarium [108]

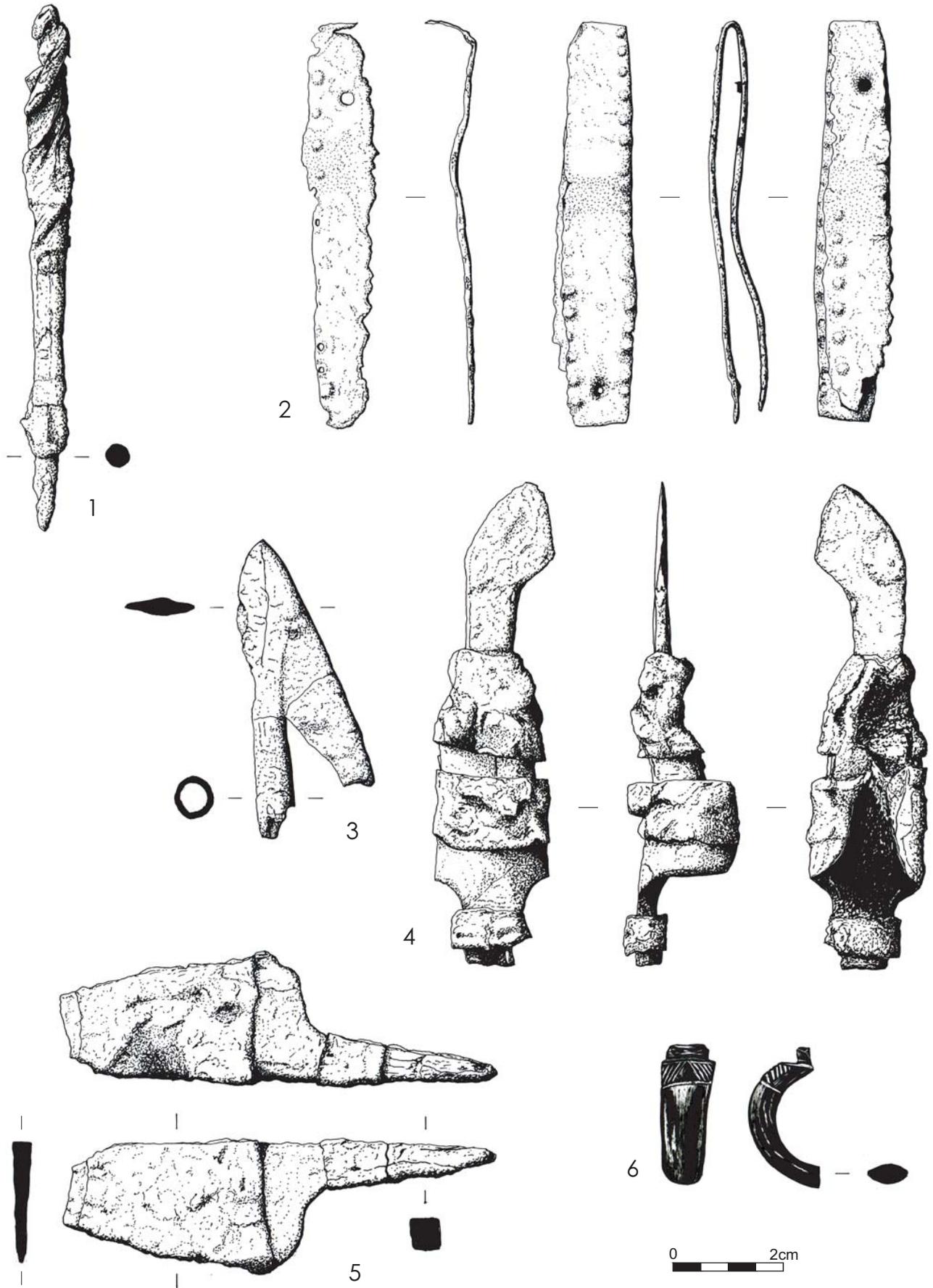


Figure 13:
 Artefacts: 1 - SF8, 2 - SF6, 3 - SF10, 4 - SF13, 5 - SF14, 6 - SF7



Figure 14: Trench 1, looking south-east



Figure 15: Trench 1, looking east from the intersection with the southern extension, with the door-sill F111 in the foreground



Figure 16: Trench 1 southern extension, looking north-east along the line of the possible path



Figure 17: Trench 1, reconstructed door-sill F111



Figure 18: Trench 2, SWAAG members at work cleaning up the roundhouse



Figure 19: Trench 2, the roundhouse, looking south-west



Figure 20: Trench 2, the door-sill F225, looking east



Figure 21: Trench 2, the north-western side of the roundhouse



Figure 22: Trench 3, looking north-west



Figure 23: Trench 4, looking south-west



Figure 24: Trench 6, showing rubble over fractured sandstone



Figure 25: Trench 6, stones F603 in foreground, looking east



Figure 26: Trench 7, corner of wall [F701] and cobbled surface [705], looking south



Figure 27: Trench 7, cut [F706], looking east



Figure 28: Trench 7, wall [F716], looking east



Figure 29: Trench 7, kink in wall [F701] at south-western corner, looking west



Figure 30: Trench 7, wall [716] with soil feature [F715] in the foreground, looking north



Figure 31: Trench 7, pit [F715] with cobbles [714] and wall [F701] to left, looking north



Figure 32: Trench 8, showing flagged surface, looking north



Figure 33: Trench 9, looking north