



TEMPLEBOROUGH ROMAN FORT, ROTHERHAM

FINAL REPORT

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NON-TECHNICAL SUMMARY

The site of the former Roman Fort at Templeborough, near Rotherham, was subject to a programme of archaeological works prior to its development by Jaguar Developments. ARCUS were commissioned to undertake the fieldwork to a strategy agreed with, and monitored by, the South Yorkshire Archaeology Service (SYAS). Fieldwork included evaluation trenching, mitigation excavation and a watching brief on areas of the site where archaeology was to be preserved *in situ* (Chan 2006 and McCoy 2008).

This report, prepared by ArcHeritage in accordance with requirements of English Heritage: *Management of Archaeological Projects* (Issue 2, 1991), is the final report on the results of the excavations; a shortened version of this report will be submitted for publication.

A rescue excavation was undertaken in 1917 by Thomas May (1922) during the construction of the Templeborough Steelworks. May identified three phases of fort building on the site with phases of abandonment between the forts. It was thought steelworks construction had largely destroyed the Roman fort but the recent excavations have demonstrated that localised and heavily truncated remains of the fort and *vicus* did survive in some parts of the site.

The fort remains are restricted to the bases of the deepest cut features, the ditches around the fort. These demonstrated that the fort defences were much more complex and extensive than had previously been identified. There were more ditches and even in their truncated state aspects of the history of maintenance and recutting of the ditches were identified.

Within the area under investigation *vicus* remains were limited with preservation of the *vicus* better further to the east where the ground surface dropped away. In this area the archaeological deposits were preserved *in situ*.

Analysis of the pottery from the excavations demonstrated there were two main phases of activity associated with the fort. The first phase was a Flavian Trajanic phase and the second was a Hadrianic Antonine phase. Analysis of the quantities of Samian recovered shows that there were two periods when consumption of Samian ware peaked. The period when Samian ware was virtually absent might relate to the abandonment and destruction of the original fort identified by Thomas May (1922).

May identified a 3rd fort but the excavations did not produce any evidence for this. The third fort could have been completely removed by modern activity between the excavations by May and ARCUS. Alternatively, the complete absence of any finds dating from a third phase in the excavations undertaken by ARCUS seems to suggest that a third phase was not present: An interpretation supported by the stratigraphic evidence from the ARCUS excavations.

Despite the limitations of the current excavations, in particular the extremely heavy truncation of the fort remains, the work undertaken has enabled a reassessment of the excavations undertaken by May (1922) including a comprehensive reinterpretation of the development, layout and dating of Templeborough Roman Fort.

KEY PROJECT INFORMATION

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1 INTRODUCTION

The site of the former Roman Fort and *vicus* at Templeborough, near Rotherham, was investigated through a programme of archaeological works prior to the development of the site by Jaguar Developments. The work was undertaken as part of the planning process to a strategy agreed with and monitored by the South Yorkshire Archaeology Service (SYAS). The archaeological works comprised an evaluation phase, trial trenching, undertaken in support of the planning application and a mitigation phase, excavation, undertaken as a condition of the planning consent. Reports produced on both phases (Chan 2006 and McCoy 2008) of fieldwork identified the potential for further analysis of both the finds recovered and the sites stratigraphy to enhance our understanding and interpretation of the site. This report, which describes the results of the analysis, and our understanding of the sites development, has been prepared in accordance with requirements of English Heritage: *Management of Archaeological Projects* (Issue 2, 1991), the guidelines of the Institute of Field Archaeologists and current archaeological best practice.

2 LOCATION, GEOLOGY AND TOPOGRAPHY

The site of the former Roman Fort at Templeborough (SK 414 915) lies in the valley of the River Don. It is located 3 km southwest of Rotherham, adjacent to the river. The site for the current fieldwork lies on the location of the former rolling mills of the Templeborough Steelworks. Other former steelworks buildings lie to the east of the site and now form the Magna Centre. The River Don forms the northern boundary of the site and Sheffield Road the southern boundary (**Figure 1**).

Located in the bottom of the valley the site sits on alluvial deposits, terraces of the River Don, which overlie bedrock of the Upper Carboniferous Coal Measures series. The extensive 20th century development of the steelworks on the site has heavily modified the local topography. Within the site, the pre-industrial ground surfaces have been lost with the site levelled off during the construction of the steelworks. This appears to have involved stripping the higher terrace deposits and deposition of this material over the lower terrace deposits. The resultant ground re-profiling has implications for both the survival and preservation of archaeological deposits as the fort appears to have been constructed on the upper terrace deposits, while the bath house was probably on lower terrace deposits.

3 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

3.1 Antiquarian knowledge

The existence of the site at Templeborough has been known for a long time. Edmund Gibson (1695) made reference to the site as a Roman fort in his updated English translation of William Camden *Britannia* (1588) although Camden did not make any reference to the site in the original. Gibson referred to the site as a “fair Roman fortification called Temple Brough” (Gibson 1695). The origin of the name Templeborough is somewhat less clear. Hunter (1831) notes reference to the name in 1559 when Lionel Reresby refers to “two mills and 20 acres of pasture at Templebarrow” (Hunter 1831 page 2) held by Roche Abbey. The land appears to have been acquired by the Abbey through a gift of Ralph son of Richard de Savile. A Richard de

Savile is recorded as present at the coronation of Richard I but Hunter (1831, page 261) notes that the family history through the Medieval period is somewhat confused and it is uncertain whether the two Richards are the same person. Leader (1877) suggests Ralph's gift took place in the reign of Henry III quoting Aveling (1870 page 147) who was in turn quoting Hunter (1831). Any confusion over the first date for the use of the name is somewhat academic as what is clear is that the name has been used for hundreds of years and that the fort was a recognised feature in the landscape. Armitage (1897) even suggests that the name may date back to a time when the columns and buildings of the fort were still standing although this cannot be substantiated.

Hunter (1831) does provide the first detailed description of the surviving earthworks, visible in the early 19th century.

"... on the stream of the River Don is a rectangular encampment, which has long been known by the name of Templeborough, or Caste-garth by Templeborough. It is situated on the south bank of the river, a very small space being left between the outer agger and the water. The area is defended by a double agger, the outer line exceeding the inner considerably in height and thickness. The lines are parallel, and the space between the two lines equal, except that on the side towards the north. The entrance was on the south, where there is a depression in the work exactly in the centre. A similar depression in the north agger has at present the appearance of having no part of the original work, but made since the whole plot was given up to the purposes of husbandry."

(Hunter, 1831 page 2)

These earthworks were commented on by many later authors and a photo in Rotherham museum dated 1913 may show the remains of the northern bank of the fort (**Plate 1**) before it was destroyed to construct the Templeborough Steelworks during the First World War.



Plate 1 View across Templeborough in 1913 showing the drop off from the fort down to the river

3.2 The first excavations by Leader

The first excavations at Templeborough were undertaken in 1877 and 1878, prompted by the discovery of Roman artefacts on the surface of the ploughsoil. The results of these excavations were reported in several short publications (Leader 1877, 1878a and 1878b). These excavations, which produced the first plan of the fort, (**Plate 2**) exposed the remains of substantial stone buildings, including a colonnaded building with stone columns that Leader interpreted as the *praetorium*, paved roads inside the fort, and external buildings from the *vicus*. The external remains are described as confused and the description is limited, a large building containing a pillar of tiles is mentioned, although it is unclear if this related to a hypocaust or was a pillar above floor level. The excavations appear to have been limited to the southern third of the site. Nonetheless they added substantially to the understanding of the site as they provided the first evidence on the internal layout of the fort and identify more than one phase of Roman activity was present. Leader (1878a) identified three main phases of construction with evidence of extensive fires associated with intervening phases of destruction. Although Leader (1878a) refers to ditches around the fort he does not specify which phases the ditches relate to.

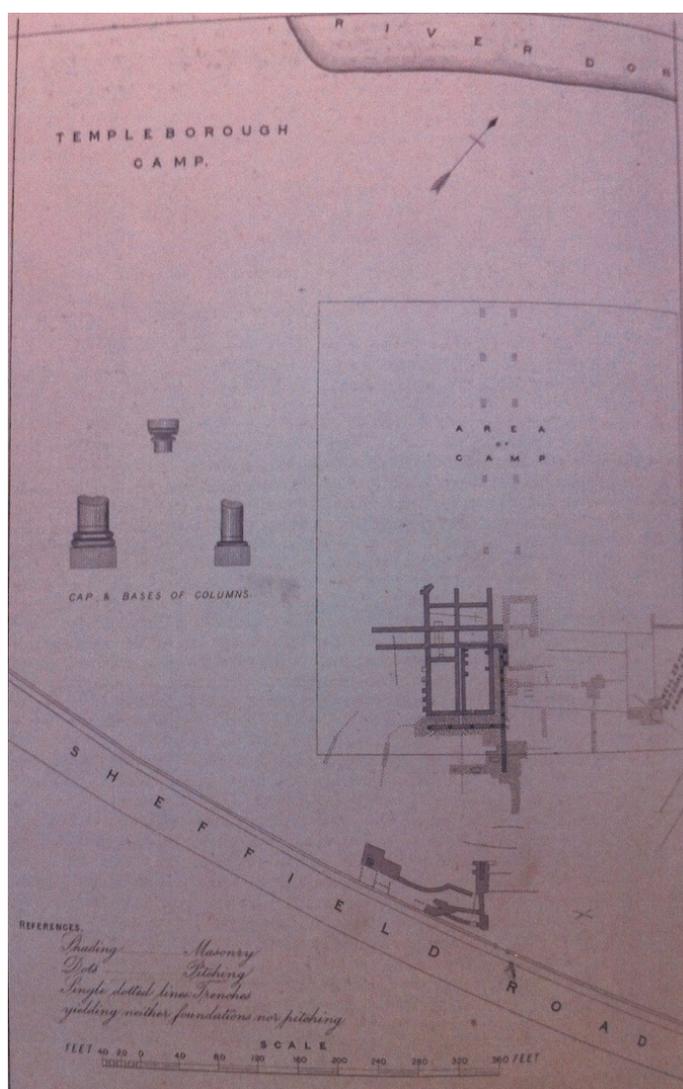


Plate 2 Plan of Templeborough Fort after Leader 1878a

In short Leader's phases were:

- Phase 1 a columned building, interpreted as the *praetorium*, and stone surfaced road,
- Phase 2 a destruction phase with fire and extensive layers of broken and burnt tiles and building debris and associated Roman pottery.
- Phase 3 new ramparts were constructed and a smaller, less grand, building was constructed above the earlier colonnaded building (*praetorium*) with a second road built over the top of and separated from the first road by the phase 2 destruction layers.
- Phase 4 a second destruction event with further evidence of burning and building rubble.
- Phase 5 the construction of earthen ramparts around the fort, these partly overlay the earlier roads and buildings from phase 3, no stone structures were identified that were associated with this phase. Leader suggests this phase may have been post Roman when the site was "occupied by a ruder race, who raised no stone buildings, but threw up earthen ramparts on the line of the old Roman works." (Leader 1878 p.603)

3.3 May's rescue excavations during World War I

Following this promising early start to the investigations at Templeborough no further work was undertaken until 1916 when during the drive for armaments in the First World War the site was acquired by Steel, Peech and Tozer to expand their steelworks. The site was then subject to an early rescue excavation directed by Thomas May, which ran from November 1916 to July 1917 in advance of development (May 1922). May's excavations built on the original work by Leader although he re-interpreted some of the buildings on the site that Leader had identified. Much of May's work appears to have comprised what now would be considered a watching brief, as his report makes reference to observing features in machine cut trenches undertaken by the workmen on site. This will have restricted his access and the details he could observe and record.

May's excavations confirmed a sequence of three superimposed Roman forts spanning the 1st to 4th centuries AD and added much greater detail on the forts' defences, their internal layouts and the buildings within them (**Plate 3**). The forts defences changed over time, variously being formed of ditches, turf ramparts and stone walls. The buildings identified in the interior of the fort included important buildings such as the *praetorium* and granaries built of stone; and other less important buildings that would have been timber built with stone sill walls. All the buildings May identified, he related to the first two forts. The absence of internal buildings or structures associated with the third fort makes this fort enigmatic and its interpretation conjectural (Buckland 1986). The building identified by May (1922) as the *praetorium* was not that identified by Leader (1878a). Leader's limited excavations only exposed one significant building inside the fort, which Leader identified as the *praetorium*; this was re-interpreted as granaries by May following his more extensive excavations. May also identified the location of the bath houses, which lay to the northwest between the fort and the River Don. Two phases of bath houses were identified associated with the first two fort phases.

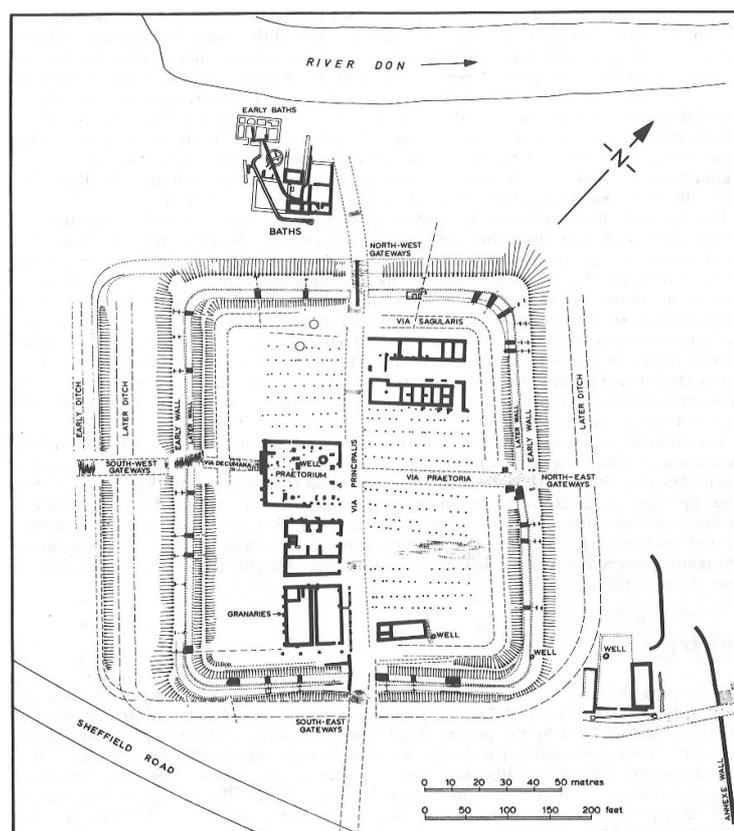


Plate 3 Plat of Templeborough Fort after May 1922

Work on the *vicus* was limited and the date for its earliest occupation was not identified; neither were possible phases of abandonment and re-occupation. It is possible that during periods when the fort was not occupied the civilian settlement continued in use.

3.4 Greene's investigations of the Don Valley during the Roman period

In the 1950s Dorothy Greene carried out work (Greene 1957 and 1958) in the vicinity of Templeborough Fort that placed it in its wider context. Greene undertook a number of small pieces of fieldwork mainly related to road development. These involved the excavation of a number of trenches across Roman Roads that enabled her to interpret the structure of the Roman Road network in the Don valley. South of Templeborough she interpreted the layout of Roman roads and associated buildings on Brinsworth Common, some 1.5km from the fort, as the remains of a Roman town. In addition to the roads she also identified other remains, including a large building located some 410m along the road running southwest from the fort.

3.5 Archaeological works for the Magna Science Adventure Centre

Following the closure of the Templeborough Steel Works archaeological works were undertaken in association with the development of the Magna Science Adventure Centre. During the redevelopment of the site for the Magna Centre a desk-based assessment (Wagner 1998) and trial trenching (Davies 1999) were undertaken. Three trenches were excavated; these were located in the northern corner of the fort, outside the northeast defensive ditch and north of the fort. The locations were chosen to investigate the fort ramparts, an area east of the fort that May identified with industrial activity, and the area around the bath house. No remains of the Roman fort or associated features were identified and the results of this evaluation appeared to confirm May's assertion that the fort site had been stripped to a depth

of between 3-4.5m to fill in surrounding depressions. May's assertion and the results of the trenching implied that low lying features could remain preserved under deep dumping layers associated with the levelling of the site. Limited knowledge of the original topography of the area, pre the steelworks, restricted the interpretive potential for this observation. It was recognised that lower lying areas such as depressions or where the ground slopes away from the fort, such as the site of the bath house to the north and the vicus to the east, may contain preserved archaeological deposits (Davies 1999).

3.6 2004 Archaeological Monitoring

A Templeborough Gateway feasibility study was undertaken that included the current development site within its study area. As part of the study, NAA (2004) carried out a watching brief of geotechnical investigations monitoring a total of 72 test pits and 23 boreholes. The study investigated areas to the east and west of the Magna Centre. Of particular interest to the current study were, test pits 7-13, 17-28, 38, 49 and boreholes 7-10 and 13 located within the area of the current development project.

Test pit 9, located north of proposed building E1 recovered Romano-British brick fragments from a mixed layer existing from 0.7m below the current ground surface.

Test pits 17-21 and boreholes 7-10, located along the same tract of land as evaluation trenches 3-7 from the 2006 field evaluation discussed below, revealed a gentle sloping profile of natural deposits from west to east. Test pit 18 located approximately 2.5m east of evaluation trench 7 of the 2006 investigations, contained archaeological deposits associated with the former eastern *vicus* from a depth of 1.2m below the current ground surface. This included wall foundations, a heat affected clay surface and fragments of Roman pottery and ceramic building material.

3.7 A summary of fort defences based on Leader (1878) and May (1922)

Both Leader (1878a and b) and May (1922) agreed that there were three forts at Templeborough although Leader did not produce detailed descriptions of the defences and so our primary knowledge of them comes from May's work. Based on their work and others (Buckland 1986) who have re-examined their reports a provisional phasing of the site would be:

- Fort I - The earliest foundation and occupation of the fort was around AD 54-70.
- Fort II - A reoccupation and rebuild took place in the middle of the 2nd century.
- Fort III - The final fort was built sometime in the late 3rd century was abandoned by the 2nd half of the 4th century, at the latest.

Fort 1 was the largest fort at 533ft (162m) east to west and 525ft (159m) north to south (May 1922). The defences of this fort comprised an earth rampart. This varied on the four sides of the fort. On the west side the rampart had been constructed on a bedding of hard clay and cobbles between 6ft (1.8m) and 8ft (2.5m) wide. The best preserved section of the rampart was on the north side where it was constructed of turfs over a bedding layer of compacted beaten gravel and clay; both the bedding and rampart were 18ft (5.5m) wide. On east side the rampart was deeply buried and its location was only seen in one deep section, where a sod rampart 23ft (7m) wide was identified. The rampart was not evident on the south side but a

foundation bedding layer of coaly clay 16 to 18ft (4.8 to 5.5m) wide was identified that extended under the stone footings of the wall for Fort III.

One ditch was identified in association with Fort I. A section through this showed that it was roughly V-shaped in section, 7ft (2.1m) deep from the current ground surface, and an estimated 18ft (5.5m) wide at its original surface. The ditch was separated from the rampart by a 13ft (4m) berm. The profile of the ditch, as identified by May (1922), was irregular in shape and it is likely that several re-cuts were not identified during the initial excavations.

Fort II was somewhat smaller than Fort I at 441ft (134m) east to west and 500¼ft (152m) north to south (May 1922). The ramparts for this fort were stone faced with a walkway behind. Where the wall for Fort II was preserved the core consisted of layers of sandstone rubble, clay and cobbles. The stone facing was generally missing having been robbed away, presumably to furnish material for the construction of Fort III. On the east and south sides the foundations of the Fort II wall and rampart were constructed on the foundations of Fort I. On the north side the remains of the walls/ramparts descended in three wide steps with Forts III, II and I in order from the interior to exterior.

Fort III was the smallest fort and most irregular. It was between 401 to 415ft (122 to 126m) east to west and 472 to 474ft (144 to 144.5m) north to south. May (1922) suggests irregular wall lines and the use of old materials incorporated in the rampart, fragments of grave stones, brick, mortar slabs and tiles, is related to hasty and unplanned construction, possibly not under military control. Buckland (1986) has questioned May's interpretation, as the re-use of material (including grave stone/sepulchral monuments) is not uncommon in the Roman world. May (1922) says the wall from Fort III was built of material robbed from Fort II with construction taking place on the rampart walkway of the wall of Fort II. He states that the facing stone for the wall for Fort III had been quarried away over the years and was only identifiable in a few places. In one section, where the core and facing survived, the core was a mix of broken stone, brick, tile etc consolidated with clay, approximately 8ft (2.4m) thick. This was faced with a stone revetment or outer skin of coarse sandstone rubble in blocks of around 1ft by 6inches (0.3 by 0.15m). This revetment made the total wall thickness up to 10ft (3m).

May (1922) states that a single outer defensive ditch ran around the western, eastern and southern sides of Forts II and III, but was absent on the north side. The ditch was about 18ft (5.5m) wide and between 4 and 6ft (1.2 and 1.8m) deep. The berm between the walls/ramparts and the ditch was around 50ft (15m) on the east and west sides and between 5 and 11 ft (1.5 and 3.4m) on the south side. On the north side there was a steep bank which descended down to the river in a series of steps. As with the Fort I ditch, the ditch for Forts II and III was wide, shallow and irregular in shape and it is likely several re-cuts may have been missed during the original excavations.

4 AIMS AND METHODOLOGY

The archaeological fieldwork was undertaken as a staged programme, with two main stages. The first stage comprised field evaluation undertaken using trial trenching and the second stage was mitigation. Mitigation involved preservation by record through excavation, and preservation *in situ* with an associated watching brief.

4.1 Aims

The evaluation was undertaken to determine the extent, condition, character, importance and date of any archaeological remains present and to provide data on which to assess the potential impact of the proposed development on any buried archaeology. Based on the results of the evaluation an area was identified for more extensive excavation the aims of which were:

- to preserve by record archaeological deposits and structures that will be impacted by the proposed development;
- to ensure *in situ* preservation of any archaeological deposits and structures that will not be impacted by the proposed development;
- to provide information that will enable the remains to be placed within their local, regional, and national context;
- to produce a full archive for permanent deposition, and publish the results if appropriate.
- to determine the full extent to which the ground-levelling activities associated with the early 20th-century construction of the steelworks have destroyed the remains of the fort along its southern edge;
- to document the surviving succession of defensive ditches to augment our current understanding of the cycles of construction, use, and abandonment attributed to the three superimposed forts identified by May during the 1916-18 rescue excavation;
- to investigate and document the surviving extent of the civilian *vicus* lying alongside the former Roman road leading into the southeast entrance to the fort(s).

4.2 Strategy

4.2.1 Evaluation strategy

The archaeological evaluation involved the excavation of seven trenches which were positioned in a location chosen by SYAS to investigate key areas of the fort and its surrounding *vicus* (**Figure 2**). The trench location was based upon the results of a geotechnical test pitting programme monitored by Northern Archaeological Associates (NAA 2004).

The results of the trial trenching were reported by Chan (2006). The trial trenches were 20m long and 4m wide. The width enabled the trenches to be stepped allowing the excavations to proceed down to a depth of 2m without shoring, as long as the ground conditions were stable. Trenches 4 and 5 were located to investigate the southern end of the fort while trenches 1, 2, 3, 6 and 7 were located to investigate the area of the *vicus*.

Trenches 4 and 5, located to assess the defensive ditching in the southern corner of the fort, revealed extensive remains of the defensive ditches surviving to within 0.5m of the current ground surface. Trenches 1 and 2 were located to assess the *vicus* east of the fort and north of the rolling mill. Trench 1 identified well-preserved remains likely to be associated with the *vicus* surviving under approximately 2m of modern tarmac, concrete and made ground, no surviving Roman remains were identified in trench 2. Trenches 6 and 7 investigated the eastern *vicus* south of the rolling mill. Trench 6 contained well-preserved remains likely to be associated with the *vicus* surviving under varying depths of modern dumping and made ground. No surviving Roman remains associated with the *vicus* were identified in trench 7. Trench 3, located to investigate the *vicus* west of the fort, contained no Roman remains. The

results from these trenches varied considerably and identified that differential preservation across the site related to the underlying natural slope of the land from west to east and the impact of modern ground-levelling activities that truncated features to the west and buried features to east (Chan 2006).

4.2.2 *Mitigation strategy*

The strategy for the mitigation excavation and watching brief was based on the results of the evaluation (Chan 2006).

Along a strip of vacant land between the rolling mill and Sheffield Road, the location of the southern corner of the fort, the truncated remains of the defensive ditches survived from 0.05m below the current ground surface. Development activity across this area was assessed as certain to seriously impact upon these archaeological deposits and excavation of this area, Area 1, was identified as an appropriate strategy to deal with the archaeology (**Figure 2**).

The strip of vacant land between the rolling mill and Sheffield Road extended further east, and east of the southeast entrance to the fort remains of the former *vicus* were identified. These survived from depths ranging from 0.7-1.5m below the ground surface, the depth of overlying modern deposits increasing from west to east. In this area the impact of development would depend on the nature and depth of development activity; primarily groundworks for demolition, foundation trenches, service trenches, and landscaping. It was therefore determined that excavation would be required where groundworks would impact on the archaeology but that preservation *in situ* would be undertaken where archaeological deposits were below the depth of groundworks. In order to ensure that the areas preserved *in situ* were not disturbed by groundworks a watching brief was undertaken on groundworks in areas for preservation *in situ*. The excavations across the strip of vacant land, identified as Area 1, were undertaken by strip, map and sample.

4.3 **Methodology**

All excavations during the evaluation and mitigation and recording work were carried out in accordance with current industry best practice (IFA 1997; IFA 1999a-c).

4.3.1 *Trial trenching*

The archaeological evaluation was carried out between 22nd May 2006 and 15th June 2006. During the trial trenching a rubber duck 360° mechanical excavator fitted with a toothless ditching bucket carried out the removal of overburden and topsoil from the trenches that had been laid out by Total Station survey. All machining was carefully monitored by an appropriately qualified archaeologist. Machining ceased as soon as archaeological deposits or structures were identified and the remaining excavation was conducted by hand.

4.3.2 *Excavation*

Excavation fieldwork was carried out intermittently between November 2006 and July 2007 in Area 1. The area targeted for stripping commenced approximately 5m west of the westernmost defensive ditch as identified by May and extended east beyond the southeast entrance to the fort. This area encompassed the inner and outer fortifications of the southern corner of the fort and any surviving remains of the *vicus* immediately to the east and west of the fort. The excavated area measured approximately 150m by 50m covering nearly 7500m² (**Figure 2**).

The topsoil and made ground of Area 1 were machine stripped to the top of the archaeological deposits, under archaeological supervision. Following stripping, archaeological features and deposits were hand cleaned, surveyed, sample excavated, and recorded according to the standards outlined below.

A contingency existed to extend the excavation further east into the area of the former *vicus* but following consultation it was agreed that this area of the *vicus* would be preserved *in situ*. This was achieved through the adoption of an approved demolition and remediation strategy that minimised ground disturbance and raised the ground level using site won materials. Any ground disturbance was subject to archaeological watching brief.

4.3.3 *Watching brief*

The watching brief was carried out intermittently between 29th May 2007 and 18th January 2008. This was undertaken on any groundworks in the area of the fort or associated *vicus*. This primarily related to the excavation of service trenches for the installation of site drainage. The watching brief was carried out in line with current IFA (1999) guidelines and current best archaeological practice.

4.3.4 *Recording*

All features encountered within the excavation areas were investigated and recorded using ARCUS standard pro-forma sheets. Plans and sections were drawn as appropriate and a comprehensive photographic record was made. A full set of registers was maintained for contexts, drawings, photographs and levels.

Each archaeological context was given an individual number and described in full on a pro forma context record sheet in accordance with ARCUS context record conventions. All field records were checked and indexes were compiled.

Surveys of trench locations were undertaken during the evaluation and of all features exposed during mitigation stripping.

Planning was undertaken at a scale of 1:20 or 1:50 as appropriate. Section drawings were undertaken at 1:10 or 1:20 as appropriate. All drawings were drawn on inert materials using ARCUS conventions. All surveys and plans contain spot heights related to Ordnance Survey Datum Levels in metres correct to two decimal places.

Photographs of work in progress and post-excavation of individual and groups of features were taken. This included general views of entire features and of details of such sections as considered necessary. The photographic record comprised of 35mm format colour slides and black and white prints.

4.3.5 *Finds Collection Policy*

Artefactual material was collected according to an explicit sampling strategy. Material which was obviously modern in date, and derived from unstratified contexts, was not kept. The presence of discarded material was noted on the relevant context sheet. All other finds recovered were retained for further analysis. Finds were cleaned, marked, catalogued and packed in materials suitable for long term storage as defined by relevant IFA (IFA, 1999) and the United Kingdom Institute of Conservation (UKIC) guidelines.

Finds of particular interest or fragility were retrieved as Registered Finds. Finds within discrete contexts, and dense/discrete deposits of finds were collected as Bulk Finds and bagged by context and material type.

The material from the excavations was deposited and accessioned by Rotherham Museum following completion of the assessment (McCoy 2008) who undertook their own assessment on retention at that point. The specialist reports do not therefore contain recommendations regarding retention and discard.

4.3.6 Sampling

Contextual samples were taken for palaeoenvironmental and industrial residue analysis. Soil samples were collected during the excavation for the identification and recovery of carbonised and/or waterlogged remains. Samples of approximately 30 litres were removed from excavated contexts, with particular attention paid to the sampling of primary ditch fills. The collection and processing of environmental samples was undertaken in accordance with guidelines set out by the Association for Environmental Archaeology (1995). Due to the extensive modern industrial activity on the site, samples for the assessment and analysis of Roman industrial activity were only taken from secure Roman deposits. Sample size was dependant on the size of context and its nature.

5 RESULTS

The results of the trial trenching and the excavation in Area 1, and Trenches 4 and 5, identified that the surviving remains of the fort and *vicus* at Templeborough had been heavily truncated by the construction of the former steelworks (**Plate 4**). As May noted,

“In 1916 ... [the fort]...was purchased by... the adjoining Phoenix Steel Works...and the whole surface to a depth of from 10 to 15 feet (3 to 4.6m) has been tipped into the surrounding depressions to level the ground...” (May 1922, 2).

This meant that remains of many of the features identified in earlier excavations, such as the forts defensive ramparts and walls and internal buildings were not seen, these features having been completely removed by the steelworks construction. What did survive were the bottoms of the ditches that ran around the fort and the remains of structures and deposits within the *vicus* (**Figure 3**). The *vicus* remains had also been heavily truncated and disturbed particularly near the fort. May’s comment that the site was truncated to a depth of between 10ft (3m) and 15ft (4.6m) can be compared to the ditch depths recorded by May and the surviving ditch depths. Most of the fort ditches identified during the ARCUS excavations are less than 1m deep which compared to May’s observation of ditch depths of around 7ft (2.1m) would suggest at least 1m of the ditch depth and other deposits below the former ground level have been lost, although this does assume that both excavations were identifying the same ditches, which may not always be the case. Also May’s figures do not make clear if his measurements are from the ground surface of the field or from the top of rampart remains which were then still visible as earthen banks. May’s figures suggest there was some variation in the levels of truncation across the site and it is probably safest to conclude that the depth of truncation was most likely somewhere between 1m and 3m. This would explain the lack of any evidence for internal features within the fort.

The depth of modern overburden that overlay the truncated archaeology varied across Area 1. This showed an increasing depth of overburden deposits from 0.1m over the ditches at the west end to 0.5m over the ditches at the east end. In addition there were concrete foundations from modern structures that cut down deeper through the archaeological deposits. Extensive concrete pads, a service road overlying an earlier rail track and concrete bases were all located within a c.20m wide corridor of deep industrial intrusions along Sheffield Road. These intrusions prohibited meaningful investigation of the southern edge of Area 1 which included the majority of the intersections of the south western and south eastern ditches. In addition to the east to west variation in preservation there was also a north to south trend. In this case, the evidence for the ditches seen in plan following stripping Area 1 showed them narrowing towards the north. In this area the modern ground surface sloped down northward towards the rolling mill building. The depth and concentration of industrial intrusions (i.e. structures and made ground deposits) associated with former rolling mill activities increased to the north. The apparent narrowing of the ditches was therefore a consequence of an increased truncation of archaeological deposits towards the north.



Plate 4 Remains of Ditch 5 exposed following stripping

Two types of ditches were identified that had surrounded the forts, narrow V-shaped ditches and wide but shallower ditches with pebble and rubble deposits within them. Although referred to as ditches, the function of these wider linear cuts, with rubble or pebble fills, was far from clear. These wider ditches were identified running parallel to and mixed in with the V-shaped ditches. The ditches were from the southwest and southeast sides of the fort near the southern corner, but the southern corner was not well preserved, which made identifying the relationships between the ditches on each side problematic. Following stripping, the ditches were numbered 1 to 8 from east to west (**Figures 3, 4 and 5**). During excavation several sondages were cut through these ditches and numerous recuts were identified, particularly for the V-shaped ditches. The re-cuts were given letter sub-codes. The current analysis has

identified that the sequence of ditches and re-cuts identified during the excavation of Area 1 is more complicated than was originally thought (McCoy 2008) but the numbering system used in the assessment report is retained with additional re-cut sub-codes allocated.

The number of ditches identified is significantly greater than the two ditches described by May (1922) although the irregular shape of the ditches previously recorded suggests that several re-cuts may have been missed (see section 3.7). In addition to the number and complexity of the ditches identified at Templeborough, May's (1922) dating of these ditches is called into question by the analysis undertaken on the new excavations.

It was originally thought that the ditches on the southeast and southwest sides of the fort could be related in the field and were numbered accordingly. The more detailed analysis now undertaken challenges some of the previously assumed relationships. The discussion below will therefore describe the ditches and their dating on the southeast and southwest sides separately and then identify the relationships between them where this is possible.

Features and structures east of the fort included the fragmentary remains of sandstone walls and deposits associated with the *vicus*. These were also encountered close to the modern ground surface and had suffered from severe disturbance and truncation by the industrial activities associated with the 20th-century rolling mill.

Description and discussion of the fieldwork results will be based on three distinct groups of archaeological features: the south eastern ditches, the south western ditches and the remains in the *vicus*. A full listing of the contexts is provided in **Appendix 2**.

5.1 The fort ditches on the south eastern side

Ditches 1 to 5 were located on the southeast side of the fort. These ditches were all aligned southwest to northeast and could be traced for total lengths of between 35m and 65m depending on the ditch. These ditches were often recut, and cut each other and this provided stratigraphic evidence for their relative dates and development.

5.1.1 Ditch 1

Ditch 1 was the southern most of the ditches on the south side of the fort (**Figure 4**). This ditch was relatively wide at 5.3m across and relatively shallow at 1.3m deep, although as with all of the ditches at Templeborough an unknown depth has been lost through later activity. The ditch was examined in one sondage D1/s1 (**Figure 6**) that exposed its irregular shape in section. The northern side of the ditch cut, 1262, was steeper compared to the shallower southern side. Both sides of the cut were stepped in profile and these irregularities in the cut of the ditch suggest there may have been recuts that were missed during excavation. The extensive fills, such as 1264, that almost extended over the full width of the ditch would suggest otherwise. The fills of Ditch 1 were primarily clays 1265-1268 at the base of the cut. Above these deposits and spreading over most of the width of the ditch, and over half of its depth, was a layer of loose clay rubble 1264. This comprised rounded stones, possibly river pebbles, in a thin silty clay matrix. Above 1264 in the centre of the ditch was a compact clay deposit, 1263. This clay was quite narrow and either side of this the rubble layer 1264 was exposed in the surface of the ditch following stripping. As 1264 overlies the lower clay fill of ditch 1 it would appear that the ditch was not dug with this deposit in mind and deposit 1264 was a later addition.

The rubble deposit 1264 appeared somewhat similar at first sight to the bedding deposits May (1922) identified under the fort walls/ramparts, but the uncompacted and loose consistency of this deposit argues against its interpretation as a foundation deposit. In addition this ditch is on a line much further south of any ramparts May identified. The rubble deposit could be traced on the surface of the ditch over its exposed length. What this feature was for is uncertain, and it may not have been primarily defensive. The loose rubble fill is reminiscent of a drainage feature and May noted the presence of stone drains outside the fort but the scale of this feature is far larger than one would expect for a drain in any normal circumstances. In addition the presence of lower fills below the rubble would suggest that if the rubble does relate to drainage it was not the initial function of this feature.

Within the sondage cut through Ditch 1 a second cut, 1436, was identified cutting the southern side of the ditch. This was not identifiable beyond the sondage and may well have been a small feature related to the adjoining *vicus* rather than the fort ditches. There were few finds from the fills of Ditch 1 but the remains of an imported lava quern were recovered (**Appendix 8**) This is probably from quarries at Mayern in Germany and is likely to date from the 1st century AD. The fragment of quern, being a single robust artefact, may be residual in Ditch1, but in the absence of other evidence the date of ditch 1 is suggested to be 1st century AD, a date that should be treated with caution and open to revision.

5.1.2 Ditch 2

Ditch 2 was located north of Ditch 1 and separated from it by a gap of approximately 6.2m. Four sondages D2/s1, D2/s2, D2-4/s3 and D2-5/s4 were cut across Ditch 2 (**Figure 4**), two of these extended across several of the ditches to investigate their relationships (**Figure 7**) while two investigated only Ditch 2 (**Figure 6**). A recut, D2a, was identified in three of the sections across Ditch 2, in the sondage, D2-4/s3, where no re-cut was identified, it appears likely that the re-cut was missed rather than being absent, or that the re-cut removed all of the fill or overcut the initial ditch. The initial cut D2 was generally more U-shaped, similar to 1023, while the re-cut D2a was generally more V shaped, similar to 1433 and 1435. In general the re-cut D2a was slightly off centre being nearer the northwest, fort side of the ditch (**Plate 5**). Ditch 2 was between 1.4 and 1.8m wide and survived to a depth of around 0.7m.

In sondage D2-4/s3 a narrow linear feature was identified on the exterior, south eastern, side cutting Ditch 2. This small linear 1426 appears too small to be re-cut D2a of Ditch 2. The absence of this linear feature from other sections suggests it may not have related to the fort ditches and the proximity of the *vicus* raises the possibility that it may have related to civilian activity.



Plate 5 Ditch 2 northeast facing section in sondage D2/s2

The fills of D2 and re-cut D2a were primarily a mix of clays and silty clays with occasional river pebbles. Within sections (D2-4/s3 and D2-5/s4), the fills of Ditch 2 appear to have accumulated through natural sedimentation. The picture was less clear in sections D2/s1 and D2/s2 where the presence of high concentrations of broken ceramics suggests that some intentional deposition or discard may have been involved. Such discard or intentional deposition may well relate to the inhabitants of the *vicus* rather than the fort, given the proximity of this ditch to the remains of the *vicus*. Finds from Ditch 2 were all recovered from the fills of the initial cut D2; none came from the re-cut D2a. Analysis of the ceramics recovered (**Appendix 3**) identified fine grey ware, fine orange oxidised ware, oxidised mortarium and Dressel 20 amphora sherds. All bar the Dressel 20 amphora date to the late 1st to early 2nd centuries AD, the Dressel 20 amphora could be mid 1st through to 3rd century AD. Overall a date between the late 1st to early 2nd centuries AD is proposed for D2 and its fills.

5.1.3 Ditch 3

Ditch 3 was investigated in sondages D2-4/s3 and D2-5/s4 (**Figures 4 and 7**); this ditch was similar to Ditch 1 being wide and relatively shallow. Only one cut was identified for Ditch 3, and this had a width of between 2.7 and 3.3m and a surviving depth of 0.25 to 0.5m in the two sondages excavated. In sondage D2-5/s4 the cut 1275/1282 for Ditch 3 was flat bottomed with steep sides, while the cut 1428 in sondage D2-4/s3 was more irregular with a mix of sloping and stepped sides and a narrower base. A section was also cut across Ditch 3 in Trench 5 where it was shallow with gently sloping sides.

The fills for Ditch 3 were generally a mix of orange grey sandy clays, with in sondage D2-5/s4 an upper deposit of cobbles and pebbles 1244 visible in the truncated surface of the ditch, that was absent in D2-4/s3. The cobbles were loose and did not appear to have been set in position. This deposit was similar to the rubble deposit 1264 in Ditch 1 even down to the same uncompacted condition. The loose nature would also lead to a similar negative conclusion

with regard to the potential for this deposit to be a foundation deposit. The limited extent of this deposit, only seen in one sondage, also suggests this deposit did not extend over the surviving length of the ditch and presumably was not related to the primary function of the feature.

A small cut 1279 was identified cutting through Ditch 3 in sondage D2-5/s4. This feature, which was near the centre of the ditch was only identified in section following excavation and may have been a small gully or post hole. In addition this cut was on the northwest edge of the cobble deposit 1244 and may have been related to it.

The different character of the fills seen in the two sondages cut through ditch 3 are indicative of a depositional sequence in this ditch that was varied along its length suggesting infilling probably involved a number of processes and events.

In sondage D2-5/4 Ditch 3 was cut by Ditch 2 while Ditch 3 was cut by Ditch 4b in the section of Trench 5. The pottery from Ditch 3 included sherds of roughcast and sandy grey ware that dated to the late 1st to early 2nd centuries AD and sherds of white ware and fine buffed oxidised ware from the mid 1st to 2nd centuries AD. The date of Ditch 3 is therefore late 1st to early 2nd century AD.

5.1.4 Ditch 4

Ditch 4, located northwest of Ditch 3, was examined in sondages D2-5/s4 and D2-4/S3 (**Figure 4 and 7**) and Trench 5 (**Figure 12**). Ditch 4 was a V-shaped ditch with two off centre re-cuts, one to the northwest, D4a, and one to the southeast, D4b. Truncation had left varying surviving widths and depths of Ditch 4 and its re-cuts, in general these survived for a width of over one meter and were under a meter deep. D4a and its relationship to D6a were investigated through a sondage at their intersection; this will be discussed below (**section 5.3.1**).

The earliest cut in the sequence of Ditch 4 was D4 a steep sided V-shaped ditch. Re-cut D4a, offset to the northwest, cut through D4 in sondages D2-5/s4 and D2-4/s3 but lay beyond the line of the initial cut D4 in the section of Trench 5. Re-cut D4a was similar in profile to D4 but somewhat shallower in depth. The re-cut to the southeast, D4b, cut through D4 in both sondages and the Trench 5 section.

The sequence of re-cuts is uncertain but evidence from Trench 5 and Sondage D2-4/3 suggests D4b may precede D4a. In Trench 5 there was a possible cut 543, the identification of this is uncertain, but this putative cut appears to have truncated Ditch 3, D4, and D4b but did not appear to cut D4a. This raises the possibility that D4a is later than both D4 and D4b, but leaves cut 543, a feature of unknown shape and extent that was only identified in the evaluation trench, as an enigmatic feature. In sondage D2-4/s3 there are three layers 1323, 1325 and 1326 that appeared to overlie both D4 and D4b, the truncation of the archaeological deposits did not enable this to be absolutely confirmed although it appears likely. The cut 1431 for D4a cuts through layers 1223 to 1226 and as such D4a postdates both D4 and D4b.

In sondage D2-5/s4 there was a small linear cut 1285 cutting the eastern side of D4b. This linear feature was identified as crossing the full width of the sondage but was not identified in any other sections across D4 and could not be identified in plan. This feature was U-shaped in section and survived to a depth of around 0.15m. Although apparently small, the extensive

truncation of archaeological deposits across the site means this feature may originally have been much more substantial, probably over 1m deep based on the estimated truncation of the site.

The fills of Ditch 4 and recut 4a were primarily a mix of blue-grey, brown and orange clays silty clays with occasional river pebbles. Within sondage D2-5/s4 the fills of Ditch 4 appear to have accumulated through natural sediment deposition. This would have included material derived from erosion of the ditch sides and potentially the former fort earthworks, although Mays (1922) identification of the width of the berms between the ditches and ramparts varying between 5ft (1.6m) and 50ft (15m) would suggest that erosion from the ramparts into the ditches would have had a limited contribution in some cases.

Sondage D2-4/s3 was targeted at a large black deposit identified following machining. This proved to be a deposit of dark blue-gray clay 1326 that contained numerous charcoal inclusions. Deposit 1326 was an upper fill of D4 and D4b, and overlay 1327 and 1430 respectively. 1326 had been cut by cut 1431 of D4a (see **Plate 10**). Deposit 1326 yielded concentrations of ceramic material, pottery and ceramic building material. The density of finds from this small area relative to the near lack of finds from most other sondages suggests these may be the result of intentional deposition or discard, possibly from the *vicus*.

With Trench 5 the cut 510 of Ditch 4a contained unusual fills 503, 514 and 541. Secondary fill (503) comprised predominantly burnt material with frequent inclusions of charcoal and sandstone rubble in a deposit that sloped down steeply from the north western, fort, side of the ditch. It is possible that this deposit relates to one of the destruction horizons that May (1922) identified.

All of the cuts of Ditch 4 contained fills that produced finds. These included fine grey wares, Black Burnished wares, fine buff oxidised wares, white wares, grog-tempered wares, oxidised moratorium and half a rusticated jar. Leary's analysis of this material (**Appendix 3**) suggests all of these deposits are probably 2nd century in origin, probably Hadrianic or possibly early Antonine in date.

5.1.5 Ditch 5

Ditch 5 was originally identified as present on both the south eastern and south western sides of the fort, based on the presence of a potential corner where the two sides met. This corner could not be properly investigated due to the presence of modern structures and disturbance. However, further investigation of Ditch 5 on both sides of the fort showed that there were significant differences in the ditches on either side and they are probably not the same ditch. Four cuts or re-cuts were assigned to Ditch 5, D5 and D5b were on the southeast side of the fort while D5a and D5c were on the southwest side of the fort. The descriptions and discussion of D5a and D5c will be included **section 5.2** on the south western fort ditches. D5b and its relationship to D6a and D6 were investigated through two sondages excavated at the intersections between D5 and D6a/D6, these will be discussed below (**section 5.3.1**).

The two cuts D5 and D5b on the south eastern side of the fort were the innermost fort ditches on this side. Sections were cut through D5 and D5b in two sondages, D5/s1 and D2-5/s4 and in Trench 5 (**Figures 4, 7, 8 and 12**). They all showed the initial cut D5 and the re-cut D5b as V-shaped ditches, in all cases the re-cut D5b was southeast of the original cut with a significant

overlap (**Plate 6**). D5b was re-cut through the full stratigraphic sequence of fills within D5 demonstrating that D5 was infilled up to at least the surviving levels before D5b was cut.

Numerous fills were recorded in each of the sections for ditches D5 and D5b. The fills of D5 and D5b were primarily a mix of blue-grey, brown and orange clays and silty clays with occasional river pebbles deposited through natural sediment deposition. The sections through D5 and D5a showed deposits accumulating down both sides of the ditches with the accumulations on the northwest side, the fort side, more substantial suggesting more material was derived from this side. These ditches were closest to the fort defensive ramparts and May (1922) identified the berm between the ramparts and the defensive ditches was only between 5ft (1.6m) and 10ft (3m) on this side of the fort. The fills of D5 and D5a could therefore have been derived from erosion of the ramparts.



Plate 6 Ditch 5b and ditch 5 in sondage D2-5/s4

The only datable finds from D5 and D5b were recovered from the initial evaluation trench, Trench 5 (**Appendix 3**). Two fills from D5 produced datable material. Fill 512 produced an assemblage of late 1st to early 2nd century material of Flavian-Trajanic date while 502 the layer above, produced mid 2nd century material probably of early Antonine date. This suggests D5 was Flavian-Trajanic in origin but carried on in use until the Antonine period. D5b, although undated by its contents, cut layer 502 of D5 and was in turn cut by D6b which is Hadrianic or possibly early Antonine; providing a probable early Antonine date for D5b.

5.2 The fort ditches on the south western side

Ditches 5 to 8 were located to the southwest of the fort. These ditches were all aligned northwest to southeast and survived as lengths varying up to 40m long. As with the ditches on the southeast side the ditches were often re-cut providing stratigraphic evidence of their sequence.

5.2.1 Ditch 5

As discussed above two cuts originally assigned to Ditch 5, D5a and D5c, were located on the southwest side of the fort and formed the innermost ditches on this side of the fort. There was

no stratigraphic relationship between these cuts. The line of these ditches was investigated in sondages D5a/s2 and D5c/s2 (**Figures 5 and 8**). Although the line of these ditches cut across Trench 4 from the evaluation these ditches were not identified in the trench.

Ditch 5b was to the east and survived as a small ditch 0.5m across and 0.3m deep, although the known truncation on the site suggests it was originally substantially bigger. The U-shaped base of the cut 1111 appeared slightly asymmetrical with a steeper south western side. This feature appears to be located under the earthworks of the rampart (**Figure 18**) and it may be that this was not a defensive ditch but part of the structure of the rampart construction. May's report (1922) identified the rampart element above D5a with his Fort II, which had a stone face, later robbed away, a rubble and clay core and a rampart walkway. Ditch D5a may have related to the foundations or robbed out foundations of the fort wall.

Approximately 1.0m southwest of D5a and parallel to it was D5c. This was a wide shallow ditch approximately 4.0m in width. The sides sloped very gently and its cut 1361 was difficult to identify.

The fills of D5a and D5c were primarily a mix of grey-brown and yellow-brown silty and sandy clays, but running down the centre of D5c was a deposit of angular sandstone rubble in a silty clay matrix 1360 (**Plate 7**). Deposit 1360 was narrow, only 0.5m wide and 0.25m deep, and only ran along the southernmost 11m of the ditch. At its northern end this deposit curved slightly to the west away from the centre line of the ditch. The structure of 1360 suggested it had been deliberately deposited. There was no sign of a cut associated with 1360 suggesting that the deposit 1356 located either side of 1360 may also have been deposited at the same time. There are a number of factors that suggest 1360 was a later addition to D5c; deposit 1360 did not run for the full length of D5c; 1360 was located part way up the sequence of fills within D5c and deposit 1360 was much narrower than the cut 1361 for D5c. The construction of this linear rubble feature 1360 therefore appears to have been a later adaption of D5c.



Plate 7 Ditch 5c eastern half of ditch with linear rubble fill 1360 sondage D5c/s2

Finds from both D5a and D5c (**Appendix 3**) dated to the late 1st to early 2nd century AD giving a Flavian-Trajanic date for these features.

5.2.2 Ditch 6

Ditch 6 was located approximately 10m southwest of, and parallel to, D5c. Ditch 6 was investigated through 4 sondages, D6/s1, D6/s2, D6/s3 and D6/s4 and a section in Trench 4 that cut across the line of the ditch (**Figures 5, 9 and 13**). The relationships between Ditch 6 and ditches D4a and D5b was investigated in three further sondages discussed below in section 5.3.1.

Ditch 6 comprised an original cut D6 and a re-cut D6a. At the northern end of the surviving length of Ditch 6, in sondages D6/s2 and D6/s3, D6 the original cut was steep sided with a rounded base with an overall appearance somewhere between a V and a U shape. In these sondages D6a had been re-cut entirely within D6 from the top of the surviving fills of D6 (**Plate 8**). The re-cut, 1439, of D6a was U-shaped in sondage D6/s2 and V-shaped, 1397, in sondage D6/s3. In trench 4 Ditch 6 was seen in both the north and south sections although the ditch profiles were different. In the south facing section the original cut, 413, of D6 was U-shaped with a flattened base, and two re-cuts 403 and 414 were identified above this, both with similar profiles to the original. The extra re-cut in this section means that it is not possible to identify if 403 or 414 relate to D6a and suggests there may have been a D6b. In the north facing section only one cut 427 was identified and in this case the profile was more V-shaped although again it had a flattened base. Adjacent to 427 was a second cut 426 that occurred in the edge of the trench. The relationship between 427 and 426 was unclear, partly due to the similarities of their fills, although 427 probably cut 426. Within the trench it was not possible to identify if this cut was from a linear feature or a pit, the absence of any evidence for this feature in any other Ditch 6 sondages suggests it was probably a discrete feature.



Plate 8 Ditch 6 northwest facing section, sondage D6/s3

Sondage D6/s1 that was located immediately south of Trench 4 contained two cuts both U-shaped in profile. A roughly circular feature 1021, approximately 1m in diameter, cut the northeast side of ditch 6 in sondage D6/s1. This feature was not well defined and was possibly the remains of a tree bowl. Further south near the corner of the fort defences Ditch 6 was less substantial with D6 and D6a narrower and shallower. In this area D6a also ran slightly off the line of D6 and terminated while D6 continued. It is not possible to say how much further D6 went as modern disturbance had destroyed its continuation. D6a ran slightly north east of the line of D6 and a sondage D6/s4 showed that the cut 1245 for D6 was U-shaped with a flattened base, in contrast the cut 1261 for D6a was V-shaped with a narrow step sided base.

The variation seen in the number of cuts and re-cuts of Ditch 6 seen in the different sondages are in part the consequence of a complex history of re-cutting and probably cleaning. The variation could also be due to some re-cuts not being seen during the excavation or re-cuts cutting beyond the original cut and effectively removing it.

The fills of Ditch 6 and re-cut 6a were primarily a mix of blue-grey, brown and yellow clays with occasional rounded pebbles; these deposits appeared to have accumulated through natural sediment deposition. In the north facing section of Ditch 6 in Trench 4 three of the fills 419, 420 and 423 contained frequent inclusions of charcoal suggesting the possibility that persistent burning activities were taking place in proximity to the ditch.

Datable ceramics were recovered from the fills of both D6 and D6a (**Appendix 3**). The material recovered dates the fills of D6 to the Flavian-Trajanic period and D6a to the Hadrianic or early Antonine period.

5.2.3 *Ditch 7*

Ditch 7 was located some 10m southwest of and parallel to Ditch 6. This was investigated in two sondages D7-8/s1 and D7/s2 (**Figures 5, 10 and 11**). This ditch comprised an initial V-shaped cut D7 and a V-shaped re-cut D7a (**Plate 9**). The re-cut was offset approximately 1.5m to the southwest from the original ditch line moving it further away from the fort. The re-cut, D7a, cut through the uppermost surviving deposit in D7 suggesting the later was filled up before the re-cut D7a was undertaken.

The fills of D7 and D7a were primarily a mix of blue-grey, brown and yellow clays with occasional river pebbles. There was no evidence of backfilling and the deposits in D7 and D7a appear to have accumulated through natural deposition.

Only one sherd of pottery was recovered from 1123 an upper fill D7a and none from D7. This single sherd is probably second century in date suggesting D7a is possibly Hadrianic or Antonine, given the presence of only one sherd in the upper fill the dating should be considered as tentative.



Plate 9 Ditch 7 southeast facing section, sondage D7-8/s1

West of Ditch 7, between it and Ditch 8, were two further cut features, one 1195 was a linear feature that crossed sondage D7-8/s1 parallel with ditches 7 and 8 and appeared to be a further ditch, although this only extended around 1m further north from the sondage. Modern disturbance excluded the possibility of tracing it further south and it is therefore possible that it was an elongated pit. The cut 1195 was irregular in profile had a steeper south western side compared to the north eastern side and had a flat base that sloped down gently to the south west. The second feature was 1234, this was either the U-shaped terminal of a ditch that ended half way across the sondage or a pit. Feature 1234 could not be traced further south due to modern disturbance. Feature 1195 was cut by 1234 which was in turn cut by Ditch 8a. The fills of 1195 produced ceramics that dated to the 1st or early 2nd centuries AD providing a Flavian-Trajanic date for this feature (**Appendix 3**).

5.2.4 Ditch 8

Ditch 8 had the most complex history of re-cutting seen in any of the ditches around the fort (**Plate 10**). At least 5 re-cuts were identified with not all the re-cuts were seen in all of the sections in the two sondages cut through Ditch 8, D7-8/s1 and D8/s2 (**Figures 5, 10 and 11**). Additionally it is not possible to be certain that the re-cuts seen in one section were the same as those seen in other sections, although there is a consistency to the sequence of re-cuts that suggests the correlations made are likely to be correct.

The earliest ditch cuts are D8 and D8e, both cuts were identified in both of the sections of sondage D8/s2 but only D8 was identified in D7-8/s1. D8 was located centrally within the complex of cuts and re-cuts, was V-shaped and the deepest cut in most sections. D8e was located southwest of D8, had a shallower U-shaped profile and was separated from D8 by D8b, which obscured the relationship between D8 and D8e.



Plate 10 Ditch 8 sondage 2 southeast facing section

Re-cut D8d was only seen in the southeast facing section of sondage D8/s2. The limited surviving extent of this V-shaped re-cut appeared to indicate that it was entirely within D8 and represented a partial cleaning out of D8.

Southwest of D8 and cutting through it, D8e and D8d was D8b, this V-shaped cut was similar in size to D8 but offset from its central line by approximately 0.6m. Northeast of D8 and offset by around 0.7m from its central line was D8a a U-shaped ditch. This cut through D8 but did not intersect with D8b so the chronological relationship of D8a and D8b is unknown.

The final recut in the sequence appears to have been D8c a shallow U-shaped cut that cut through D8b. The shallow sloping sides of D8c, if continued to the former ground surface, would have produced a very wide ditch. It is possible that the slope on the ditch sides could have been steeper higher up making the potential width of the ditch narrower.

The cuts and re-cuts of Ditch 8 fall into two groups the V-shaped cuts such as D8, D8b and D8d or the U-shaped cuts such as D8a and D8c. The limited survival of D8e makes identification of its form impossible. Stratigraphically the V-shaped cuts are central within Ditch 8 while the shallower U-shaped cuts are somewhat less centrally located. In addition the U-shaped D8c is late in the sequence of re-cuts; in contrast the V-shaped D8, D8b and D8d are generally earlier in the sequence. It is impossible to be certain where D8a fits into the stratigraphic sequence.

The fills of the Ditch 8 cut and re-cuts were primarily a mix of blue-grey, brown and yellow clays. These appear to have accumulated through natural depositional processes rather than deliberate backfilling. Finds were recovered solely from the fills of D8 and D8a. Samian from fill 1136 of D8 dates to 70-120 AD Flavian-Trajanic while pottery from 1162 and 1164 provides a Hadrianic or Antonine date.

5.3 Phasing and chronology of the ditches

5.3.1 Relating the south eastern and south western ditches stratigraphically

The corner between the south eastern and south western ditches had largely been lost to modern truncation but a few ditch intersections did remain and these were investigated

(**Figure 14**). In all cases these intersections were heavily truncated, often surviving for less than 0.5m depth, which limited the potential to consider the stratigraphic and interpretative significance of shallower recuts lost to truncation. The investigated intersections at the southern corner of the fort related to ditches D4a and D5b from the southeast side of the fort and D6 and D6a on the southwest side of the fort. In describing these intersections it should be noted that all of the intersections examined involved one ditch cutting another. In no cases did ditches appear to continue around the corner as a single cut. In the cases examined it would therefore appear that the ditches in the intersections examined were not contemporary although some of the cuts could be cleaning events. This is suggested by ditches that terminate at the some point rather than crossing each other. As noted above the heavily truncated nature of the ditches in this area meant that significant information regarding the interpretation of these intersections was probably missing. Sections were cut through the intersections of D6a/5b, D6a/D4a and D6/D5b (**Figure 15**). In addition few datable finds were recovered from the limited surviving remains of the ditch intersections.

Following stripping it was clear that ditch D6a, on the southwest side of the fort cut three ditches on the southeast side. D6a cut both D5 and D5b, the earlier and later cuts of Ditch 5. In both cases limited remains survived truncation and at the intersection of, D6a and D5b, only 0.25m depth of ditch survived (**Plate 11**). Both D6a and D5b only extended for short distances beyond the intersection. Approximately 1m southeast from the intersection of D6a and D5b, the terminus of D6a intersected the probable terminus of D4a. Unfortunately, the depth of both ditches at this point was less than 0.10m (**Plate 12**) although the section showed that D6a cut D4a. No finds were recovered from either ditch at the intersection. Given that less than c.0.75m length of the probable D4a cut was exposed, it is not possible to be certain regarding its identification at this terminus. The stratigraphic relationships in these intersections suggests that D6a post dates all of the other ditches but as D6a and D4a both terminate at the same point they would appear to be part of the same ditch around the fort and would have been in contemporary use. Dated pottery from other sondages suggests that this was the case with both ditches containing Hadrianic-Antonine pottery. D5b is also of the same date. As D6a and D4a terminate at the same point and D5b barely extends beyond D6a it is possible that these ditches relate to the same fort phase and the cut for D6a represents the latest cleaning event within these ditches. D5 is earlier in date, Flavian-Trajanic, and is clearly cut by the later D6a.

D6 also intersected D5b, although the intersection of D6 and D5b was at the shallow terminus of D5b, c.0.05m deep, and yielded questionable results. A sondage excavated at the point of intersection suggested that cut 1405 of D6 may have cut through D5b but given the limited depth of surviving deposits and difficulty in identifying the exact edge of the cuts it would probably be safer to say that D5b terminated at D6 and their stratigraphic sequence is unconfirmed. Pottery from the fills of these two ditches in other sondages show that D6 is earlier, Flavian-Trajanic in date, and D5b is later, Hadrianic-Antonine.

The terminal of D6 was not identified, as D6 extended to the southeast beyond the excavated area, and so beyond the terminus of D6a.



Plate 11 Intersection of ditches 6a and 5b



Plate 12 Intersection of ditches 6a and 4a

5.3.2 *Dating the ditches*

The evidence for dating the ditches comes from the finds recovered from their fills, primarily the ceramics. The analysis of the general ceramics is provided in **Appendix 3** (Leary) and Samian in **Appendix 4** (Monteil). Of these the most important for dating purposes are the general ceramics; this is due to the quantities recovered. The dates from the Samian back up the dates of the general ceramic. The analysis of both the general ceramics and Samian identified there were two phases of ditches; Phase 1 - Favian-Trajanic phase and phase 2 - Hadrianic-Antonine phase. Some of the pottery forms and fabrics recovered do continue into the 3rd century but all could be 2nd century. There are no deposits that contain pottery of exclusively 3rd century date. In addition the *vicus* material also covers the same period. **Table 1** shows a matrix of the dating of the ditches around the fort.



Plate 13 Remains of wall 1336 facing south west

Examination of the section through wall 1336 showed that it was a substantial clay-packed, randomly coursed sandstone wall c.0.80m wide. Deposits built up against both the northwest and southeast faces comprised thin layers of heavily compacted brown and grey clays that sloped away from the faces of wall 1336 (**Plate 14**). The compaction and layering of these deposits indicate that these were most likely built up during a period(s) of occupation and not residual deposits spread into areas of fill during early 20th-century ground-levelling.

The deposits on either side of wall 1336 contained high concentrations of pottery and the only glass fragments recovered from the excavation. Hundreds of sherds of pottery were collected from seven deposits and included sherds of white wares, fine grey wares, gritty grey wares, Black Burnished wares, sandy orange wares, Dressel 20 amphorae, Gauloise amphorae, mortaria, and roughcast wares with spot dates for the vast majority falling between the late 1st and early 2nd century AD. 5.4m southeast of wall 1336 and parallel to it was a second possible wall 1391; this was more disturbed and consisted of irregular sandstone rubble spread over a width of up to 1.2m. Excavation of this feature was limited as it lay on the boundary of excavation and preservation *in situ*. The size, location and orientation of these two walls suggest they were parts of a building or buildings that were located on the frontage of the road that ran from the south eastern gateway to the fort; walls 1336 and 1391 being perpendicular to the road.



Plate 14 Compacted occupation layers north of wall 1336

North of wall 1336 and heavily truncated by modern brick walls, the surviving remains of surface 1390 comprised roughly hewn sub-rectangular red sandstone blocks packed with clay. The surviving remains of this surface were near oval in plan, and exhibited signs of heat damage. The stones were discoloured and cracked and the clay reddened and burnt (**Plate 15**). Many of the stones were cracked with adjoining fragments still together in the surface demonstrating that the stones were burnt *in situ* and that the surface had not been made from stones burnt elsewhere.

A number deposits in and around wall 1336 produced datable ceramics. The wall could not be accurately dated but did produce Romano British pottery, the deposits that built up either side of it date from lower deposits such as 1343 that date to the late 1st/early 2nd century AD through to 1337 which is early to mid 2nd century. These *vicus* deposits therefore show the same range of dates as the ditch fills. In addition two sherds from 1390 suggest an Antonine date for this feature (**Appendix 3**)



Plate 15 Stone surface 1390 showing evidence of burning

5.4.2 *Vicus remains from the trial trenches*

Roman remains related to the vicus were identified in two of the trial trenches, 1 and 6, away from Area 1. These remains were not subject to further investigation as they were at sufficient depth to be preserved *in situ*.

Trench 1 lay to the north of the rolling mill in an area where extensive deposition of made ground had taken place. Two linear features and a pit were identified at a depth of approximately 2m below the modern ground surface. The two linear cut features 106 and 124 were located in the centre of the trench cut into the natural yellow clay 108. Feature 106 was aligned northeast-southwest and crossed the full width of the trench while feature 124 was aligned southeast-northwest and terminated halfway across the trench leaving a gap of approximately 0.5m between it and 106. Although there was no direct stratigraphic relationship between the two features their proximity and similarity suggests they may be related to each other. Feature 106 was approximately 0.50m wide with a maximum depth of 0.20m while feature 124 was 0.30m wide but only survived to a depth of 0.06m. The surviving shallowness and depth at which these features were buried suggest they have been heavily truncated and it is possible that they were originally much more substantial. It is likely that these features were either ditches or gulleys originally. Both of these features produced Roman ceramics in small quantities. The upper fill 107 of linear 106 produced two abraded sherds of pottery and fill 125 of linear 124 produced a single sherd of pottery. The pottery from 107 is probably late 1st or early 2nd century AD and the sherd from 125 is of potential 2nd century AD date.

The third feature in Trench1 was a large pit 110 at the southern end of the trench. The pit extended beyond the bounds of the trench; its full size and shape are therefore unknown. In

plan pit 110 appeared to represent three sides of a roughly square pit approximately 0.75m across. The sides of the pit were near vertical and the pit was excavated to a depth of approximately 1.00m. The fills were generally soft and wet at the time of excavation and consisted of a series of clays and silty clay, one of which, red brown silt clay 126, contained lumps of burnt clay. The uppermost surviving fill 111 contained several fragments of Roman brick and 2 sherds of Romano-British pottery which could date from the mid 1st-3rd century AD. While further down the sequence a third sherd of Roman pottery was recovered. The base fill 126 of pit 110 produced a few small fragments of square cut wood.

Trench 1 was located in a large structure, possibly a building or a courtyard identified on May's (1922) site plan as just outside the eastern corner of the fort. Linear 106 and 124 are approximately aligned with the outline of this structure and may have related to it in some way, possibly as internal features of the structure.

The identification of Roman features and deposits in Trench 6 was not clear. There were some deposits that contained Roman finds but these could be related to the levelling activities undertaken during the steelworks construction. There were, however, three small Roman features - pits 620 and 614 and a post hole 627.

Located at the northern end of Trench 6 was a circular pit 620, 1.10m in diameter and 0.63m deep. The rounded concave base of the pit contained a primary fill of charcoal-rich dark grey-black silt 658. Over this was 621 similar to 658 although more clay rich and charcoal poor.

Deposit 621 contained 22 sherds of pottery most of which were dated to the late 1st to early 2nd century AD except a single sherd of a Samian bowl which may date to the 2nd century AD, overall it is likely that this context is late 1st century.

Post hole 627 was located west of pit [620], and measured 0.40m in diameter and 0.60m in depth. The post hole contained a primary fill (630) in its base with a packing deposit (628) on its eastern side and a post-pipe (629) on its western side. The initial fill (630) contained two sherds of pottery, which suggested a date from the late 1st or early 2nd century AD.

Neither of these features appeared to have been truncated which would mean all the layers they cut through were Roman or earlier although only one, 617, of a number of deposits cut by post hole 627 contained any datable material, Roman ceramics and one fragment of glass. In addition a number of made ground or dump deposits 615, 616 and 618 overlying 627 could also be Roman in date.

A small pit 614 was identified in the south facing section of Trench 6. This did not produce dating material but it was sealed by 611 a thin horizontal layer possibly a former surface and this was in turn cut by 620. This would make 614 Roman in date despite the absence of datable material from within it. There were a number of other deposits in Trench 6 that were possible Roman inhabitation layers or dump deposits, 601, 605, 637, 644, 648, 649, 650, 651 and 652, although this is not certain.

5.4.3 *Vicus remains identified in the watching brief*

Following on from the mitigation in Area 1, an archaeological presence was maintained on site to monitor the groundworks for the installation of drainage systems in the areas of principal archaeological significance. The watching brief carried out on the drainage systems confirmed

the presence of heavily truncated defensive ditches and increasing depth of made ground to the north and east of the mitigation area.

6 DISCUSSION

6.1 The fort defences

As previously noted two types of ditches had been identified outside the fort: the V- or U-shaped ditches typical of Roman forts (Jones 1975) and wider ditches with pebble fills. The later are somewhat enigmatic in function but do appear to relate to phase 1 of the fort and show no evidence of recutting in contrast to the defensive ditches. Of these wide flat ditches, there were two on the southeast side of the fort and one on the southwest side, suggesting that at least one of these ditches on the southeast side of the fort does not relate to a corresponding ditch on the south west side and may in fact relate to the *vicus* not the fort. If this is so, ditch 1 is the most likely candidate based on its proximity to the *vicus*. The other two wider ditches, 3 and 5c, are solidly within the complex of defensive ditches and if they are related could form a single feature around the fort dating to phase 1. Their function is unclear as it appears that 5c either cuts or was cut by ditch 5 suggesting the two features could not be in use at the same time, despite both belonging to phase 1. One possibility is that the wide ditches, 3 and 5c were related to the construction of the fort in some way but only open for a short time. This explanation is not entirely convincing and is based more on conjecture than evidence.

There were three lines of defensive ditches on either side of the fort that were investigated. To the southeast were ditches 2, 4 and 5 while to the south west were ditches 6, 7 and 8 (**Figure 17**). All of these ditches had re-cuts, demonstrating the effort put into their maintenance. Most of the identified re-cuts were offset from the line of the original ditch although there were a few entirely within the original cut. The re-cuts were probably undertaken for one of two reasons - either to clean an existing functioning ditch or to cut a new ditch when the fort was rebuilt in phase 2 after being abandoned. The profiles of the ditches have been described as V- or U-shaped. The differentiation is somewhat arbitrary as some ditches showed both profiles in different sections while in others the profile was more a blend between the two. The irregular profiles and flattened bases seen in some cases, giving a more U-shaped profile, may have been the result of ditch cleaning, although no cleaning channels, as seen on other sites (Jones 1975), have been identified. For many of the ditches there was more than one cut or re-cut associated with a phase of the fort.

The phasing of the defensive ditches identifies that some were only used in one phase while others were used in both of the fort phases identified. To the south east, ditch 2 was only used in phase 1 and ditch 4 was only used in phase 2; while ditch 5 was in use in phases 1 and 2. On the south west side ditches 6 and 8 were used in both phases while ditch 7 was only dated to phase 2, it should be noted that the earliest cut for ditch 7 was not dated. If these dates are correct there were two defensive ditches on the south east side of the fort in both phases and 2 for phase 1 on the southwest side but three for phase 2.

Considering the layout of the ditches a pattern does emerge regarding the three defensive ditches identified on each side of the fort. On both the south eastern and south western sides, the inner defensive ditch lines closest to the fort, ditches 5 and 6 were both used in phases 1

and 2, and in both cases two cuts were identified for each ditch. In the case of the middle line of defensive ditches, ditches 4 and 7, both were dated to phase 2 but ditch 4 had 3 cuts in total while ditch 7 only had 2. The outer defensive ditch line, ditches 2 and 8, was less consistent, ditch 2 only had 2 cuts and was dated to phase 1 while ditch 8 had 6 cuts and was in use during both phases 1 and 2. Variation in the number of defensive ditches on the different sides of a fort is not unusual with additional ditches being added to the weaker sides of the fort (Jones 1975), but it should always be borne in mind that Templeborough is heavily truncated and it is possible that some shallower recuts have been lost. This could explain the absence of phase 2 ditches along ditch line 2.

6.2 Relating the current excavations to May's excavations

Comparison of the results of the latest excavations at Templeborough with May's excavations during the First World War shows some major differences (**Figure 18**). Based on his work May (1922) identified three forts, primarily based on the evidence of the ramparts, these started with the largest fort and reduced in size with time. In contrast the current work, based only on the ditches and the ceramics recovered from them, suggests there were only two phases to the fort. As Mays Fort III was always something of an enigma, lacking internal structures and finds it may be that Fort III, defined from the rampart remains, did not exist but was a rebuild of Fort II.

Additionally there is no evidence from the current excavation that the fort changed significantly in size between phase 1 and phase 2, but the heavy truncation and absence of the ramparts limits our ability to re-assess some May's assertions.

May also identifies only one active ditch for each of his three forts, but it is quite clear that multiple ditches with re-cuts were present for each of the two fort phases identified. May's (1922) description and drawings of the ditches show single wide V-shaped ditches, whereas the defensive ditches identified in the current work are narrow V-shaped ditches. Examination of Mays sections show irregular sides to his ditches and it may be that with his ditches the multiple re-cuts seen in ditches like ditch 8 may not have been recognised. His ditches are in effect cumulative ditches comprising several re-cuts into one feature.

For the ramparts and fort interior the total absence of surviving remains from the current excavation means that there is no new evidence which can be compared to May's data and interpretation. However, May identified two main phases of buildings within the fort which he related to his Forts 1 and 2 which could equate to phases 1 and 2 of the current study.

7 CONCLUSIONS

Templeborough was the site of a former Roman fort and *vicus*. The excavations have demonstrated that remains of the fort and *vicus* survived the construction of the Templeborough Steelworks during the First World War, but that the remains were localised to some areas and severely truncated.

The remains of the Roman fort are very limited as the truncation of the archaeology has been particularly damaging over the fort and the only remains identified were limited to the southern corner. The fort remains are restricted to the bases of the deepest cut features which are the ditches around the fort. The fort ditches proved to be much more complex and extensive than had previously been identified. There were more ditches and even in their

truncated state aspects of the history of maintenance and recutting of the ditches were identified. Ditches were identified on the southeast and southwest sides of the fort. The ditches occurred as two types, relatively narrow V- or U-shaped ditches typical of fort defensive ditches, and wide flat bottomed and generally shallower ditches. The typical defensive ditches all showed re-cutting which, with two exceptions, were offset from the centre line of the original cut. The re-cuts and the dates obtained for them suggest that within the two main phases of the fort the ditches were maintained, cleaned or re-cut regularly.

Within the area under investigation *vicus* remains were only identified east of the fort although previous work suggests the *vicus* originally lay to the west as well. The natural ground surface originally dropped away towards the east and preservation of structures and deposits within this area was much better. A scheme of preservation *in situ* was undertaken in the *vicus* east of the fort to conserve the remains. The *vicus* remains identified within the evaluation trenches and excavation were limited: two walls, a stone surface, possible former ground or floor surfaces built up against one of the walls, and some pits and small ditches or gullies were revealed. The features confirmed that deposits associated with the *vicus* survive. The limited number of *vicus* deposits investigated and their sparse distribution across several of the evaluation trenches does not add significantly to our understanding of the *vicus*.

The analysis of the artefacts, primarily ceramics, recovered from the excavations demonstrated that there were two main phases of activity associated with the fort. The first phase was a Flavian Trajanic phase and the second was a Hadrianic Antonine phase. Pottery was recovered from all of these periods and analysis of the quantities of Samian recovered (**Appendix 4 figure 1**) shows that there were two peaks in the consumption of Samian ware. This was seen in both the current and May's (1922) excavations. The pottery from May's excavations suggests the fort may have originated at an earlier date as Neronian samian was also recovered. No definite evidence was recovered for the destruction of the fort and rebuild identified by May but the two peaks seen in the graph of Samian dates does suggest that the fort fell out of use for a period. The evidence from the current excavations is not incompatible with May's suggestion that the original fort was abandoned and destroyed before being rebuilt. May also identified a third fort phase probably in the 3rd century AD but no evidence was found for this in the current excavations. No definitely 3rd century ceramics were identified and the majority of the surviving ditches, with the exception of the Ditch 8 complex, did not contain un-dated later re-cuts. The extensive truncation does leave the possibility that a later phase with shallower ditches has been lost. The absence of 3rd century ceramics anywhere from the excavations does not favour this scenario. May also said that he could not identify any buildings associated with the third fort and this has always made it somewhat enigmatic (Buckland 1986). In light of the evidence from the latest excavation it may well be that the third phase fort did not exist and the changes May identified in the ramparts were a rebuild within Phase 2 and not a later fort.

Despite the limitations of the current excavations, in particular the extremely heavy truncation of the fort, the work undertaken has enable a reassessment of the excavations undertaken by May (1922) including a comprehensive reinterpretation of the development, layout and dating of Templeborough Roman Fort.

8 BIBLIOGRAPHY

Armitage, E.S. 1897. *A key to English Antiquities: with special reference to the Sheffield and Rotherham District*. Sheffield, William Townsend.

Aveling, J.H. 1870. *History of Roche Abbey from its foundation to its dissolution*. Robert White, Worksop.

Buckland, P.C. 1986. *Roman South Yorkshire: A Source Book*. Department of Archaeology and Prehistory, University of Sheffield.

Chan, B. 2006 *Archaeological Evaluation at Templeborough Rolling Mill, near Rotherham, South Yorkshire*. ARCUS unpublished report 1023(2).

Davies, G. 1999, *Archaeological Trial Trenching at Templeborough Steel Works Rotherham*. ARCUS Report, 444c.1

Greene, D. 1957. "The Roman roads in the Don Valley". *Transactions of the Hunter Archaeological Society*. Vol. 7 pp.281-94.

Greene, D. 1958. "Roman Yorkshire. Templeborough, near Rotherham". *Yorkshire Archaeological Journal*. Vol. 39 pp.337.

Hunter, J. 1831. *South Yorkshire - The history and Topography of the Deanery of Doncaster in the Diocese and County of York*. Volume 2. London, J.B Nicholes and Son.

IFA (Institute of Field Archaeologists). 1997. *Code of Conduct*.

IFA (Institute of Field Archaeologists). 1999a. *Standard and Guidance for an archaeological excavation*.

Jones, M.J. 1975. *Roman Fort-Defences to A.D. 117 with special reference to Britain*. British Archaeological Reports No.21, Oxford.

Gibson, W. 1695. *Camdens Britannia* Updated English Translation. London.

Leader, J.D. 1877. *Explorations on the site of the Roman station called Templeborough near Rotherham, October to December 1877*. Paper read to the Rotherham Literary and Scientific Society December 1877.

Leader, J.D. 1878a "Roman Rotherham" in Guest, J. *Historical Notices of Rotherham*. Worksop, Robert White.

Leader, J.D. 1878b . "The Roman Station called Templeborough" *Journal of the British Archaeological Association* No 33, pp.503-510.

May, T. 1922. *The Roman Forts of Templeborough near Rotherham*. The County Borough of Rotherham, Rotherham.

McCoy, M. 2008. *Archaeological Mitigation at Templeborough Rolling Mill, near Rotherham, South Yorkshire*. ARCUS unpublished report 1023b(2).

NAA. 2004. *Templeborough Gateway Archaeological Monitoring Report and Site Assessment*. NAA unpublished report 04/59.

Wagner, P. 1998, *Archaeological desk-based assessment at Templeborough Steelworks Rotherham*. ARCUS Report 444.1.

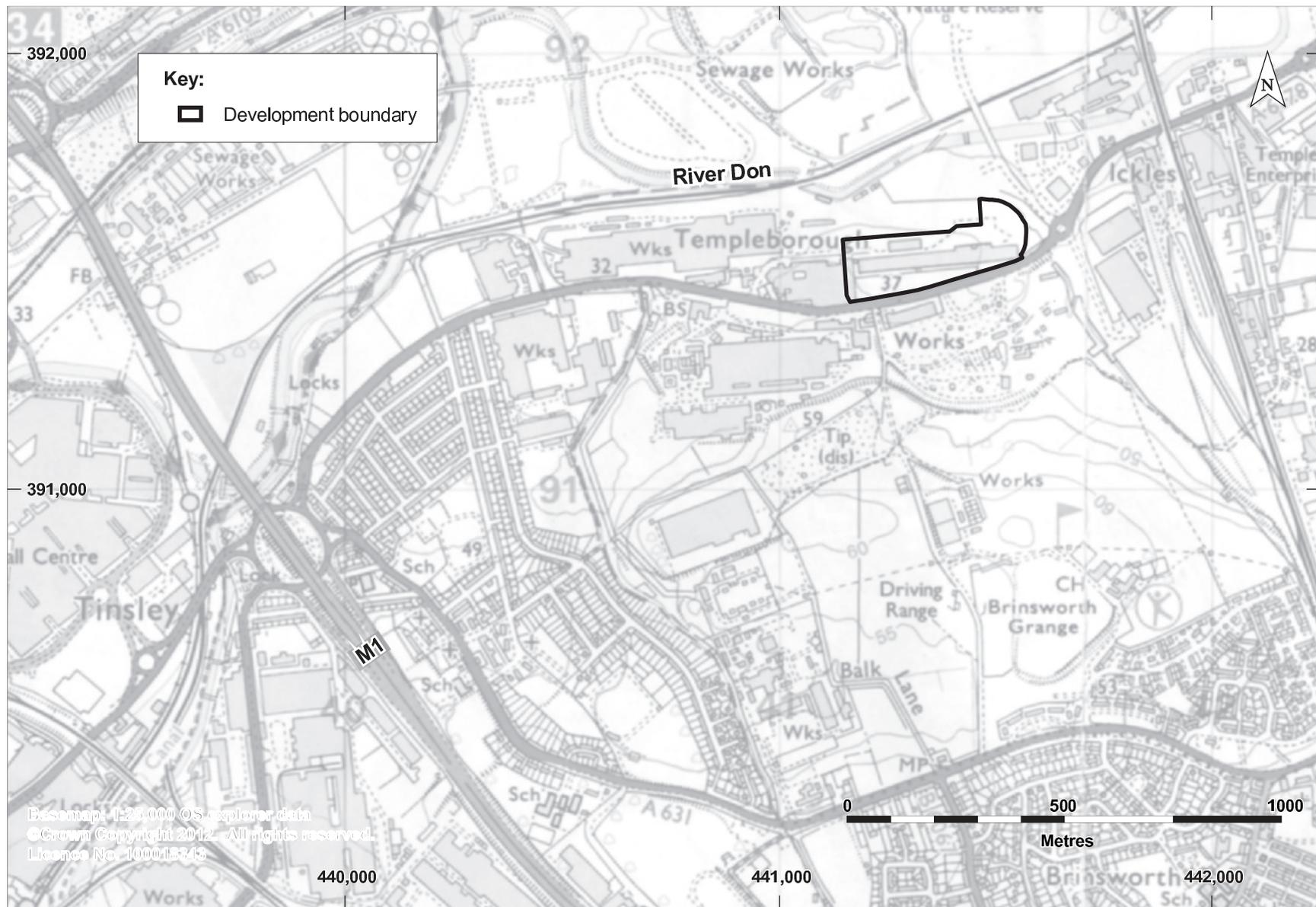
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Post excavation analysis was undertaken by R. Leary, G. Monteil, K. Hartley, J. McComish, N. Rodgers, R. Cubitt, L. Wright, E. Simmons and H. Wilmott.

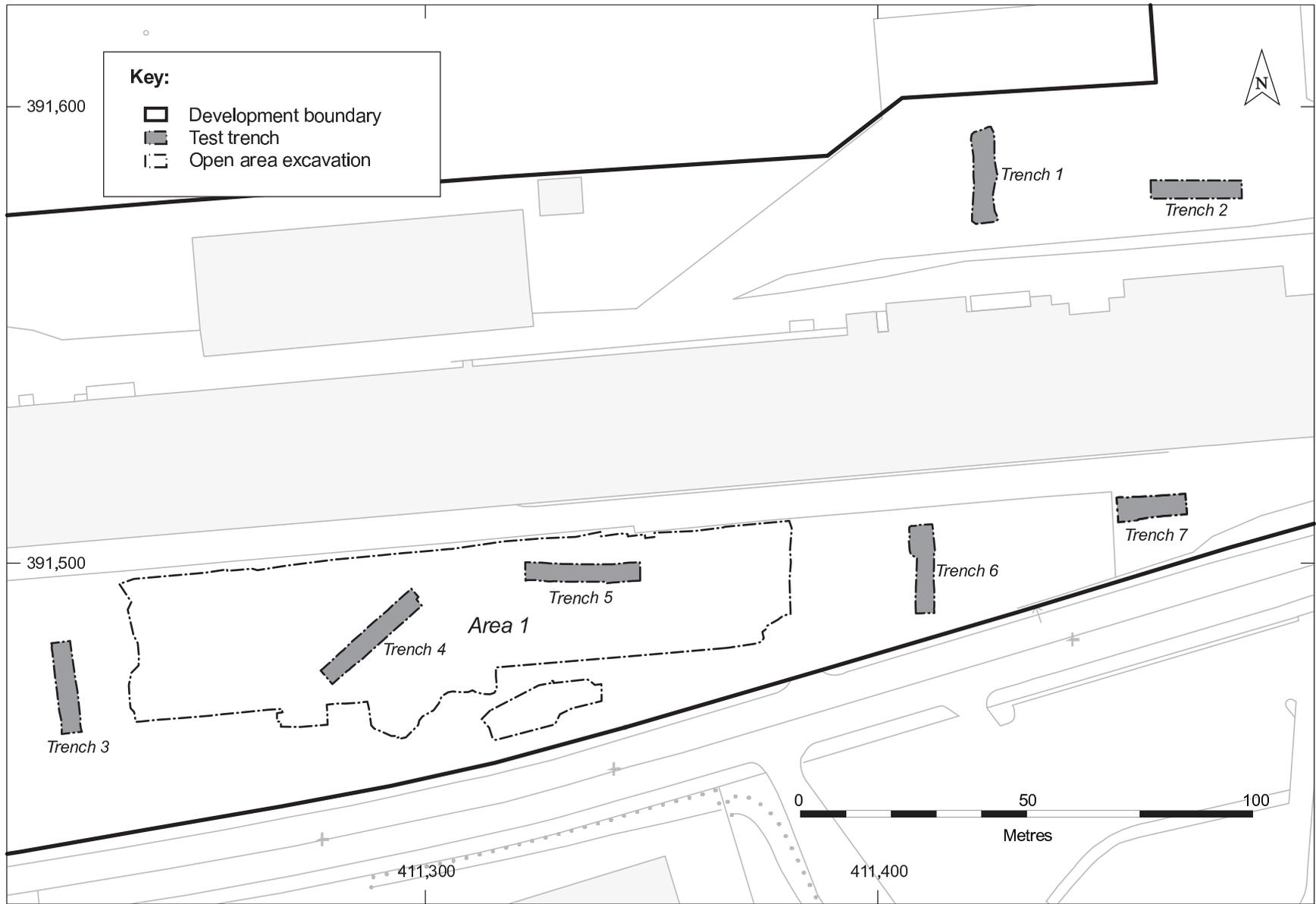
10 FIGURES



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Figure 1: Site location



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Figure 2: Site plan showing evaluation trial trenches and mitigation excavation area

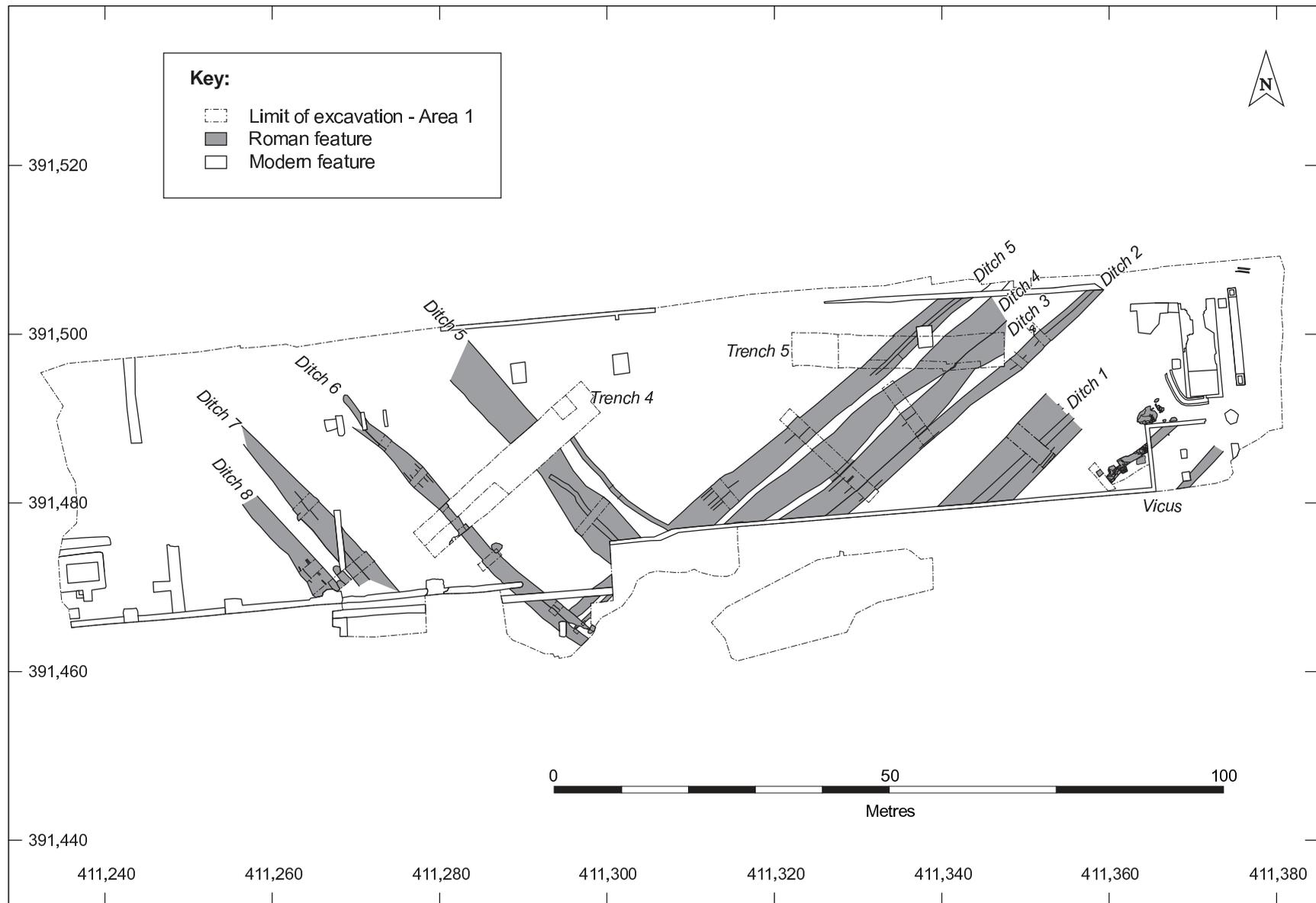


Figure 3: Roman and Modern Features

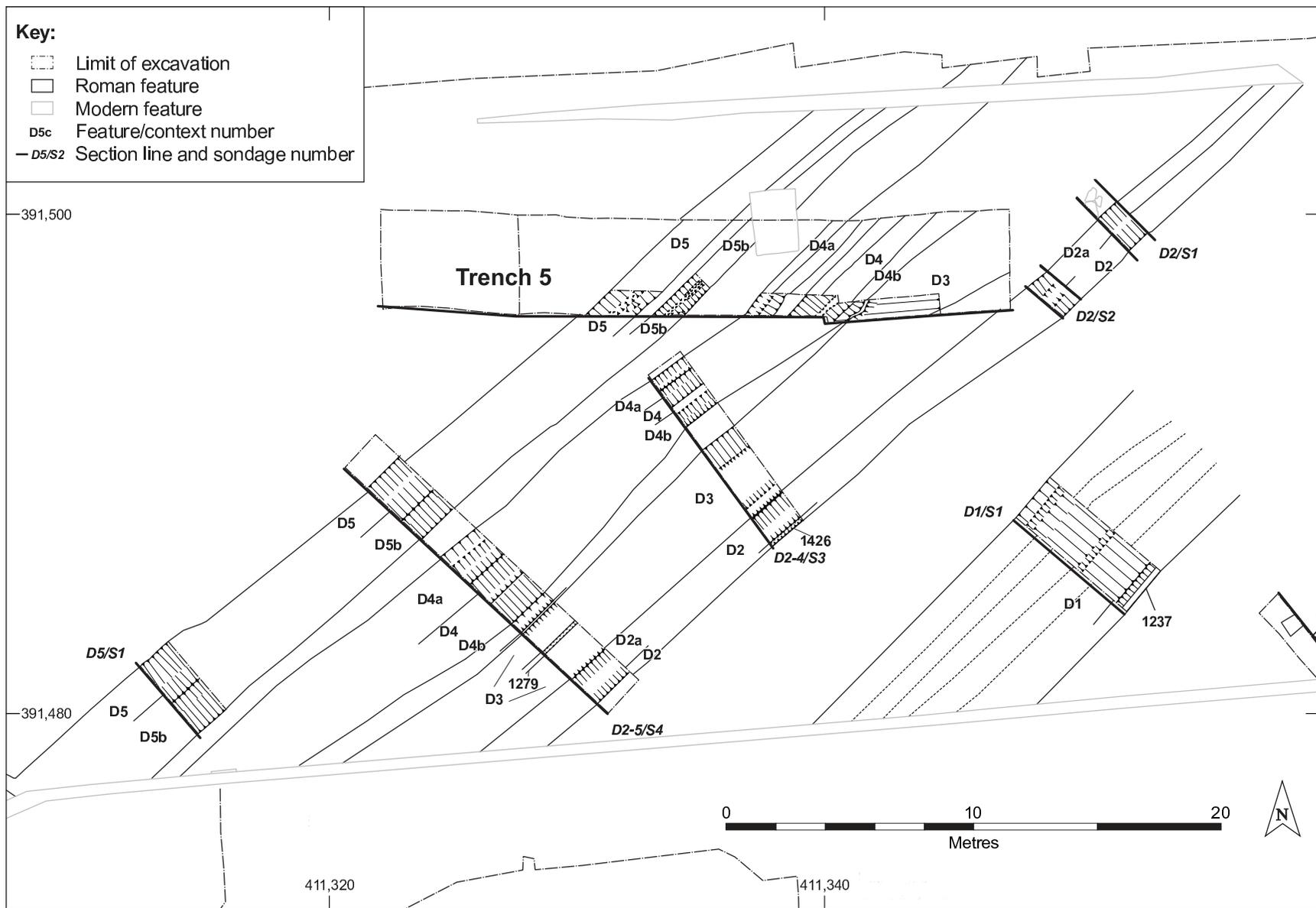


Figure 4: Roman ditches on the south eastern side

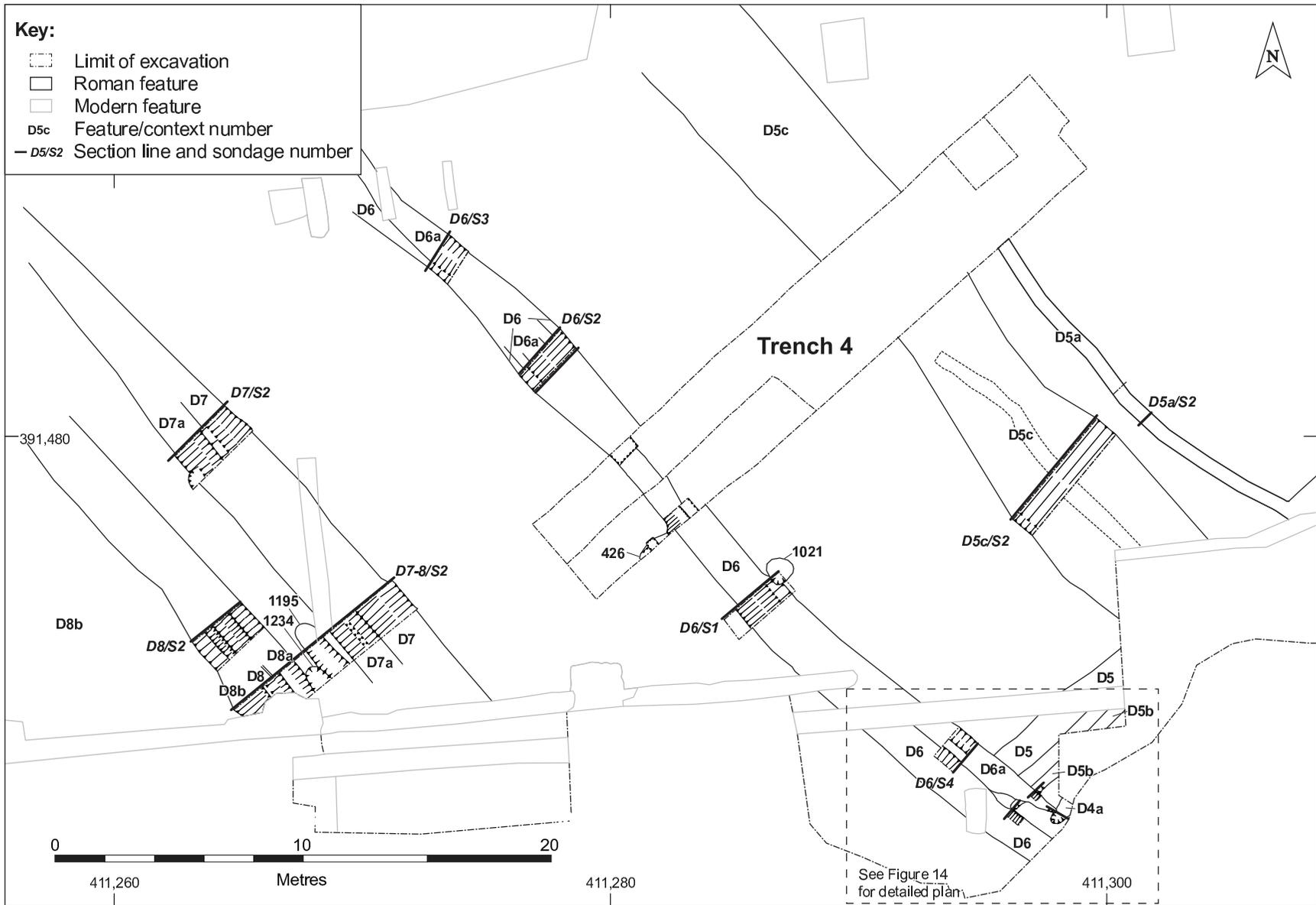
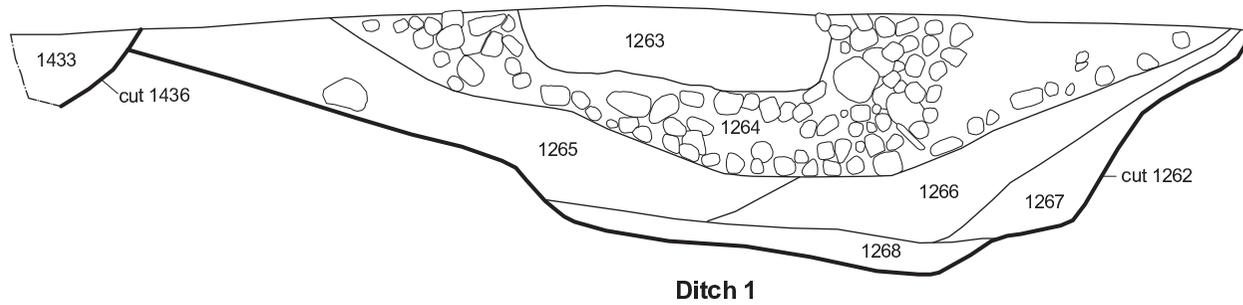
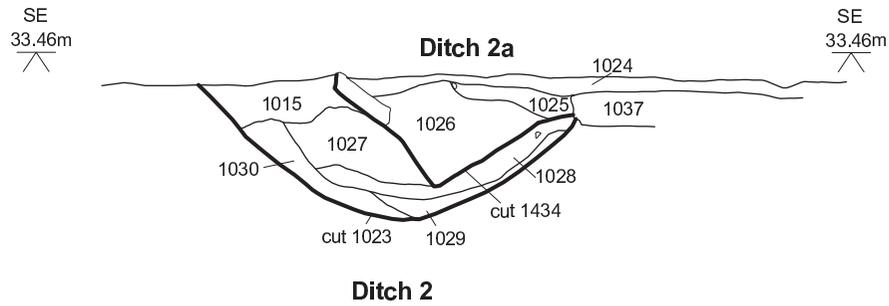


Figure 5: Roman ditches on the south western side

North-east facing section of ditch 1 sondage D1/s1



North-east facing section of ditch 2 sondage D2/s1



North-east facing section of ditch 2 sondage D2/s2

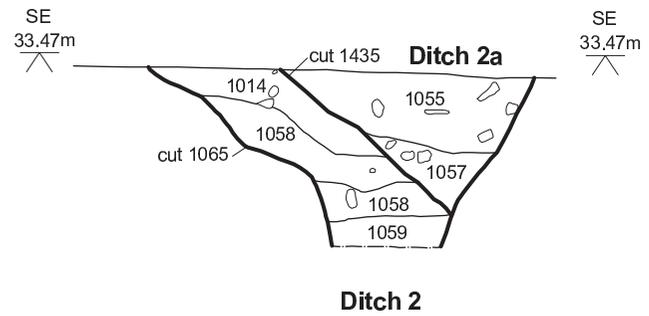


Figure 6: Ditches 1 and 2 sections

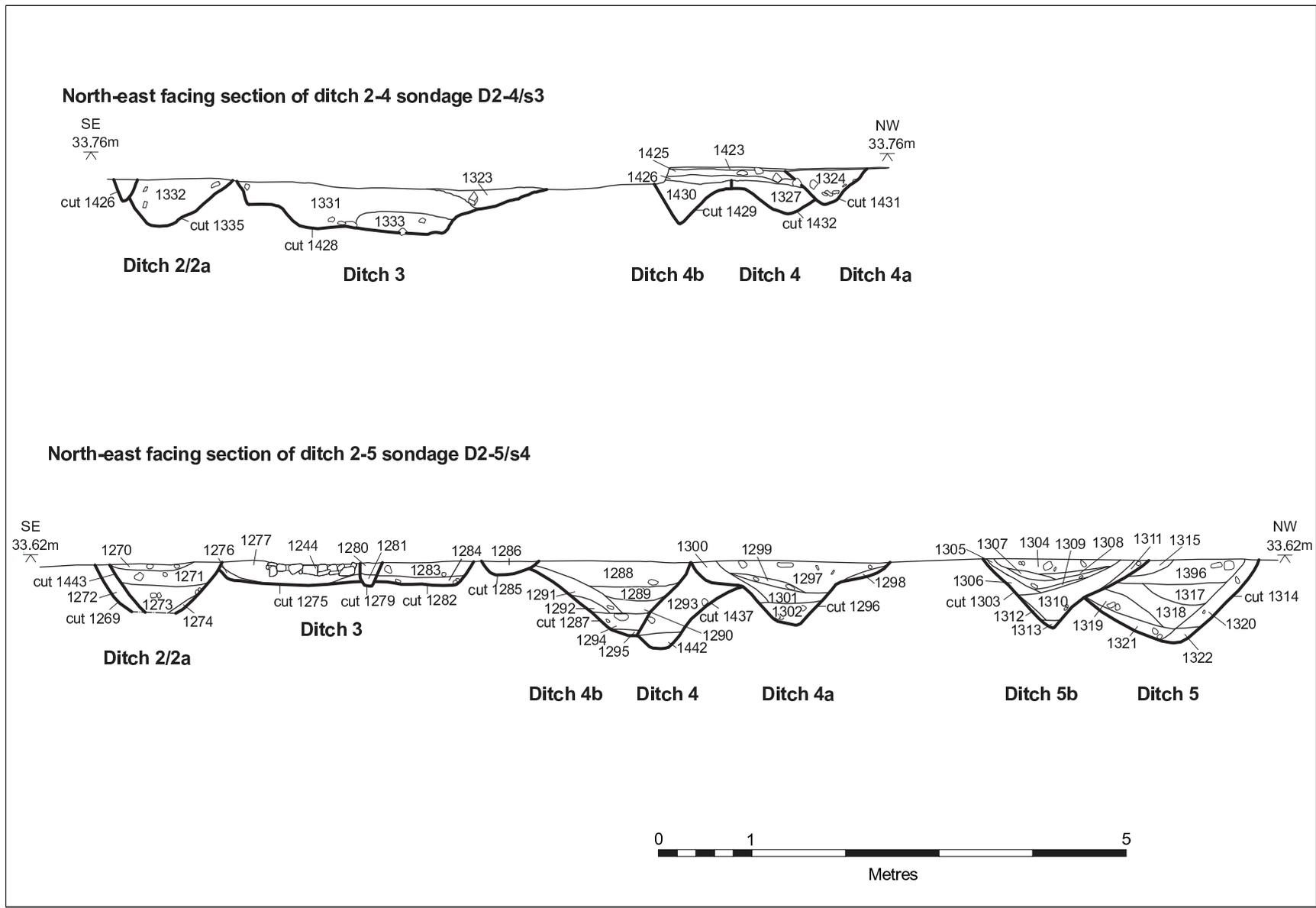
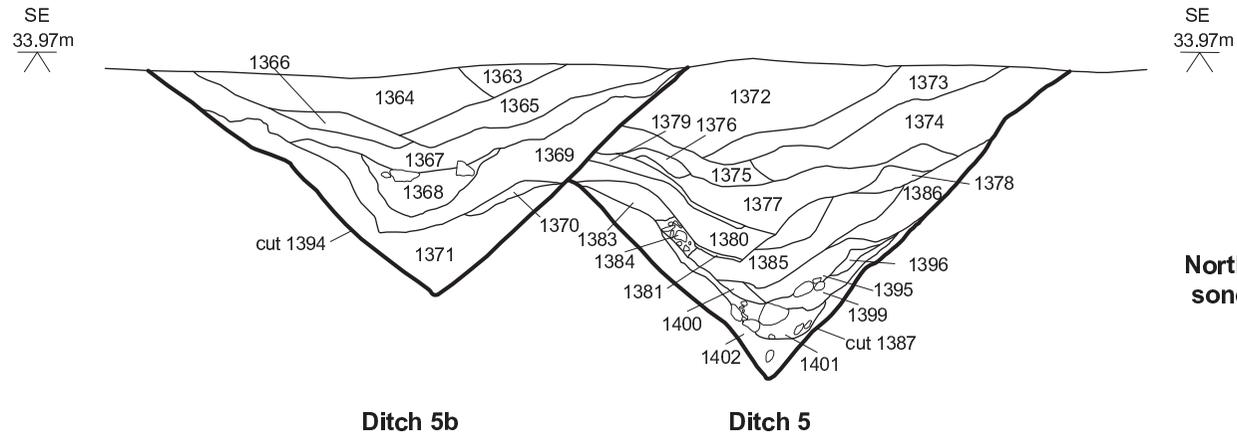
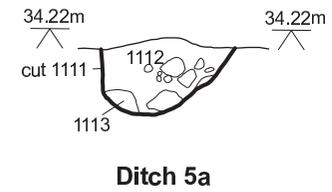


Figure 7: Sondages through ditches 2 - 4 and ditches 2 - 5

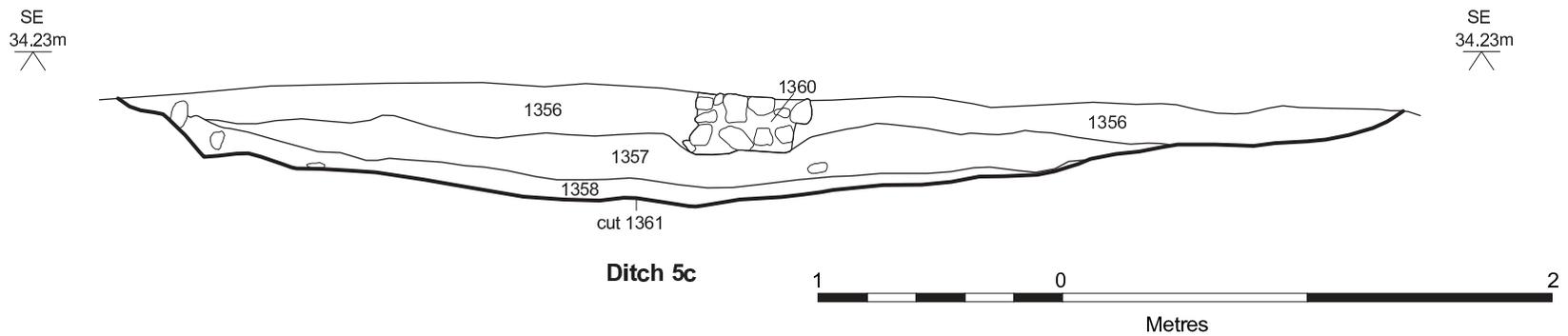
North-east facing section of ditch 5 and 5b Sondage D5/s1



North-east facing section of ditch 5a sondage D5a/s2



North-east facing section of ditch 5c sondage D5c/s2



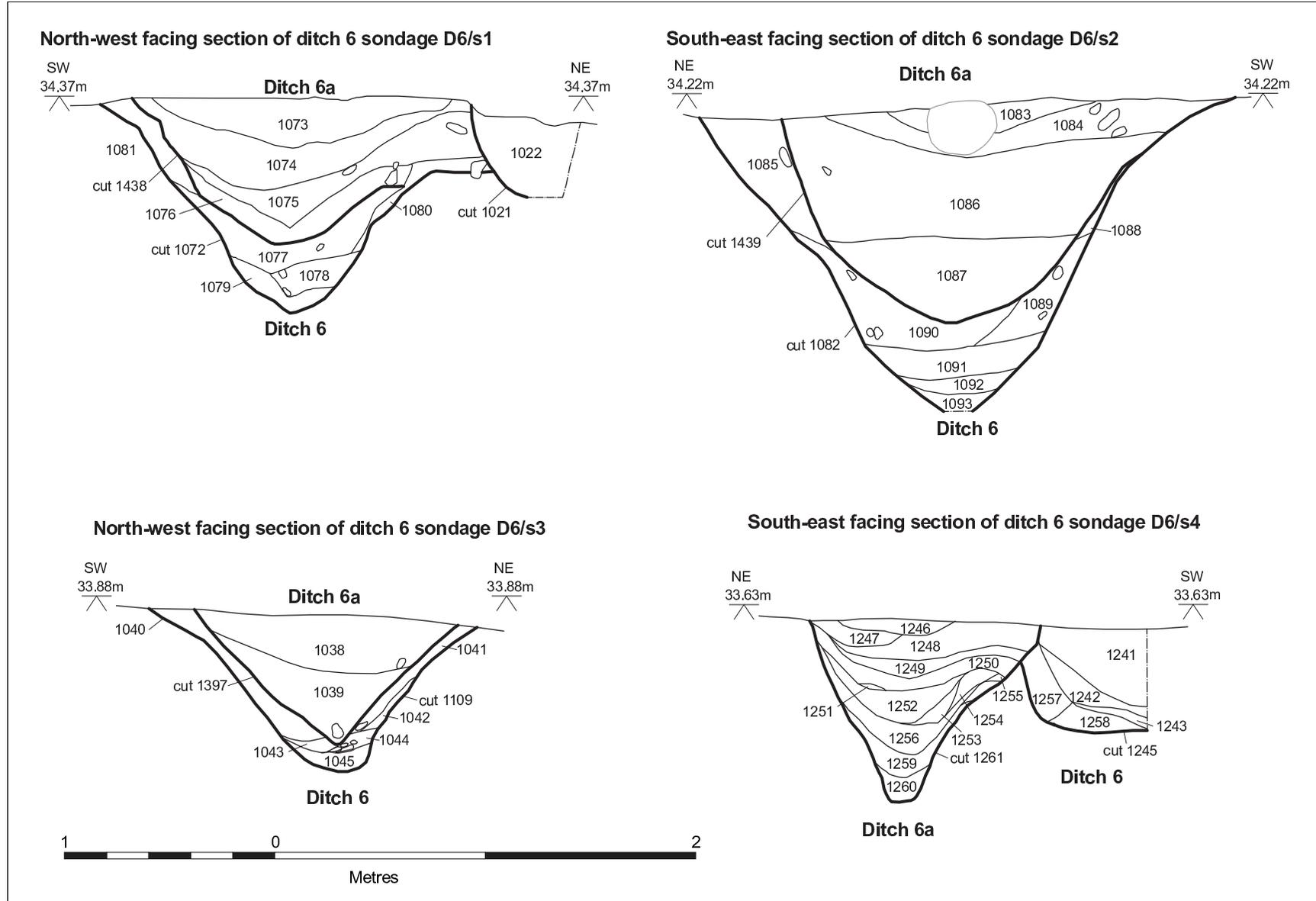
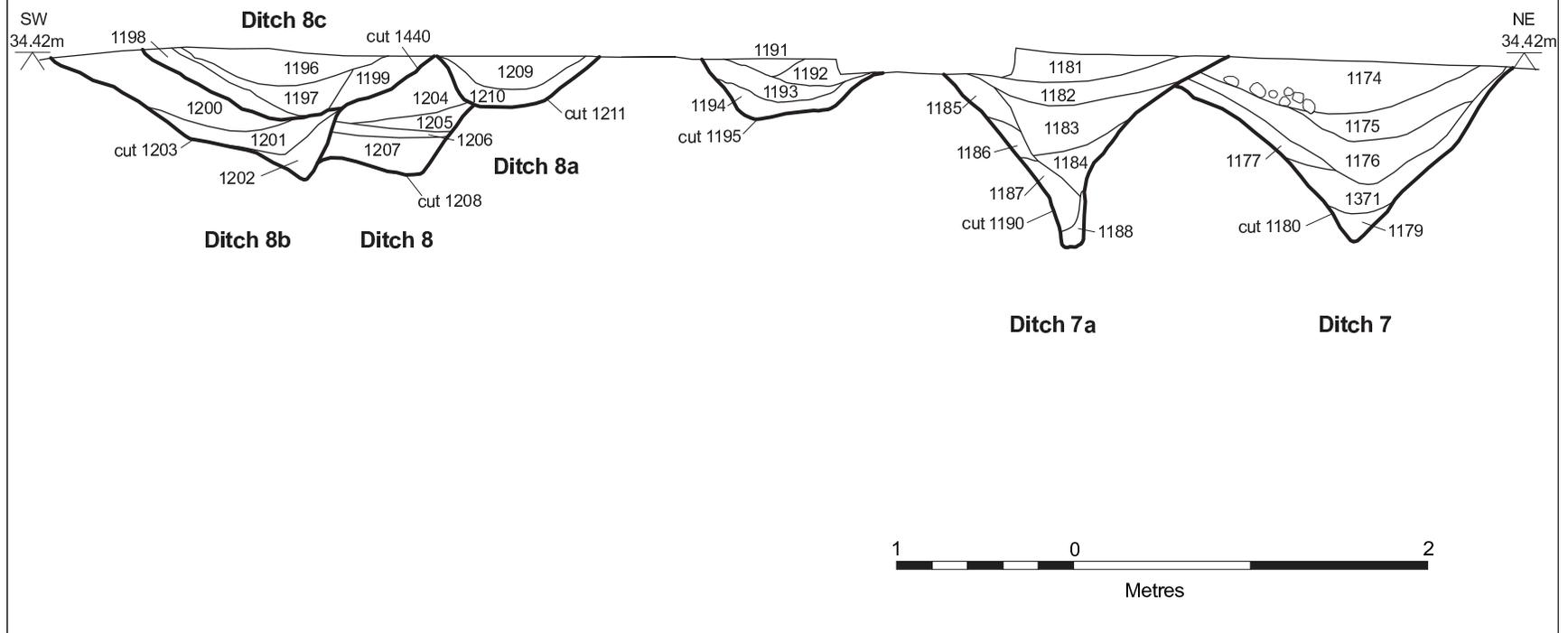


Figure 9: Ditch 6 sections

South-east facing section of ditch 7 and ditch 8 sondage D7-8/s1



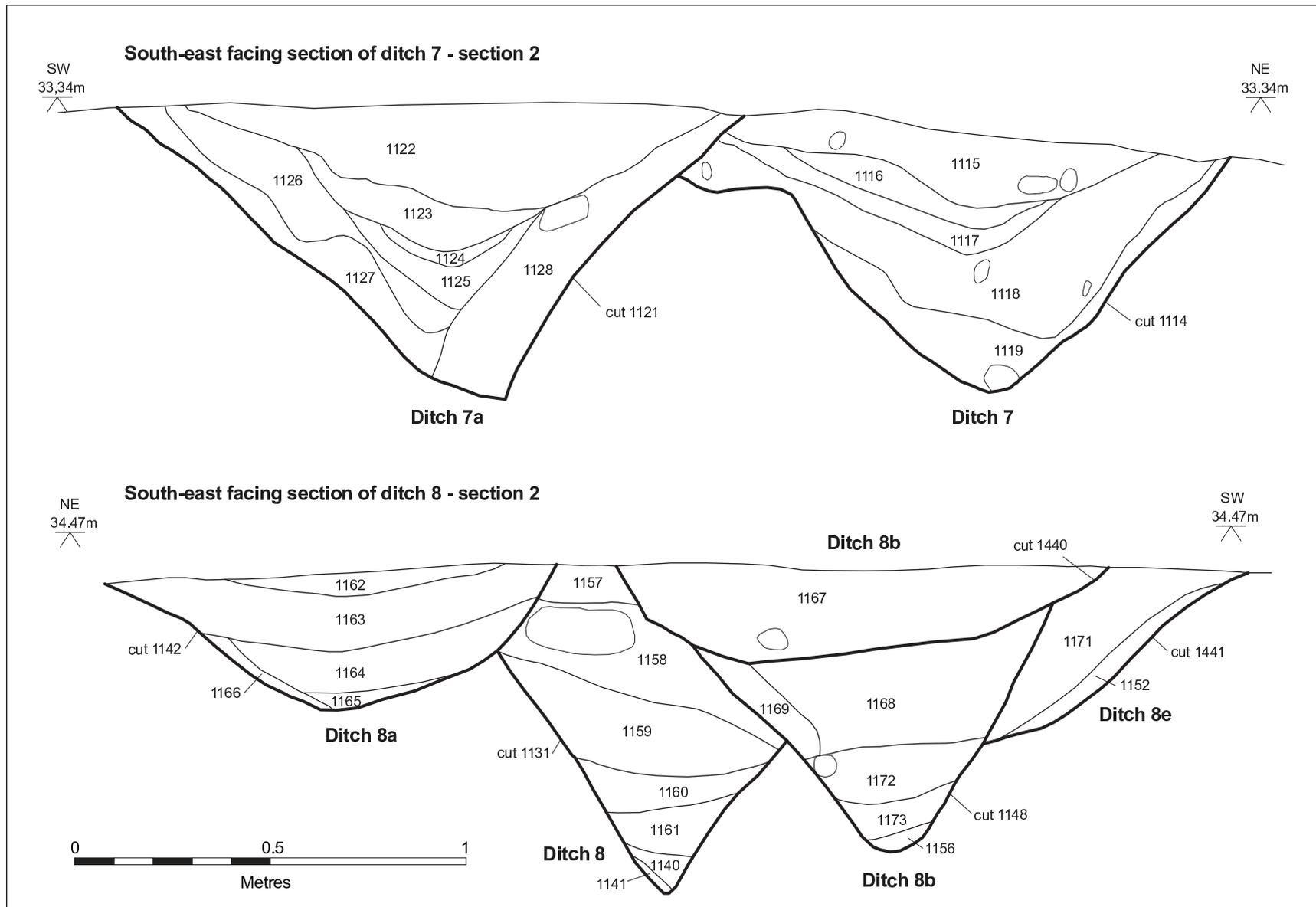
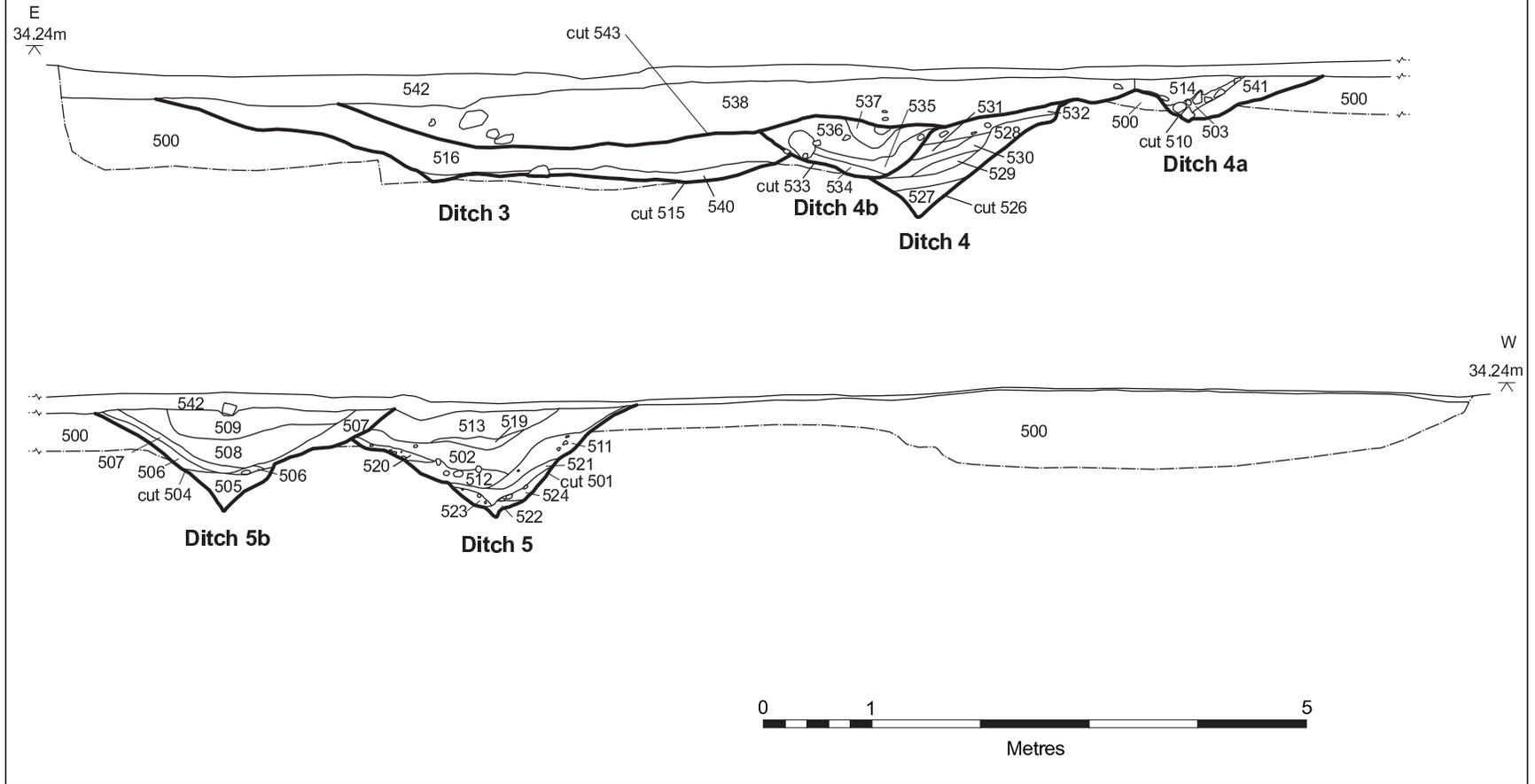


Figure 11: Ditches 7 and 8 sections

North facing section of Trench 5



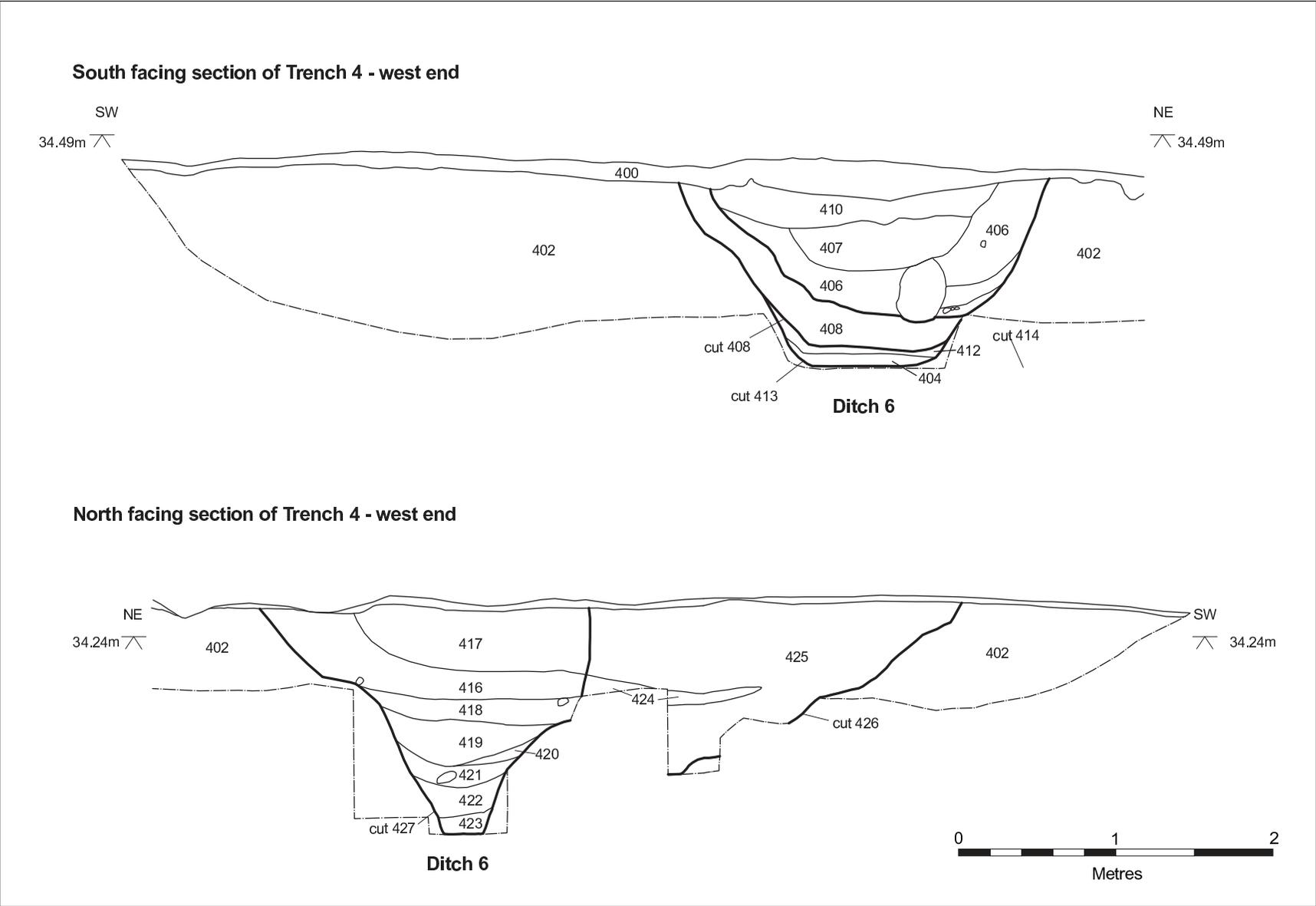


Figure 13: Trench 4 sections

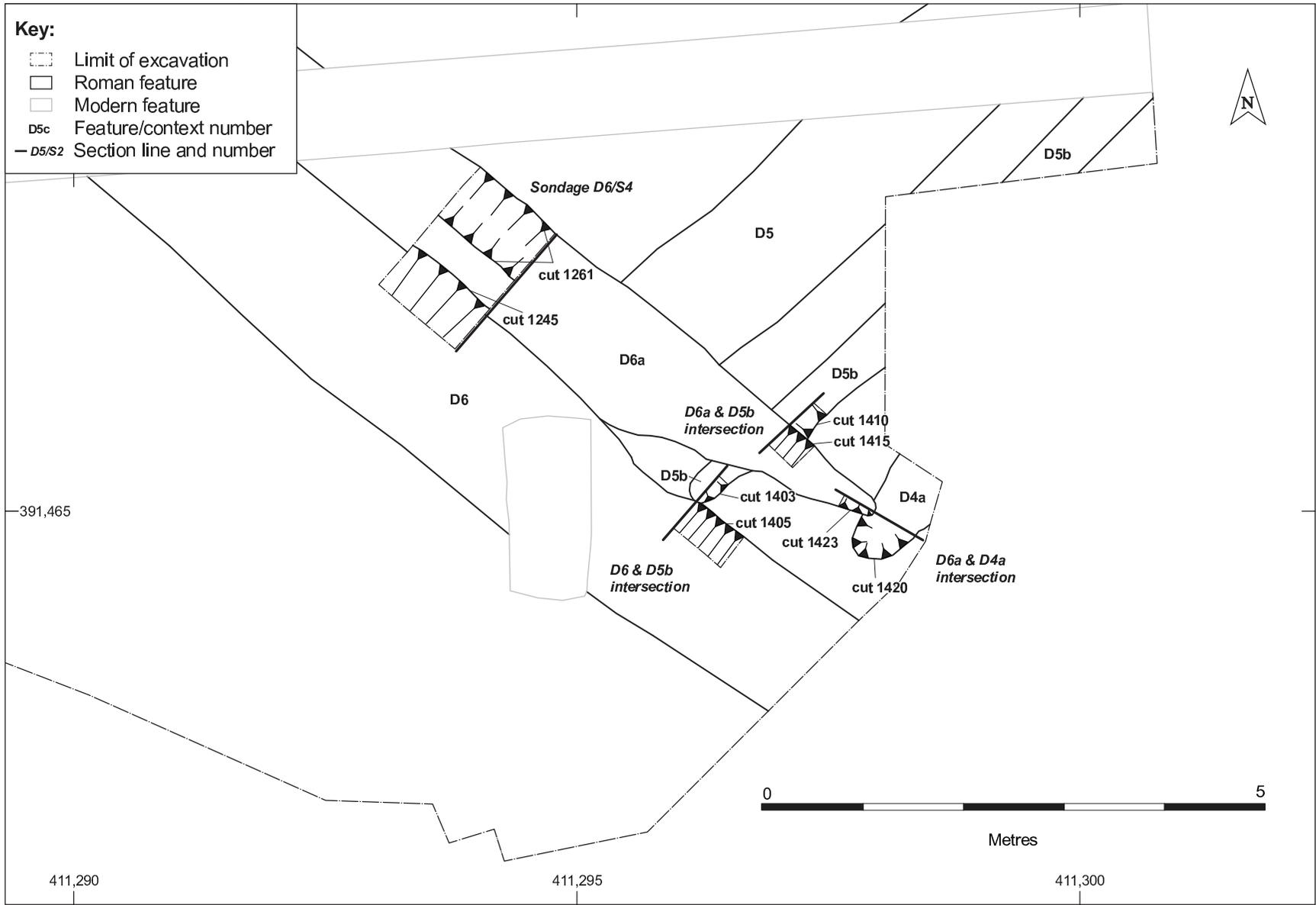


Figure 14: Detailed plan of ditch intersections

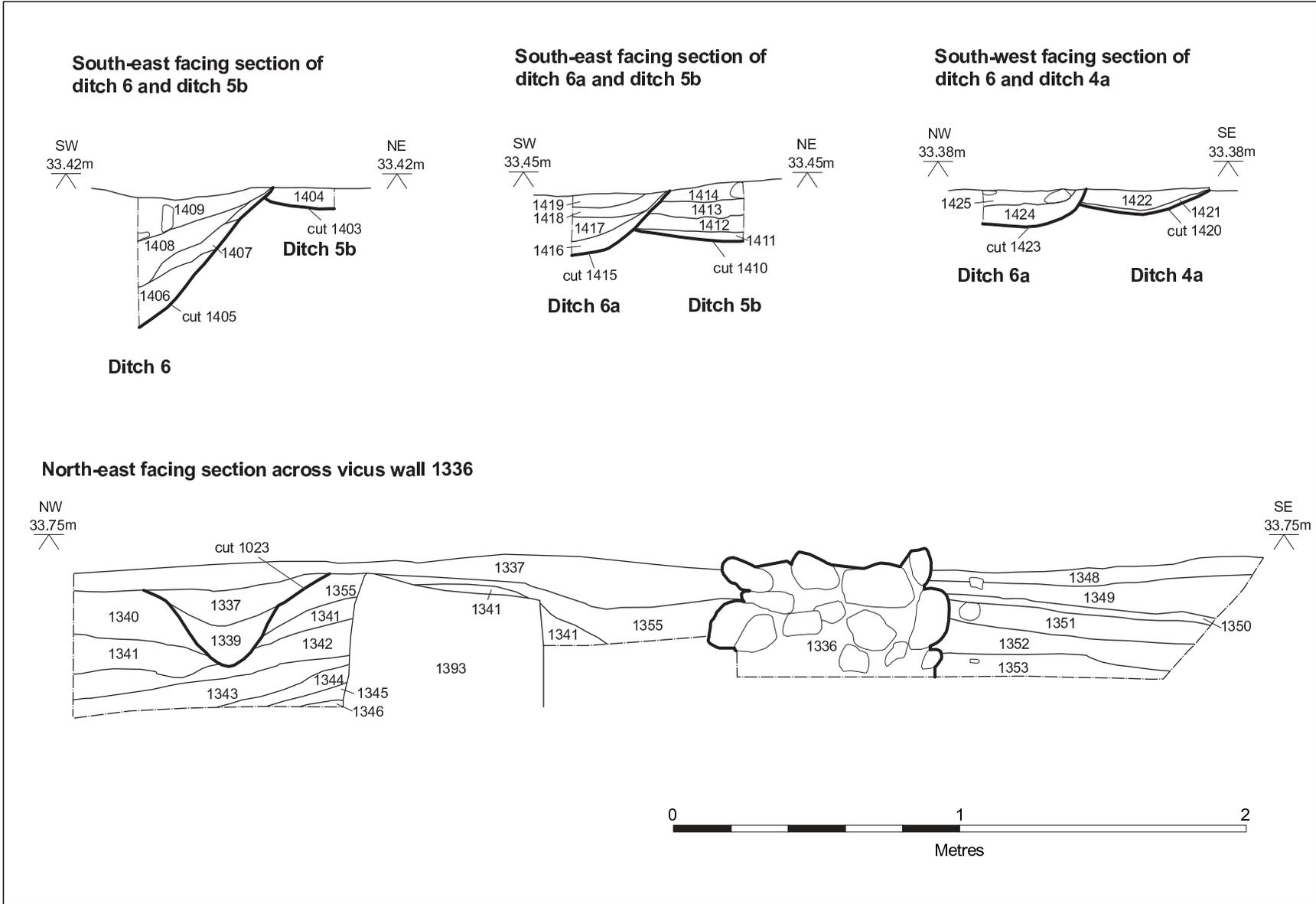


Figure 15: Ditch intersection sections and section across vicus wall 1336

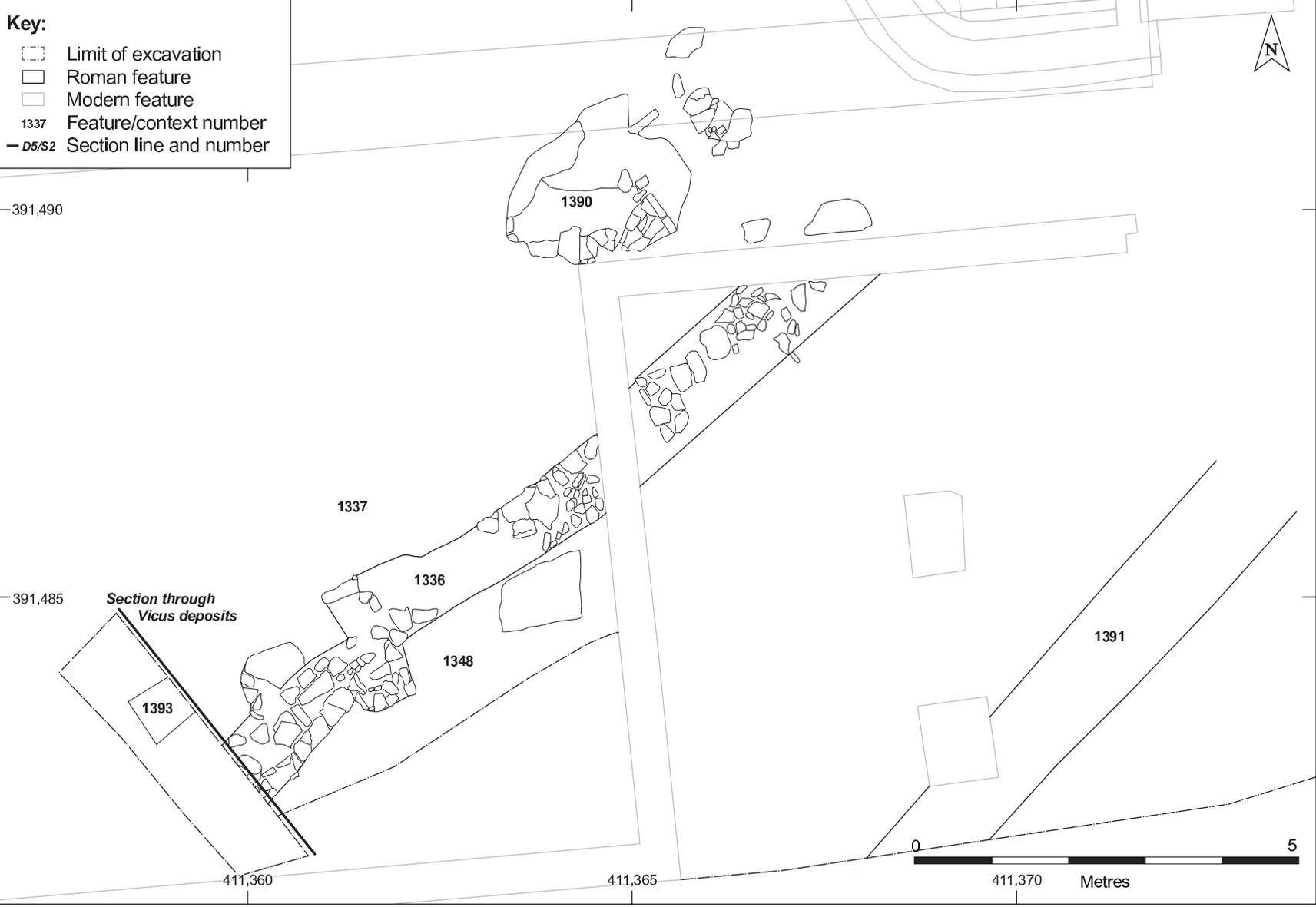


Figure 16: Detailed plan of the vicus remains



Figure 17: Plan of Roman Ditches by phase

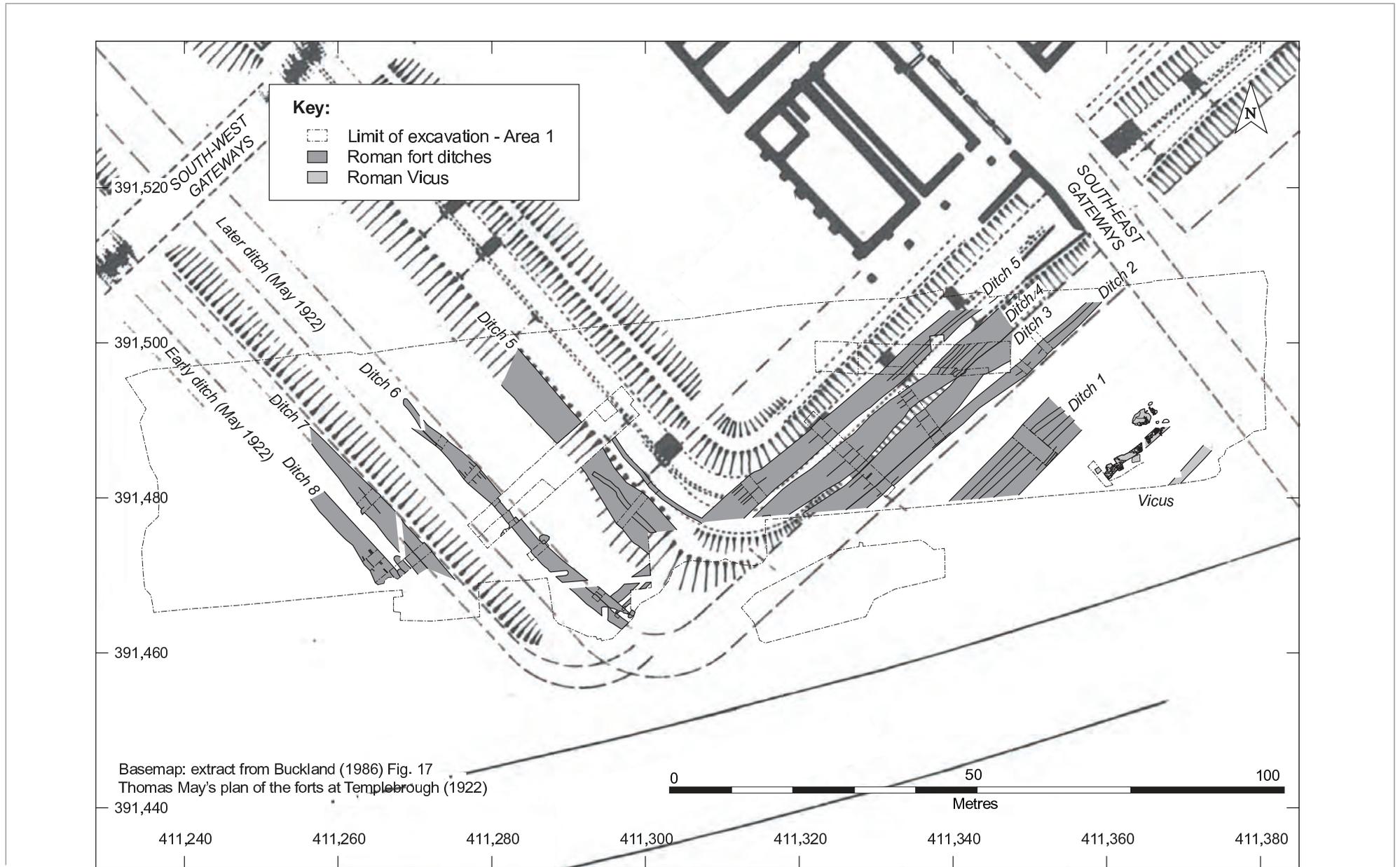
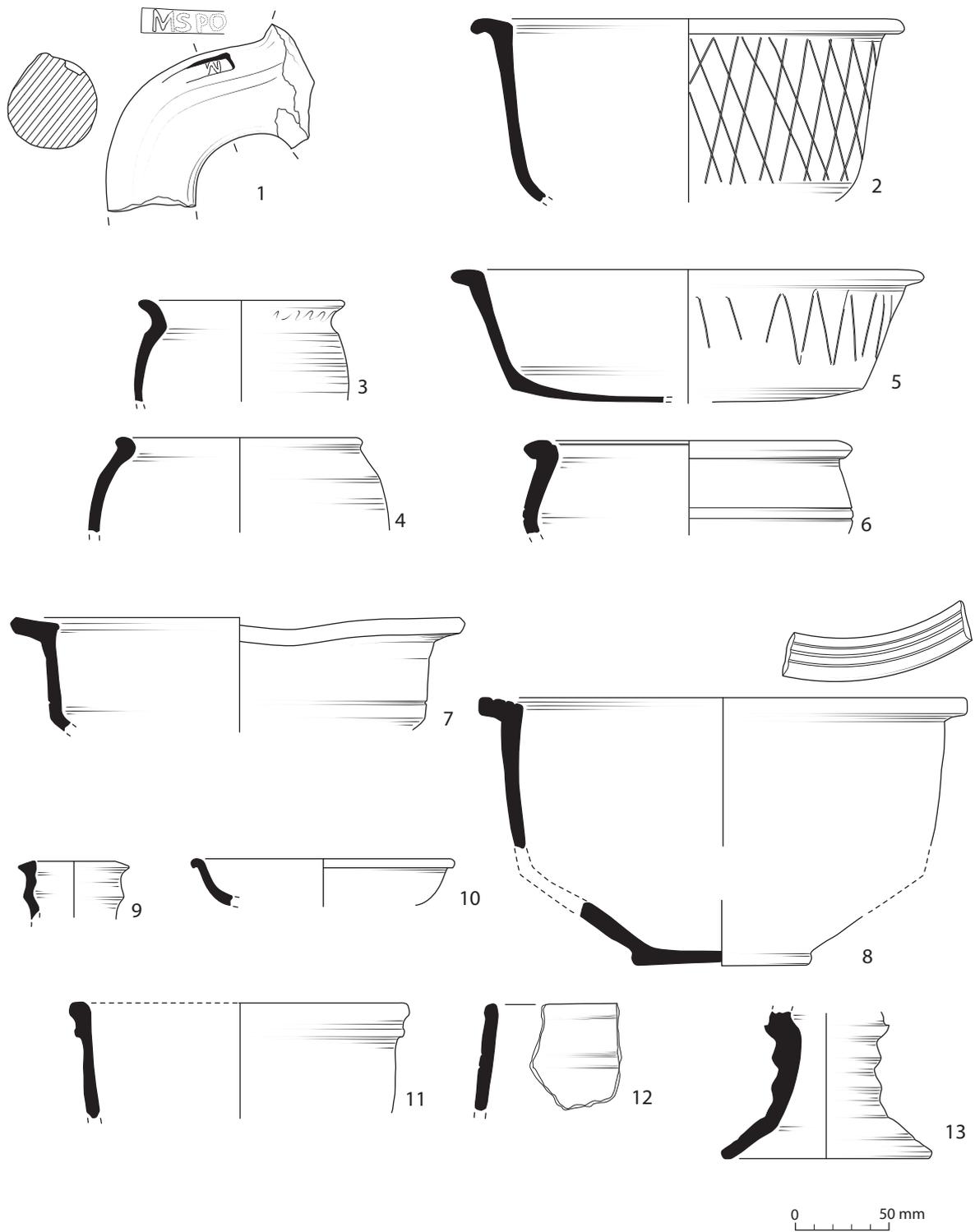
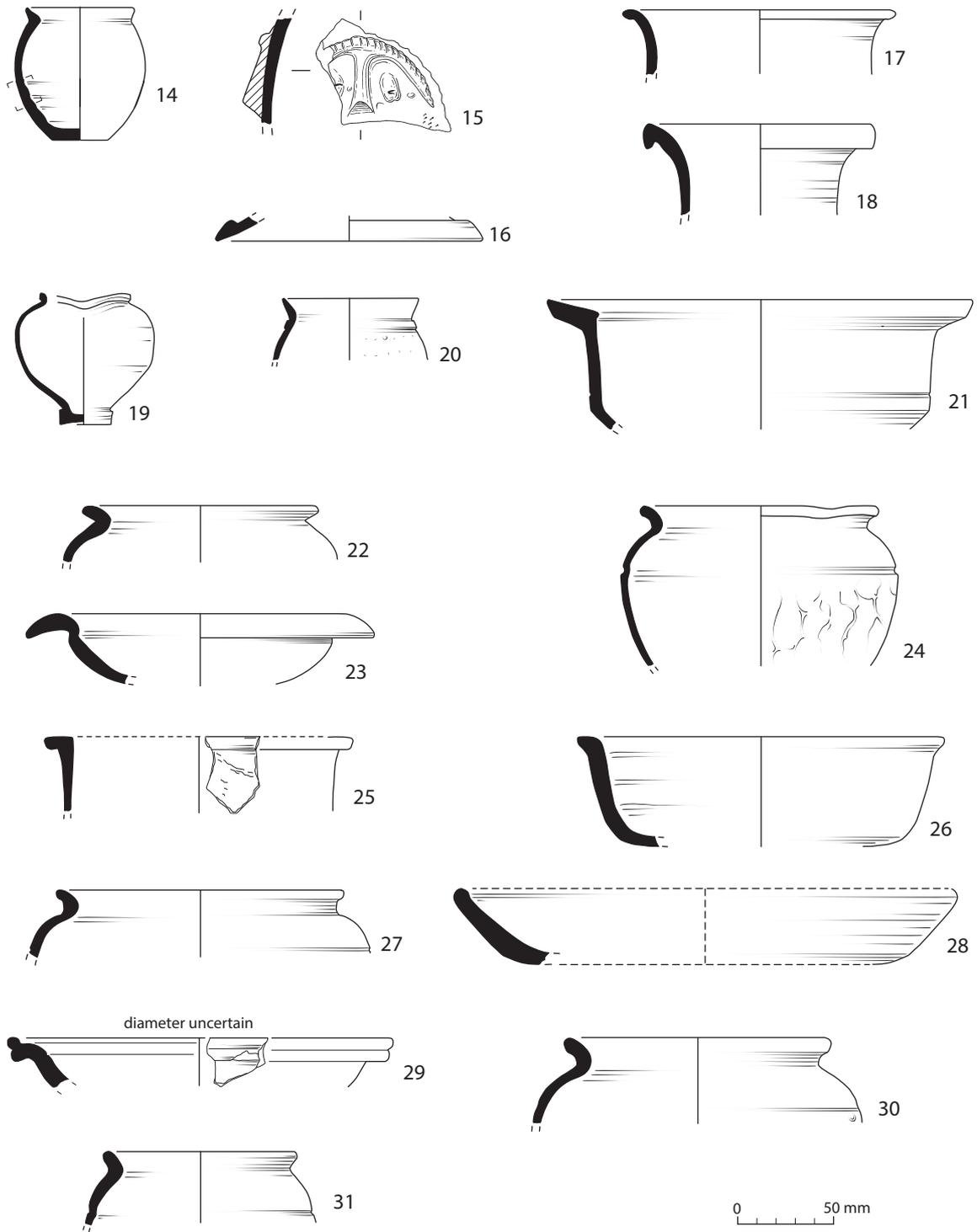
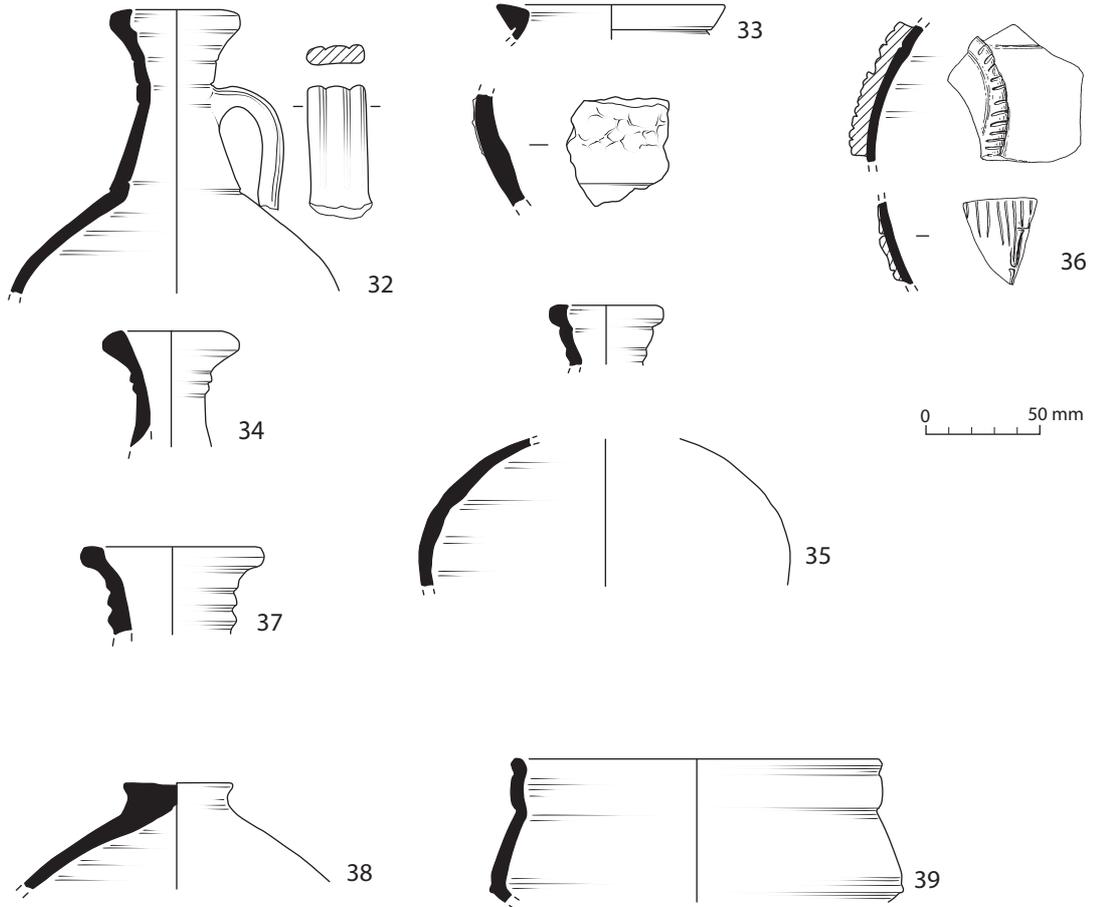


Figure 18: Excavated Roman Ditches overlaid on May's plan of the fort







APPENDIX 1 – INDEX TO ARCHIVE

Item	Number of items
Context sheets	634
Levels register	12
Drawing register	7
Photographic register	26
Original drawings	73
B/W photographs (films/contact sheets)	13
Colour slides (films)	13
Digital photographs	382
Sample register	1
Bulk finds register	11
Small finds register	2
Written Scheme of Investigation	1
Report	1

APPENDIX 2 – LIST OF CONTEXTS

Site code	Site area	Context No.	Context type	Description
1023	TR 1	100	Deposit	Tarmac
1023	TR 1	101	Structure	Concrete
1023	TR 1	102	Deposit	Made ground
1023	TR 1	103	Cut	Ditch cut, North end of TR 1
1023	TR 1	104	Deposit	Fill of [103]
1023	TR 1	105	Structure	Brick + concrete at base of [103]
1023	TR 1	106	Cut	NE-SW linear feature
1023	TR 1	107	Deposit	Upper fill of [106]
1023	TR 1	108	Deposit	Natural clay - coal measures
1023	TR 1	109	Structure	Group number for concrete, brick and iron, South end of trench
1023	TR 1	110	Cut	Possible pit-type feature, S end of trench
1023	TR 1	111	Deposit	Dark fill of [110]
1023	TR 1	112	Deposit	Lower fill of [106]
1023	TR 1	113	Cut	Construction cut for [114]
1023	TR 1	114	Structure	Wall, middle of trench
1023	TR 1	115	Cut	Construction cut for [116]
1023	TR 1	116	Structure	Wall, N of trench
1023	TR 1	117	Deposit	Black deposit, S of trench
1023	TR 1	118	Deposit	Rubble/concrete mix between (100) and (101)
1023	TR 1	119	Deposit	Grey alluvial deposit over (108)
1023	TR 1	120	Deposit	Orange deposit over (119), possibly re-deposited
1023	TR 1	121	Cut	Cut for brick structure, far N of trench
1023	TR 1	122	Structure	Brick structure far north of trench
1023	TR 1	123	Deposit	Backfill of cut [121]
1023	TR 1	124	Cut	Linear gully, N of [106]
1023	TR 1	125	Deposit	Fill of [124]
1023	TR 1	126	Deposit	Grey brown silty clay - fill of [110]
1023	TR 1	127	Deposit	Greenish grey clay – fill of [110]
1023	TR 1	128	Deposit	Dark grey silty clay - fill of [110]
1023	TR 1	129	Deposit	Light green grey clay - natural?
1023	TR 1	130	Deposit	Backfill of cut [109]
1023	TR 1	131	Deposit	Foundation cut for [109]
1023	TR 1	132	Deposit	Fill of [115]
1023	TR 2	200	Deposit	Tarmac
1023	TR 2	201	Deposit	Thick concrete deposit
1023	TR 2	202	Deposit	Thick made ground deposit
1023	TR 2	203	Deposit	Natural clay (coal measures)
1023	TR 2	204	Deposit	Natural clay (grey)
1023	TR 3	300	Deposit	Topsoil over TR 3
1023	TR 3	301	Deposit	Coal seam S. half of TR 3
1023	TR 3	302	Deposit	Natural clay - colour varies
1023	TR 3	303	Cut	Construction cut for [304]
1023	TR 3	304	Structure	Concrete structure, S end of TR 3
1023	TR 3	305	Cut	Cut for E-W linear, TR 3
1023	TR 3	306	Deposit	Clay backfill of [305]
1023	TR 3	307	Structure	Drainpipe within [305]
1023	TR 3	308	Cut	Cut for [309]
1023	TR 3	309	Structure	Concrete structure NW TR 3
1023	TR 3	310	Cut	Construction cut for [311]
1023	TR 3	311	Structure	Concrete structure NE TR 3

1023	TR 3	312	Cut	Cut for [313]
1023	TR 3	313	Structure	Concrete, middle of TR 3
1023	TR 3	314	Structure	Concrete in East facing section
1023	TR 4	400	Deposit	Topsoil
1023	TR 4	401	Deposit	Made ground
1023	TR 4	402	Deposit	Natural
1023	TR 4	403	Cut	Ditch cut (visible in plan) mid trench
1023	TR 4	404	Deposit	Primary fill of ditch, S end
1023	TR 4	405	Deposit	as 419
1023	TR 4	406	Deposit	Orange brown sandy clay in ditch
1023	TR 4	407	Deposit	Light grey clay in ditch
1023	TR 4	408	Deposit	Mid grey clay in ditch
1023	TR 4	409	Deposit	Mid grey clay lens in ditch
1023	TR 4	410	Deposit	Stone lens in ditch
1023	TR 4	411	Deposit	Brown orange clay sand lens
1023	TR 4	412	Deposit	Brown orange lens out of ditch
1023	TR 4	413	Cut	Ditch cut (lower)
1023	TR 4	414	Cut	Ditch cut (upper)
1023	TR 4	415		Group number, ditch TR 4
1023	TR 4	416	Deposit	Upper ditch fill [415] N facing
1023	TR 4	417	Deposit	Central ditch fill (upper), N facing
1023	TR 4	418	Deposit	Mid brown clay layer [415], N facing
1023	TR 4	419	Deposit	Mottled grey clay, N facing
1023	TR 4	420	Deposit	Pale grey clay lens, N facing
1023	TR 4	421	Deposit	Grey brown clay, N facing
1023	TR 4	422	Deposit	Re-deposited blue clay, N facing
1023	TR 4	423	Deposit	Pale grey clay, N facing
1023	TR 4	424	Deposit	Lens of brown clay and charcoal
1023	TR 4	425	Deposit	Re-deposited brown natural clay
1023	TR 4	426	Cut	Feature W of [415], N facing
1023	TR 4	427	Cut	Ditch cut (N facing) [415]
1023	TR 5	500	Deposit	Natural clay -colour varies
1023	TR 5	501	Cut	Cut for potential fort ditch
1023	TR 5	502	Deposit	Reddish-mid brown clay
1023	TR 5	503	Deposit	Black deposit - numerous sandstone inclusions
1023	TR 5	504	Cut	Cut for "V" shaped ditch
1023	TR 5	505	Deposit	Primary fill of [504] - grey clay
1023	TR 5	506	Deposit	Secondary fill of [504]
1023	TR 5	507	Deposit	Fill of [504] - grey layer
1023	TR 5	508	Deposit	Mottled silty clay fill of [504]
1023	TR 5	509	Deposit	Fill of [504] - mottled clay
1023	TR 5	510	Cut	NW-SE cut filled by (503)
1023	TR 5	511	Deposit	Reddish sandy clay fill of [501]
1023	TR 5	512	Deposit	Light grey sandy/silty clay fill of [501]
1023	TR 5	513	Deposit	Mottled silty clay fill of [501]
1023	TR 5	514	Deposit	Upper fill of [510]
1023	TR 5	515	Cut	Easternmost ditch cut
1023	TR 5	516	Deposit	Grey clay fill of [515]
1023	TR 5	517	Deposit	Grey clay fill of (possible same as (516))
1023	TR 5	518		VOID
1023	TR 5	519	Deposit	Brownish/mottled silty clay fill of [501]
1023	TR 5	520	Deposit	Reddish mid brown clay fill of [501]
1023	TR 5	521	Deposit	Light grey silty clay fill of [501]

1023	TR 5	522	Deposit	Primary fill [501]
1023	TR 5	523	Deposit	Mixed reddish silt fill of [501]
1023	TR 5	524	Deposit	Reddish mid brown silty fill of [501]
1023	TR 5	525	Deposit	Grey fill with 1 in it
1023	TR 5	526	Cut	Eastern most "V" shaped ditch
1023	TR 5	527	Deposit	Grey clay deposit at base of [526]
1023	TR 5	528	Deposit	Orange deposit over (527)
1023	TR 5	529	Deposit	Grey/orange mottled deposit over (528)
1023	TR 5	530	Deposit	Orange/grey deposit over (529)
1023	TR 5	531	Deposit	Orange/grey deposit over (530) -iron panning
1023	TR 5	532	Deposit	Grey clay contains burnt clay, overlies (531)
1023	TR 5	533	Cut	Small ditch cut truncated (529)-(532)
1023	TR 5	534	Deposit	Grey clay primary fill of [533]
1023	TR 5	535	Deposit	Mottled grey/orange clay deposit over (534)
1023	TR 5	536	Deposit	Orange/grey mixed deposit over (535) - burnt stone present
1023	TR 5	537	Deposit	Grey clay deposit over (536)
1023	TR 5	538	Deposit	Homogenous mid brown-grey deposit overlies trench 5
1023	TR 5	539	Deposit	Dark brown upper fill of [526]
1023	TR 5	540	Deposit	Primary fill of [515]
1023	TR 5	541	Deposit	Yellowish mid brown fill of (510)
1023	TR 5	542	Deposit	Topsoil covering trench
1023	Tr5	543	Cut	Cut in trench 5 possible upper cut of D3
1023	TR 6	600	Deposit	Mid blackish brown sandy silt in E facing section
1023	TR 6	601	Deposit	Mid brownish black sandy silt -charcoal layer in E facing section
1023	TR 6	602	Deposit	Mid brown sandy clay in E facing section
1023	TR 6	603	Deposit	Brown clay sand in west facing section
1023	TR 6	604	Deposit	layer above (611) (w facing)
1023	TR 6	605	Deposit	Mid yellow brown sand in W facing section
1023	TR 6	606	Deposit	Mid brown silty sand in S facing section
1023	TR 6	607	Deposit	Pale orange yellow clay in south facing section
1023	TR 6	608	Deposit	Re-deposited topsoil
1023	TR 6	609	Deposit	Grey brown clay made ground
1023	TR 6	610	Deposit	Clinker layer
1023	TR 6	611	Deposit	Mid Brown possible occupation layer
1023	TR 6	612	Deposit	Fill of Pit in south facing section
1023	TR 6	613	Deposit	Mid orange sand layer
1023	TR 6	614	Cut	Cut for pit
1023	TR 6	615	Deposit	Red and Black layer in northwest part of trench
1023	TR 6	616	Deposit	Brown silt below (615)
1023	TR 6	617	Deposit	Blue/grey silty clay - possible roman floor surface
1023	TR 6	618	Deposit	Mid brown clayey silt dumped layer
1023	TR 6	619	Deposit	Mid brown silty clay - dumped deposit possibly roman
1023	TR 6	620	Cut	Cut of pit in northern end (plan)
1023	TR 6	621	Deposit	Fill of pit in northern end (plan)
1023	TR 6	622	Deposit	Band of shale
1023	TR 6	623		VOID
1023	TR 6	624	Deposit	Mottled yellow/brown dumped deposit
1023	TR 6	625	Deposit	Mottled orange and grey silty clay below

				(617)
1023	TR 6	626	Deposit	Dark grey silty clay below (625)
1023	TR 6	627	Cut	Post hole in sondage (northwest of trench)
1023	TR 6	628	Deposit	Packing fill of [627]
1023	TR 6	629	Deposit	Post-pipe in [627]
1023	TR 6	630	Deposit	Primary fill of [627]
1023	TR 6	631	Structure	Concrete
1023	TR 6	632	Deposit	Tarmac/clinker relating to railway
1023	TR 6	633	Deposit	Yellow clay band below (632)
1023	TR 6	634	Cut	Modern cut for railway
1023	TR 6	635	Deposit	Fill for railway
1023	TR 6	636	Structure	Sandstone structure in station end
1023	TR 6	637	Deposit	Pale brown clay silt below (605)
1023	TR 6	638	Structure	concrete surface at southern end
1023	TR 6	639	Deposit	Upper layer south end (W section)
1023	TR 6	640	Deposit	Purple clinker layer
1023	TR 6	641	Deposit	Beige stony/ gravel layer
1023	TR 6	642	Deposit	Mixed clay/demolition layer
1023	TR 6	643	Deposit	Purple clinker layer
1023	TR 6	644	Deposit	Mid-grey brown possible Roman occupation layer.
1023	TR 6	645	Structure	Modern rubble wall south end of trench 6
1023	TR 6	646	Deposit	Layer below (610) E section
1023	TR 6	647	Deposit	Charcoal layer below (646)
1023	TR 6	648	Deposit	Red/Brown sandy gravel above (649)
1023	TR 6	649	Deposit	Layer of sandstone and brown sandy silt
1023	TR 6	650	Deposit	Brown layer, S end of trench
1023	TR 6	651	Deposit	Shale layer, south end of trench
1023	TR 6	652	Deposit	Mixed grey silty clay bottom layer s end of trench
1023	TR 6	653	Cut	Foundation cut for [645/938]
1023	TR 6	654	Cut	Foundation cut for [653]
1023	TR 6	655	Deposit	Mid brown clay w/ slag between (643) and (602)
1023	TR 6	656	Cut	Cut for wall [567]
1023	TR 6	657	Structure	Wall at South end of trench
1023	TR 6	658	Deposit	Primary fill of [620]
1023	TR 7	700	Structure	Modern brick and concrete structure, W end of trench
1023	TR 7	701	Cut	Foundation cut for [700]
1023	TR 7	702	Deposit	Made ground, upper deposit of coke and clinker
1023	TR 7	703	Deposit	Made ground, re-deposited clay
1023	TR 7	704	Deposit	Black grey organic silt deposit
1023	TR 7	705	Deposit	Yellow clay natural
1023	TR 7	706	Deposit	Gravel in fill of [700]
1023b	Area 1	1000	Deposit	Topsoil
1023b	Area 1	1001	Deposit	Made ground - slag, gravel, scrap
1023b	Area 1	1002	Deposit	Made ground - R/B demo (south of ET 5)
1023b	Area 1	1003	Deposit	Natural -Riverine clay, blue/grey/yellow
1023b	Area 1	1004	Structure	W-E RB wall along N Fence line
1023b	Area 1	1005	Structure	N-S return off 1004 (east of DP 2)
1023b	Area 1	1006	Structure	Concrete pad
1023b	Area 1	1007	Structure	Concrete pad
1023b	Area 1	1008	Structure	Concrete foundation W-E

1023b	Area 1	1009	Structure	Concrete m/b at W end of 1008
1023b	Area 1	1010	Deposit	Black Gravel south of 1008
1023b	Area 1	1011	Deposit	Black gravel road surface E fr. 1010
1023b	Area 1	1012	Structure	Foundation for E-W wall 1004
1023b	Area 1	1013	Deposit	Gravel underlying 1011
1023b	Area 1	1014	Deposit	Upper fill of ditch 2 (D2/s2)
1023b	Area 1	1015	Deposit	Upper fill of ditch 2 (D2/s1)
1023b	Area 1	1016	Cut	Cut of ditch 6 (D6/s1) NW facing section
1023b	Area 1	1017	Deposit	Upper fill of recut 6a 6 (D6/s1) NE facing section
1023b	Area 1	1018	Deposit	Fill of recut 6a 6 (D6/s1) NE facing section
1023b	Area 1	1019	Deposit	Fill of recut 6a 6 (D6/s1) NE facing section
1023b	Area 1	1020	Deposit	Fill of recut 6a 6 (D6/s1) NE facing section
1023b	Area 1	1021	Cut	Cut feature to immediate E of ditch 6 (slot1)
1023b	Area 1	1022	Deposit	Fill of [1021]
1023b	Area 1	1023	Cut	Cut of ditch 2 (D2/s1)
1023b	Area 1	1024	Deposit	?Mod deposit overlying ditch 2 (D2/s1)
1023b	Area 1	1025	Deposit	Fill of recut 2a (D2/s1) NE facing section
1023b	Area 1	1026	Deposit	Fill of recut 2a (D2/s1) NE facing section
1023b	Area 1	1027	Deposit	Fill of ditch 2 (D2/s1) NE facing section
1023b	Area 1	1028	Deposit	Fill of ditch 2 (D2/s1) NE facing section
1023b	Area 1	1029	Deposit	Fill of ditch 2 (D2/s1) NE facing section
1023b	Area 1	1030	Deposit	Earliest Fill of ditch 2 (D2/s1) NE facing section
1023b	Area 1	1031	Deposit	?Mod deposit overlying ditch 2 (D2/s1)
1023b	Area 1	1032	Deposit	Fill of recut 2a (D2/s1) SW facing section
1023b	Area 1	1033	Deposit	Fill of recut 2a (D2/s1) SW facing section
1023b	Area 1	1034	Deposit	Fill of ditch 2 (D2/s1) SW facing section
1023b	Area 1	1035	Deposit	Fill of ditch 2 (D2/s1) SW facing section
1023b	Area 1	1036	Deposit	Earliest fill of ditch 2 (D2/s1) SW facing section
1023b	Area 1	1037	Structure	Concrete slab/pad, truncates [1023]
1023b	Area 1	1038	Deposit	Fill of recut 6a (D6/s3) SE facing section
1023b	Area 1	1039	Deposit	Fill of recut 6a (D6/s3) SE facing section
1023b	Area 1	1040	Deposit	Fill of ditch 6 (D6/s3) SE facing section
1023b	Area 1	1041	Deposit	Fill of ditch 6 (D6/s3) SE facing section
1023b	Area 1	1042	Deposit	Fill of ditch 6 (D6/s3) SE facing section
1023b	Area 1	1043	Deposit	Fill of ditch 6 (D6/s3) SE facing section
1023b	Area 1	1044	Deposit	Fill of ditch 6 (D6/s3) SE facing section
1023b	Area 1	1045	Deposit	Fill of ditch 6 (D6/s3) SE facing section
1023b	Area 1	1046	Deposit	Fill of recut 6a (D6/s3) NW facing section
1023b	Area 1	1047	Deposit	Fill of recut 6a (D6/s3) NW facing section
1023b	Area 1	1048	Deposit	Fill of recut 6a (D6/s3) NW facing section
1023b	Area 1	1049	Deposit	Fill of ditch 6 (D6/s3) NW facing section
1023b	Area 1	1050	Deposit	Fill of ditch 6 (D6/s3) NW facing section
1023b	Area 1	1051	Deposit	Fill of ditch 6 (D6/s3) NW facing section
1023b	Area 1	1052	Deposit	Fill of ditch 6 (D6/s3) NW facing section
1023b	Area 1	1053	Deposit	Fill of ditch 6 (D6/s3) NW facing section
1023b	Area 1	1054	Deposit	Fill of ditch 6 (D6/s3) NW facing section
1023b	Area 1	1055	Deposit	Fill of recut 2a (D2/s2) NE facing
1023b	Area 1	1056	Deposit	Fill of ditch 2 (D2/s2) NE facing
1023b	Area 1	1057	Deposit	Fill of recut 2a (D2/s2) NE facing
1023b	Area 1	1058	Deposit	Fill of ditch 2 (D2/s2) NE facing
1023b	Area 1	1059	Deposit	Fill of ditch 2 (D2/s2) NE facing
1023b	Area 1	1060	Deposit	Fill of recut 2a (D2/s2) SW facing

1023b	Area 1	1061	Deposit	Fill of ditch 2 (D2/s2) SW facing
1023b	Area 1	1062	Deposit	Fill of ditch 2 (D2/s2) SW facing
1023b	Area 1	1063	Deposit	Fill of ditch 2 (D2/s2) SW facing
1023b	Area 1	1064	Deposit	Fill of ditch 2 (D2/s2) SW facing
1023b	Area 1	1065	Cut	Cut of ditch 2 (D2/s2)
1023b	Area 1	1066	Deposit	Fill of recut 6a (D6/s1) NW facing section
1023b	Area 1	1067	Deposit	Fill of ditch 6 (D6/s1) NW facing section
1023b	Area 1	1068	Deposit	Fill of ditch 6 (D6/s1) NW facing section
1023b	Area 1	1069	Deposit	Fill of ditch 6 (D6/s1) NW facing section
1023b	Area 1	1070	Deposit	Fill of ditch 6 (D6/s1) NW facing section
1023b	Area 1	1071	Deposit	Fill of ditch 6 (D6/s1) NW facing section
1023b	Area 1	1072	Cut	Cut of ditch 6 (D6/s1) SE facing section
1023b	Area 1	1073	Deposit	Fill of recut 6a (D6/s1) SE facing section
1023b	Area 1	1074	Deposit	Fill of recut 6a (D6/s1) SE facing section
1023b	Area 1	1075	Deposit	Fill of recut 6a (D6/s1) SE facing section
1023b	Area 1	1076	Deposit	Fill of recut 6a (D6/s1) SE facing section
1023b	Area 1	1077	Deposit	Fill of ditch 6 (D6/s1) SE facing section
1023b	Area 1	1078	Deposit	Fill of ditch 6 (D6/s1) SE facing section
1023b	Area 1	1079	Deposit	Fill of ditch 6 (D6/s1) SE facing section
1023b	Area 1	1080	Deposit	Fill of ditch 6 (D6/s1) SE facing section
1023b	Area 1	1081	Deposit	Fill of ditch 6 (D6/s1) SE facing section
1023b	Area 1	1082	Cut	Cut of ditch 6 (D6/s2) NW facing section
1023b	Area 1	1083	Deposit	Fill of recut 6a (D6/s2) NW facing section
1023b	Area 1	1084	Deposit	Fill of recut 6a (D6/s2) NW facing section
1023b	Area 1	1085	Deposit	Fill of recut 6a (D6/s2) NW facing section
1023b	Area 1	1086	Deposit	Fill of recut 6a (D6/s2) NW facing section
1023b	Area 1	1087	Deposit	Fill of recut 6a (D6/s2) NW facing section
1023b	Area 1	1088	Deposit	Fill of ditch 6 (D6/s2) NW facing section
1023b	Area 1	1089	Deposit	Fill of ditch 6 (D6/s2) NW facing section
1023b	Area 1	1090	Deposit	Fill of ditch 6 (D6/s2) NW facing section
1023b	Area 1	1091	Deposit	Fill of ditch 6 (D6/s2) NW facing section
1023b	Area 1	1092	Deposit	Fill of ditch 6 (D6/s2) NW facing section
1023b	Area 1	1093	Deposit	Fill of ditch 6 (D6/s2) NW facing section
1023b	Area 1	1094	Cut	Cut of ditch 6 (D6/s2) SE facing section
1023b	Area 1	1095	Deposit	Fill of recut 6a (D6/s2) SE facing section
1023b	Area 1	1096	Deposit	Fill of recut 6a (D6/s2) SE facing section
1023b	Area 1	1097	Deposit	Fill of recut 6a (D6/s2) SE facing section
1023b	Area 1	1098	Deposit	Fill of ditch 6 (D6/s2) SE facing section
1023b	Area 1	1099	Deposit	Fill of recut 6a (D6/s2) SE facing section
1023b	Area 1	1100	Deposit	Fill of recut 6a (D6/s2) SE facing section
1023b	Area 1	1101	Deposit	Fill of recut 6a (D6/s2) SE facing section
1023b	Area 1	1102	Deposit	Fill of ditch 6 (D6/s2) SE facing section
1023b	Area 1	1103	Deposit	Fill of ditch 6 (D6/s2) SE facing section
1023b	Area 1	1104	Deposit	Fill of ditch 6 (D6/s2) SE facing section
1023b	Area 1	1105	Deposit	Fill of ditch 6 (D6/s2) SE facing section
1023b	Area 1	1106	Deposit	Fill of ditch 6 (D6/s2) SE facing section
1023b	Area 1	1107	Deposit	Fill of ditch 6 (D6/s2) SE facing section
1023b	Area 1	1108	Deposit	Fill of ditch 4 (D2-4/s3) - carbon/charcoal stratum
1023b	Area 1	1109	Cut	Cut of ditch 6 (D6/s3)
1023b	Area 1	1110	Cut	Cut of ditch 6 (d6/s3)
1023b	Area 1	1111	Cut	Cut of ditch 5a (D5/s2)
1023b	Area 1	1112	Deposit	Uppermost fill of ditch 5a (D5/s2)
1023b	Area 1	1113	Deposit	Fill of ditch 5a (D5/s2)

1023b	Area 1	1168	Deposit	Fill of ditch 8b (D8/s2) (NW facing section)
1023b	Area 1	1169	Deposit	Fill of ditch 8b (D8/s2) (NW facing section)
1023b	Area 1	1170	Deposit	Fill of ditch 8b (D8/s2) (NW facing section)
1023b	Area 1	1171	Deposit	Fill of ditch 8b (D8/s2) (NW facing section)
1023b	Area 1	1172	Deposit	Fill of ditch 8b (D8/s2) (NW facing section)
1023b	Area 1	1173	Deposit	Fill of ditch 8b (D8/s2) (NW facing section)
1023b	Area 1	1174	Deposit	Fill of ditch 7 (D7-8/s1) (SE facing section)
1023b	Area 1	1175	Deposit	Fill of ditch 7 (D7-8/s1) (SE facing section)
1023b	Area 1	1176	Deposit	Fill of ditch 7 (D7-8/s1) (SE facing section)
1023b	Area 1	1177	Deposit	Fill of ditch 7 (D7-8/s1) (SE facing section)
1023b	Area 1	1178	Deposit	Fill of ditch 7 (D7-8/s1) (SE facing section)
1023b	Area 1	1179	Deposit	Fill of ditch 7 (D7-8/s1) (SE facing section)
1023b	Area 1	1180	Cut	Cut of linear ditch 7 (D7-8/s1)
1023b	Area 1	1181	Deposit	Fill of ditch 7a (D7-8/s1) SE facing
1023b	Area 1	1182	Deposit	Fill of ditch 7a (D7-8/s1) SE facing
1023b	Area 1	1183	Deposit	Fill of ditch 7a (D7-8/s1) SE facing
1023b	Area 1	1184	Deposit	Fill of ditch 7a (D7-8/s1) SE facing
1023b	Area 1	1185	Deposit	Fill of ditch 7a (D7-8/s1) SE facing
1023b	Area 1	1186	Deposit	Fill of ditch 7a (D7-8/s1) SE facing
1023b	Area 1	1187	Deposit	Fill of ditch 7a (D7-8/s1) SE facing
1023b	Area 1	1188	Deposit	Fill of ditch 7a (D7-8/s1) SE facing
1023b	Area 1	1189	Deposit	Fill of ditch 7a (D7-8/s1) SE facing
1023b	Area 1	1190	Cut	Cut of ditch 7a (D7-8/s1)
1023b	Area 1	1191	Deposit	Fill of [1195] (D7-8/s1)SE facing
1023b	Area 1	1192	Deposit	Fill of [1195] (D7-8/s1)SE facing
1023b	Area 1	1193	Deposit	Fill of [1195] (D7-8/s1)SE facing
1023b	Area 1	1194	Deposit	Fill of [1195] (D7-8/s1)SE facing
1023b	Area 1	1195	Cut	Cut of ditch (D7-8/s1)
1023b	Area 1	1196	Deposit	Fill of ditch 8b (D7-8/s1)
1023b	Area 1	1197	Deposit	Fill of ditch 8b (D7-8/s1)
1023b	Area 1	1198	Deposit	Fill of ditch 8b (D7-8/s1)
1023b	Area 1	1199	Deposit	Fill of ditch 8b (D7-8/s1)
1023b	Area 1	1200	Deposit	Fill of ditch 8b (D7-8/s1)
1023b	Area 1	1201	Deposit	Fill of ditch 8b (D7-8/s1)
1023b	Area 1	1202	Deposit	Fill of ditch 8b (D7-8/s1)
1023b	Area 1	1203	Cut	Cut of ditch 8b (D7-8/s1)
1023b	Area 1	1204	Deposit	Fill of ditch 8 (D7-8/s1) SE facing section
1023b	Area 1	1205	Deposit	Fill of ditch 8 (D7-8/s1) SE facing section
1023b	Area 1	1206	Deposit	Fill of ditch 8 (D7-8/s1) SE facing section
1023b	Area 1	1207	Deposit	Fill of ditch 8 (D7-8/s1) SE facing section
1023b	Area 1	1208	Cut	Cut of ditch 8 (D7-8/s1)
1023b	Area 1	1209	Deposit	Fill of ditch 8a (D7-8/s1) NW facing section
1023b	Area 1	1210	Deposit	Fill of ditch 8a (D7-8/s1) NW facing section
1023b	Area 1	1211	Cut	Cut of ditch 8a (D7-8/s1) NW facing section
1023b	Area 1	1212	Deposit	Fill of ditch 7 (D7-8/s1) NW facing section
1023b	Area 1	1213	Deposit	Fill of ditch 7 (D7-8/s1) NW facing section
1023b	Area 1	1214	Deposit	Fill of ditch 7 (D7-8/s1) NW facing section
1023b	Area 1	1215	Deposit	Fill of ditch 7 (D7-8/s1) NW facing section
1023b	Area 1	1216	Deposit	Fill of ditch 7 (D7-8/s1) NW facing section
1023b	Area 1	1217	Deposit	Fill of ditch 7 (D7-8/s1) NW facing section
1023b	Area 1	1218	Cut	Cut for ditch 7 (D7-8/s1) NW facing section
1023b	Area 1	1219	Deposit	Fill of ditch 7a (D7-8/s1) NW facing section
1023b	Area 1	1220	Deposit	Fill of ditch 7a (D7-8/s1) NW facing section
1023b	Area 1	1221	Deposit	Fill of ditch 7a (D7-8/s1) NW facing section

1023b	Area 1	1222	Deposit	Fill of ditch 7a (D7-8/s1) NW facing section
1023b	Area 1	1223	Deposit	Fill of ditch 7a (D7-8/s1) NW facing section
1023b	Area 1	1224	Deposit	Fill of ditch 7a (D7-8/s1) NW facing section
1023b	Area 1	1225	Deposit	Fill of ditch 7a (D7-8/s1) NW facing section
1023b	Area 1	1226	Deposit	Fill of ditch 7a (D7-8/s1) NW facing section
1023b	Area 1	1227	Cut	Cut of ditch 7a (D7-8/s1) NW facing section
1023b	Area 1	1228	Deposit	Fill of [1230] (D7-8/s1)
1023b	Area 1	1229	Deposit	Fill of [1230] (D7-8/s1)
1023b	Area 1	1230	Cut	Cut of ditch terminal (D7-8/s1)
1023b	Area 1	1231	Deposit	Fill of [1234] (D7-8/s1)
1023b	Area 1	1232	Deposit	Fill of [1234] (D7-8/s1)
1023b	Area 1	1233	Deposit	Fill of [1234] (D7-8/s1)
1023b	Area 1	1234	Cut	Cut of linear ditch (D7-8/s1)
1023b	Area 1	1235	Deposit	Fill of ditch 8a (D7-8/s1) SE facing section
1023b	Area 1	1236	Deposit	Fill of ditch 8a (D7-8/s1) SE facing section
1023b	Area 1	1237	Deposit	Fill of ditch 8a (D7-8/s1) SE facing section
1023b	Area 1	1238	Deposit	Fill of ditch 8a (D7-8/s1) SE facing section
1023b	Area 1	1239	Deposit	Fill of ditch 8a (D7-8/s1) SE facing section
1023b	Area 1	1240	Cut	Cut of ditch 8a (D7-8/s1) SE facing section
1023b	Area 1	1241	Deposit	Fill of ditch 6 (D6/s4)NW facing section
1023b	Area 1	1242	Deposit	Fill of ditch 6 (D6/s4) NW facing section
1023b	Area 1	1243	Deposit	Fill of ditch 6 (D6/s4) NW facing section
1023b	Area 1	1244	Deposit	Ditch 3 Pebble feature (D2-5/s4)
1023b	Area 1	1245	Cut	Cut of ditch 6 (D6/s4) NW facing section
1023b	Area 1	1246	Deposit	Fill of recut 6a (D6/s4)
1023b	Area 1	1247	Deposit	Fill of recut 6a (D6/s4)
1023b	Area 1	1248	Deposit	Fill of recut 6a (D6/s4)
1023b	Area 1	1249	Deposit	Fill of recut 6a (D6/s4)
1023b	Area 1	1250	Deposit	Fill of recut 6a (D6/s4)
1023b	Area 1	1251	Deposit	Fill of recut 6a (D6/s4)
1023b	Area 1	1252	Deposit	Fill of recut 6a (D6/s4)
1023b	Area 1	1253	Deposit	Fill of recut 6a (D6/s4)
1023b	Area 1	1254	Deposit	Fill of recut 6a (D6/s4)
1023b	Area 1	1255	Deposit	Fill of recut 6a (D6/s4)
1023b	Area 1	1256	Deposit	Fill of recut 6a (D6/s4)
1023b	Area 1	1257	Deposit	Fill of recut 6a (D6/s4)
1023b	Area 1	1258	Deposit	Fill of recut 6a (D6/s4)
1023b	Area 1	1259	Deposit	Fill of recut 6a (D6/s4)
1023b	Area 1	1260	Deposit	Fill of recut 6a (D6/s4)
1023b	Area 1	1261	Cut	Cut of recut 6a (D6/s4)
1023b	Area 1	1262	Cut	Cut of ditch 1 (D1/s1)
1023b	Area 1	1263	Deposit	Fill of ditch 1 (D1/s1)
1023b	Area 1	1264	Deposit	Fill of ditch 1 (D1/s1)
1023b	Area 1	1265	Deposit	Fill of ditch 1 (D1/s1)
1023b	Area 1	1266	Deposit	Fill of ditch 1 (D1/s1)
1023b	Area 1	1267	Deposit	Fill of ditch 1 (D1/s1)
1023b	Area 1	1268	Deposit	Fill of ditch 1 (D1/s1)
1023b	Area 1	1269	Cut	Cut of ditch 2 (D2/s4)
1023b	Area 1	1270	Deposit	Fill of ditch 2 (D2/s4)
1023b	Area 1	1271	Deposit	Fill of ditch 2 (D2/s4)
1023b	Area 1	1272	Deposit	Fill of ditch 2 (D2/s4)
1023b	Area 1	1273	Deposit	Fill of ditch 2 (D2/s4)
1023b	Area 1	1274	Deposit	Fill of ditch 2 (D2/s4)
1023b	Area 1	1275	Cut	Cut of ditch 3 (=1282)

1023b	Area 1	1276	Deposit	Fill of ditch 3 (D2-5/s4)
1023b	Area 1	1277	Deposit	Fill of ditch 3 (D2-5/s4)
1023b	Area 1	1278	Deposit	Fill of ditch 3 (D2-5/s4)
1023b	Area 1	1279	Cut	Cut of ?posthole/?gully through ditch 3
1023b	Area 1	1280	Deposit	Fill of [1279]
1023b	Area 1	1281	Deposit	Fill of [1279]
1023b	Area 1	1282	Cut	Cut of ditch 3 (=1275)
1023b	Area 1	1283	Deposit	Fill of ditch 3 (D2-5/s4)
1023b	Area 1	1284	Deposit	Fill of ditch 3 (D2-5/s4)
1023b	Area 1	1285	Cut	Cut of shallow ditch/gully
1023b	Area 1	1286	Deposit	Fill of [1285]
1023b	Area 1	1287	Cut	Cut of ditch 4 (D2-5/s4)
1023b	Area 1	1288	Deposit	Fill of ditch 4 (D2-5/s4)
1023b	Area 1	1289	Deposit	Fill of ditch 4 (D2-5/s4)
1023b	Area 1	1290	Deposit	Fill of ditch 4 (D2-5/s4)
1023b	Area 1	1291	Deposit	Fill of ditch 4 (D2-5/s4)
1023b	Area 1	1292	Deposit	Fill of ditch 4 (D2-5/s4)
1023b	Area 1	1293	Deposit	Fill of ditch 4 (D2-5/s4)
1023b	Area 1	1294	Deposit	Fill of ditch 4 (D2-5/s4)
1023b	Area 1	1295	Deposit	Fill of ditch 4 (D2-5/s4)
1023b	Area 1	1296	Cut	Cut of recut 4a (D2-5/s4)
1023b	Area 1	1297	Deposit	Fill of recut 4a (D2-5/s4)
1023b	Area 1	1298	Deposit	Fill of recut 4a (D2-5/s4)
1023b	Area 1	1299	Deposit	Fill of recut 4a (D2-5/s4)
1023b	Area 1	1300	Deposit	Fill of recut 4a (D2-5/s4)
1023b	Area 1	1301	Deposit	Fill of recut 4a (D2-5/s4)
1023b	Area 1	1302	Deposit	Fill of recut 4a (D2-5/s4)
1023b	Area 1	1303	Cut	Cut of recut 5b (D5/s1)
1023b	Area 1	1304	Deposit	Fill of recut 5b (D5/s1)
1023b	Area 1	1305	Deposit	Fill of recut 5b (D5/s1)
1023b	Area 1	1306	Deposit	Fill of recut 5b (D5/s1)
1023b	Area 1	1307	Deposit	Fill of recut 5b (D5/s1)
1023b	Area 1	1308	Deposit	Fill of recut 5b (D5/s1)
1023b	Area 1	1309	Deposit	Fill of recut 5b (D5/s1)
1023b	Area 1	1310	Deposit	Fill of recut 5b (D5/s1)
1023b	Area 1	1311	Deposit	Fill of recut 5b (D5/s1)
1023b	Area 1	1312	Deposit	Fill of recut 5b (D5/s1)
1023b	Area 1	1313	Deposit	Fill of recut 5b (D5/s1)
1023b	Area 1	1314	Cut	Cut of ditch 5 (D5/s1)
1023b	Area 1	1315	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1316	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1317	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1318	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1319	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1320	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1321	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1322	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1323	Deposit	Deposit/spread over ditch 4/4a (D2-4/s3)
1023b	Area 1	1324	Deposit	Fill of recut 4a (D2-4/s3)
1023b	Area 1	1325	Deposit	Fill of ditch 4 (D2-4/s3)
1023b	Area 1	1326	Deposit	Fill of ditch 4 (D2-4/s3)
1023b	Area 1	1327	Deposit	Fill of ditch 4 (D2-4/s3)
1023b	Area 1	1328	Deposit	Void
1023b	Area 1	1329	Deposit	Void

1023b	Area 1	1330	Deposit	Fill of ditch 4(D2-4/s3) (=1430)
1023b	Area 1	1331	Deposit	Fill of ditch 1428 (D2-4/s3) (?D3)
1023b	Area 1	1332	Deposit	Fill of ditch 2 (D2-4/s3)
1023b	Area 1	1333	Deposit	Fill of ditch 4 1428 (D2-4/s3) (?D3)
1023b	Area 1	1334	Deposit	Fill of ditch 4 slot 3
1023b	Area 1	1335	Cut	Cut of ditch 2 (D2-4/s3)
1023b	Area 1	1336	Structure	Sandstone wall – <i>vicus</i>
1023b	Area 1	1337	Deposit	Deposit – NW of wall 1336
1023b	Area 1	1338	Deposit	Fill in 1354
1023b	Area 1	1339	Deposit	Fill in 1354
1023b	Area 1	1340	Deposit	Deposit – NW of wall 1336
1023b	Area 1	1341	Deposit	Deposit – NW of wall 1336
1023b	Area 1	1342	Deposit	Deposit – NW of wall 1336
1023b	Area 1	1343	Deposit	Deposit – NW of wall 1336
1023b	Area 1	1344	Deposit	Deposit – NW of wall 1336
1023b	Area 1	1345	Deposit	Deposit – NW of wall 1336
1023b	Area 1	1346	Deposit	Deposit – NW of wall 1336
1023b	Area 1	1347	Deposit	Void
1023b	Area 1	1348	Deposit	Deposit – SE of wall 1336
1023b	Area 1	1349	Deposit	Deposit – SE of wall 1336
1023b	Area 1	1350	Deposit	Deposit – SE of wall 1336
1023b	Area 1	1351	Deposit	Deposit – SE of wall 1336
1023b	Area 1	1352	Deposit	Deposit – SE of wall 1336
1023b	Area 1	1353	Deposit	Deposit – SE of wall 1336
1023b	Area 1	1354	Cut	Possible posthole/gully cut into 1340/1355
1023b	Area 1	1355	Deposit	Deposit – NW of wall 1336
1023b	Area 1	1356	Deposit	Fill of Ditch 5c (D5/s2)
1023b	Area 1	1357	Deposit	Fill of Ditch 5c (D5/s2)
1023b	Area 1	1358	Deposit	Fill of Ditch 5c (D5/s2)
1023b	Area 1	1359	Deposit	Natural clay
1023b	Area 1	1360	Structure	SS linear in Ditch 5c (D5/s2)
1023b	Area 1	1361	Cut	Cut of ditch 5c (D5/s2)
1023b	Area 1	1362	Cut	Void
1023b	Area 1	1363	Deposit	Fill of Ditch 5b (D5/s1)
1023b	Area 1	1364	Deposit	Fill of Ditch 5b (D5/s1)
1023b	Area 1	1365	Deposit	Fill of Ditch 5b (D5/s1)
1023b	Area 1	1366	Deposit	Fill of Ditch 5b (D5/s1)
1023b	Area 1	1367	Deposit	Fill of Ditch 5b (D5/s1)
1023b	Area 1	1368	Deposit	Fill of Ditch 5b (D5/s1)
1023b	Area 1	1369	Deposit	Fill of Ditch 5b (D5/s1)
1023b	Area 1	1370	Deposit	Fill of Ditch 5b (D5/s1)
1023b	Area 1	1371	Deposit	Fill of Ditch 5b (D5/s1)
1023b	Area 1	1372	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1373	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1374	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1375	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1376	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1377	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1378	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1379	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1380	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1381	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1382	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1383	Deposit	Fill of ditch 5 (D5/s1)

1023b	Area 1	1384	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1385	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1386	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1387	Cut	Cut of ditch 5 (D5/s1)
1023b	Area 1	1388	Structure	E-W / N-S RB wall running
1023b	Area 1	1389	Structure	Grey sandstones north of 1388
1023b	Area 1	1390	Structure	Burnt yellowish-red sandstone north of 1388
1023b	Area 1	1391	Structure	Possible SS linear feature, south corner of site
1023b	Area 1	1392	Structure	Conc. Machine base, south corner of site
1023b	Area 1	1393	Structure	Large grey SS block
1023b	Area 1	1394	Cut	Cut of recut 5b (D5/s1)
1023b	Area 1	1395	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1396	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1397	Cut	Recut 6a (D6/s3)
1023b	Area 1	1398	Cut	Recut 6a (D6/s3)
1023b	Area 1	1399	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1400	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1401	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1402	Deposit	Fill of ditch 5 (D5/s1)
1023b	Area 1	1403	Cut	Recut 5b (Int 6-5b)
1023b	Area 1	1404	Deposit	Fill of ditch 5 [1403] (Int 6-5b)
1023b	Area 1	1405	Cut	Ditch 6 (Int 6-5b)
1023b	Area 1	1406	Deposit	Fill of ditch 6 [1405] (Int 6-5b)
1023b	Area 1	1407	Deposit	Fill of ditch 6 [1405] (Int 6-5b)
1023b	Area 1	1408	Deposit	Fill of ditch 6 [1405] (Int 6-5b)
1023b	Area 1	1409	Deposit	Fill of ditch 6 [1405] (Int 6-5b)
1023b	Area 1	1410	Cut	Recut 5b (Int 6a-5b)
1023b	Area 1	1411	Deposit	Fill of ditch 5b [1410] (Int 6a-5b)
1023b	Area 1	1412	Deposit	Fill of ditch 5b [1410] (Int 6a-5b)
1023b	Area 1	1413	Deposit	Fill of ditch 5b [1410] (Int 6a-5b)
1023b	Area 1	1414	Deposit	Fill of ditch 5b [1410] (Int 6a-5b)
1023b	Area 1	1415	Cut	Recut 6a (Int 6a-5b)
1023b	Area 1	1416	Deposit	Fill of recut 6a [1415] (Int 6a-5b)
1023b	Area 1	1417	Deposit	Fill of recut 6a [1415] (Int 6a-5b)
1023b	Area 1	1418	Deposit	Fill of recut 6a [1415] (Int 6a-5b)
1023b	Area 1	1419	Deposit	Fill of recut 6a [1415] (Int 6a-5b)
1023b	Area 1	1420	Cut	Ditch 4a (Int 6a-4a)
1023b	Area 1	1421	Deposit	Fill of ditch 4a [1420] (Int 6a-4a)
1023b	Area 1	1422	Deposit	Fill of ditch 4a [1420] (Int 6a-4a)
1023b	Area 1	1423	Cut	Recut 6a (Int 6a-4a)
1023b	Area 1	1424	Deposit	Fill of recut 6a [1423] (Int 6a-4a)
1023b	Area 1	1425	Deposit	Fill of recut 6a [1423] (Int 6a-4a)
1023b	Area 1	1426	Cut	?recut 4a (D2-4/s3)
1023b	Area 1	1427	Deposit	Fill of [1426]
1023b	Area 1	1428	Cut	?Ditch 3 (D2-4/s3)
1023b	Area 1	1429	Cut	Ditch 4 (D2-4/s3)
1023b	Area 1	1430	Deposit	Fill of [1429]
1023b	Area 1	1431	Cut	Recut 4a (D2-4/s3)
1023b	Area 1	1432	Cut	Ditch 4 (D2-4/s3)
1023b	Area 1	1433	Deposit	Fill of cut 1436
1023b	Area 1	1434	Cut	Recut 2a (D2/s1)
1023b	Area 1	1435	Cut	Recut 2a (D2/s2)
1023b	Area 1	1436	Cut	Cut of small linear next to Ditch 1
1023b	Area 1	1437	Cut	Cut for Ditch 4 (D2-5/s4)

1023b	Area 1	1438	Cut	Recut 6a (D6/s1)
1023b	Area 1	1439	Cut	Recut 6a (D6/s2)
1023b	Area 1	1440	Cut	Recut for D8c (D8/s2 and D7-8/s1)
1023b	Area 1	1441	Cut	Recut D8e (D8/s2)
1023b	Area 1	1442	Deposit	Primary fill of D4 (D2-5/s4)
1023b	Area 1	1443	Cut	Recut D2a (D2-5/s4)

APPENDIX 3 – ROMANO-BRITISH POTTERY

R.S. Leary with amphora stamp identified by D.F. Williams

Some 1435 sherds (29.3kg, 18 estimated vessel equivalents) of Romano-British pottery were examined. 16 sherds from the evaluation, including 4 oxidised bodysherds and 12 samian sherds, were not located when they were returned from the museum and were not fully quantified. Most of the unstratified pottery had been discarded and these sherds were amongst this material but fortunately the material from the excavation had had weights and EVES measurement recorded during the assessment.

Pottery was recovered from three main areas- the defensive ditches, the pebble-lined ditches and the vicus. The date range ranged from the Flavian to the early Antonine period with most sherds belonging to the Flavian to Hadrianic period. Although a couple of the pottery forms could be early or even pre-Flavian in date, their circulation is known to continue into the later Flavian period and no pre-Flavian samian or mortaria were identified.

Chronology

The pottery can be divided into two main groups – the Flavian Trajanic types (nos 6-8, 10-26, 28-32, 35, 37-42) and the BB1 and related types (nos 2-4) dating to the Hadrianic period or later. Some of the earlier group may well have continued use into the Hadrianic period but for the purposes of dating the presence of BB1 and related types are taken as an indication of a Hadrianic or later date. Two vessels may be of pre-Flavian or early Flavian type (nos 9 and 36) but were found with later forms and one BB1 form is of early Antonine form. The stamped amphora handle, Derbyshire ware and south Yorkshire GRB6 and RBB1 wares (nos 1, 5, possibly 27, 33-34) are of early Antonine or later date. On the basis of this dating the pottery therefore dates the infilling of ditches 2, 3, 5, 5a, 5c, 6 and 1195/1230, to the Flavian-Trajanic period and ditches 4, 4a, 6a, 8, cuts 510 and 515 to the Hadrianic or possibly early Antonine period. The date of ditch 7 is less certain but is probably second century. Flavian-Trajanic material in the fills of ditches 4, 8, cuts 510 and 515 suggest that these were either in use in the Flavian or Trajanic period or cut through earlier ditches of that date and incorporated earlier material from them. In the vicus area, 1390 may be early Antonine. The layers beside 1336 ranged from the Flavian-Trajanic through to the Hadrianic or possibly early Antonine period. Pottery from pit 110 was of Antonine date at the earliest and that from pit 611 gave a Flavian-Trajanic date range while the vessel from posthole 627 is Trajanic. Layer 601 contained both Flavian-Trajanic and Hadrianic-early Antonine pottery while 605 and 617 dated to the Flavian-Trajanic period.

Defensive ditches

The trench 1 a mortarium sherd and a rouletted OBB1 sherd came from ditches 106 and 124. These dated to the late first to second century. In trenches 4 and 5 and area 1 nine ditches were excavated. The neck of a Dressel 20 amphora in recut ditch 6 fill 408 dates from the mid-first to third century. Rusticated sherds in recut fill 406 date to the late first to early second century and undiagnostic grey and oxidised sherds came from fills 1018, 1082, 1084 and 1092. The GRB6 subconical bowl of South Yorkshire type from fill 1425 ditch 6a is a long lived type dating from the mid second to the fourth century.

An abraded GRB rim sherd perhaps from a bowl with triangular rather hammerhead-type flange came from ditch 7 and dated to the Flavian-Antonine period (Darling 1984 no. 45-6).

Sherds from two late first to early second century ring-necked flagons (1162 in FLA1 and FLA2) and a small BB1 jar probably Hadrianic or early Antonine came from ditch 8. A third late first to early second century ring-necked flagon (FLA2) came from fill 1210 with a mortarium base and in fill 1164 more BB1 sherds dating from the Hadrianic period or later were identified. The sherds from samian bowls form 37 from 1143 and 1162 dated to AD 100-120. In 1195 a near complete GRA2 waster of a small everted-rim beaker was found, severely distorted. This vessel is similar in form to the Flavian-Trajanic neckless jars while in related feature 1230 undiagnostic sherds of white ware and grey ware were recovered.

Pottery was only recovered from ditch 5 in the evaluation trenches and it comprised four GRA1 bodysherds probably from a beaker tentatively dated to the late first-early second century.

Ditch 4 lowest fill 1330 contained a sherd from a Hadrianic or early Antonine BB1 vessel rusticated ware, a barbotine dot beaker and a samian bodysherd from a dish dated AD70-110. More BB1 vessels came from fill 1326 with mortaria, second century lipped grey ware dishes and a Dr36 flanged dish and redeposited Flavian-Trajanic sherds including several samian vessels dating to AD70-110 but only Flavian-Trajanic types such as GTA jars, grey rusticated jars, neckless everted-rim jars, samian dated AD70-110 and white wares came from fill 1327. 1323 yielded a late first –early second century reeded- rim bowl and a sherd from a Dr37 samian bowl dated AD70-110 only.

A South Yorkshire grey ware subconical bowl with bead rim of mid-second to fourth century type came from ditch 4a fill (Buckland et al 1985 type Hc-d) as well an 18/31 or 31 samian vessel dated AD70-110 . In the evaluation trench ditch 4a/cut 533 fill 529 20 GRB5 sherds from a jar with acute lattice burnish date to the Hadrianic-early Antonine period.

Ditch 2 yielded no BB1 sherds but only contained late first-early second century wares and forms such as rusticated ware (1074) and 1014) and neckless everted-rim jars (1062), a mortarium (1062) and less closely datable sherds.

In the evaluation trench 5 two additional ditches, cuts 510 and 515 were excavated which did not directly correspond to ditches excavated later. Cut 510 contained two samian sherds dated to AD70-110, a BB1 jar of the Hadrianic-early Antonine period and a mortarium. Cut 515 included white ware sherds, samian sherds dated to AD70-110 and 120-80, rusticated ware and a vesicular jar base. Initially this last vessel was thought to be Dales ware but on further consideration, it is more likely to be a Lincolnshire early shelly ware jar of the mid-first to mid-second century.

Pebble lined ditches

An FLA2 ring-necked flagon and sherds from the base of lower body of a GRB5 jar came from ditch 5a fill 1112. The flagon with its prominent top ring and upright neck dates to the late first and early second century. The fabric of the jar compares well with that found in Flavian-Trajanic levels at Doncaster used to make Flavian-Trajanic forms such as reeded-rim bowl and rusticated jars. In ditch 5c grey ware sherds from only three vessels were recovered from fills 1356 and 1357 but a GRB1 carinated sherd (1356) is probably from a carinated bowl belonging

to the late first to early second century. The diagnostic pottery sherds from ditch 3 included roughcast ware bodysherds, a Flavian-Trajanic GRB1 flat-rim bowl and a samian sherd. Only unstratified material was assigned to ditch 1 but this include a BB1 type jar of the Hadrianic period or later.

Vicus

Only two sherds came from 1390 but these were both in the medium grey sandy fabric GRB6, a fabric found in the South Yorkshire kilns from the early Antonine period onwards. The range of material from the layers associated with 1336 date from the Flavian-Trajanic period (1342, 1343 and 1355 characterised by rusticated wares, neckless everted-rim jars and an early South Yorkshire GRB5 bifid flange rim dish of Flavian-Antonine date) and the Hadrianic period (1337, 1348 and 1352 characterised by similar vessels to the earlier layers with the addition of early second century BB1 types). Samian from 1341, 1343 and 1352 date to AD80-110 but a vessel in 1355 was dated to AD120-70. The GRB6 jar with acute lattice from 1341 is likely to date to the early to mid-second century although a lack of BB1 suggests a date in the Trajanic or early Hadrianic period. A pit, 110, contained the base and lower part of a Derbyshire ware jar, a type not made before the Antonine period. In trench 6 pit 620 was cut from layer 611 and contained a group of sherds of Flavian or Flavian-Trajanic type. These included the Lincolnshire type GTA jars, a GRB5 dish with inturned rim (Gillam 1970 no. 337, late first; Darling 1984 nos 43-44 dated Flavian-Hadrianic/Antonine but in this fabric probably Flavian-Trajanic), a Flavian-early Trajanic mortarium, a samian cup dated AD70-90 and a samian form 36 dated AD70-110. Adjacent posthole 627 contained a flat-rim bowl probably of Trajanic date. In the layers associated with layer 611, layer 601 contained a large proportion of a reeded-rim bowl with fairly curved rather than carinated profile. This vessel was burnt and dates to the earlier part of the Flavian-Trajanic period. Also present were rusticated sherds, a BB1 type sherd with traces of burnished lattice decoration and a bead-rim bowl. The BB1 type sherd gives a deposition date in the Hadrianic-early Antonine period. Layer 605 contained sherds from two samian bowls, forms 30 and 37, dated AD70-110. The post-hole cut through layer 617 dated by sherds of an early moulded rim flagon, an OAA1 flat-rim bowl, a carinated bowl, a Dr27 copy, rusticated ware, a neckless everted-rim jar, a GRB5 dish with inturned rim of Flavian-Antonine date and samian date AD70-110. The coarse ware is of Flavian-Trajanic date. The samian from 605 gave a Flavian-Trajanic date while the mortarium from 604 gave a late first to early second century date.

Ceramic supply, function and status

The stratified groups were rather small for detailed analysis so the whole assemblage is considered as one group with a date range from the late Flavian to Hadrianic/beginning of the Antonine period. The reduced wares were the most common ware group by sherd count and EVES vales with amphorae and oxidised wares not far behind and white, black burnished and mortarium wares not far behind. Samian ware levels were in keeping with a military site although other fine wares were scarce. 60% of the grey wares were in locally made fabrics GRB1 and GRA2 with a further 20% in grey wares of South Yorkshire type and 6% in a white cored grey ware. To the South Yorkshire wares may be added the BB1 ware which is likely to come from the Rossington Bridge kilns. Similarly around 62% of the oxidised wares were in fabrics likely to be locally produced. As regards the white wares, FLA2 compared well with

fabrics made from Coal Measures clay and could be local while FLA1 seems to be a finer variant of that fabric. FLA3 and the buff version OBA3 compared well with a fabric known from Lincoln during the legionary period and one sherd was of Ver white ware. Only a very small number of white-slipped oxidised sherds were identified but it is very likely that more existed originally and due to burial conditions, the slip has now gone so they are in the oxidised group. As well as the fine white/buff wares, two other groups, the CT and GT wares, are from Lincolnshire or the Trent Valley. The GTA jars are typical of jars made in the Trent Valley and north Lincolnshire in the late first to mid-second century and were arriving in Yorkshire during the Flavian-Trajanic period at Doncaster and Castleford. The shell-tempered jar is also likely to be from that area although in this case the type of jar is not known. Again a similar date range is suggested. Fine wares were scarce and were mostly made up of roughcast beakers, probably imported, and one scrap of Nene Valley colour-coated ware. The imported amphorae were made up of 78% comprising Spanish Dressel 20 oil amphora with c22% of the amphora sherds coming from Gallic wine amphora. Using the weight value, the proportion of Gallic amphorae is reduced to 4%. Samian comprised 5% by count of the total assemblage.

Pottery wasters - underfired, distorted or overfired sherds – were present in upper layers 502, 601a and 615 and in ditches 4 and 5, 1195, vicus layer 1348 near 1336 and made up ground layer 1001. The vessels comprised a GRB1 rusticated jar, much of an underfired OAA1 rounded body reeded-rim bowl, a distorted OAA1 flat-rim bowl GRA2 everted rim beaker, nearly complete, and a GRB1 rusticated jar with short, everted rim (nos 7,8, 19 and 25). May records waster pottery from his excavations and these included “coarse red ware” flagons, Dr 27 cups, a flanged bowl, flanged mortaria, bead-rim bowl, a flat-rim bowl, a cheese-press, and plain-rimmed platters (1922 pls XXIX nos 172-3, 178, XXXIIIa nos 199a-e, XXXIIIb, XXXIV and XXXVII no. 237). May (1922, 109) dated production to the first century and Simpson agreed (1973,84) but Swan suggested a Flavian –Trajanic date range (2002, 35-6). Several aspects of the waster group suggest a late Flavian or Trajanic date. Earlier necked everted-rim jars were not present and jars were all of the neckless short everted-rim type. Flat-rim carinated bowls were more common than reeded-rim bowls with rounded bodies. The samian is of later Flavian-Trajanic type.

The assemblage compares well with other military sites as regards vessel types with dining equipment such as bowls, dishes, cups, small jar/beakers and flagons making up nearly half the assemblage. The presence of specialist vessels such as two facepots and a tazze base from 1341, 603 and 104 respectively indicates a ritual or possibly sepulchral side to life at Templeborough. 1341 was a layer associated with wall 1336 in the vicus while 603 and 104 were both modern in date so may have been moved from elsewhere in the fort or vicus. Two miniature or very small beakers from 615 may also be of ritual significance. The waster beaker from ditch 7 fill 1194 may also be a miniature.

Apart from the wasters, other conditions noted included one amphora which had had the handle sawn off to facilitate re-use, one amphora which was burnt down one side perhaps during secondary usage, one South Yorkshire deep subconical bowl with a perforation c6mm in diameter through the wall, two scorched BB1 bowls and one jar, one BB1 bowl and one jar with burnt accretions, a scorched CT jar, three burnt grey ware jars and two possibly burnt or misfired white wares.

In terms of functional differences, excluding pottery from post Roman modern dumps, the vicus assemblages had substantially more amphorae by weight and count, more fine wares, samian but less white and white-slipped wares. When the vessel types are examined the vicus deposits had more bowls, cups, jars and mortaria whereas the fort ditches had more beakers/small jars, flagons, narrow-necked jars and wide-mouthed jar/bowls. This small data set cannot be considered a reliable indicator of functionality within the fort and vicus at Templeborough but the tendency for a high incidence samian within vici particularly decorated samian has also been noted as a widespread phenomenon by Willis.

Vessel	Rel %
Bowl/dish	19.7
dish	2.9
bowl/dish	0.7
beaker	6.9
cup	2.7
flagon	14.5
jar	30.0
narrow-n jar	7.8
wide-mouthed jar/bowl	3.3
mortarium	10.9
lid	0.6

Table 1 Relative quantities of vessel types using EVES

Fabrics

? denotes uncertain examples of a fabric, usually because of very abraded condition, accretions and effects of burial on sherd.

Ware group	Fabric	Description	Source	Ill.	Description and dating	Quantities (nos, g, rim %)
Ampora	DR20	Tomber and Dore 1998 BAT AM	Spain oil amphora	1	603 Upper part of a Dressel 20 handle with a partially legible impressed stamp <i>in ansa</i> enclosed in a cartouche. The reading of the first three letters as M S P is fairly clear but there is also a space for a fourth letter, unfortunately too faint to read, before the end of the cartouche. It is possible that this may be an O and that the full reading of the stamp is M S P O [Callender, 1965, 1180; Millet, 2008, Fig. 152, no. 181]. If this	170, 11523

Ware group	Fabric	Description	Source	Ill.	Description and dating	Quantities (nos, g, rim %)
					reading is correct, the amphora may well have been made at the kiln site of La Catria, on the south bank of the River Guadalquivir in the region of Axati, in the Roman province of Baetica [Millet, 2008, 318-334]. Callender suggests a date of AD 140-180? For the range of MSP and MSPO stamps [Callender, 1965, 1180].	
	GALAMP	Tomber and Dore 1998 GAL AM	Gaul wine amphora		Mid 1 st -3 rd century	50, 425
BB1	BB1	Tomber and Dore 1998 DOR BB1	Dorset	2-4	2 flat-rim bowl, acute lattice burnish, Gillam 1976 no.34, early-mid 2nd century. 1326. 3 necked jar with wavy line neck burnish. Gillam 1976 no. 2 early to mid-second century. 600. 4 neckless everted-rim small jar Gillam 1976 no. 30 early to mid-2 nd century. 1162	66, 1298, 170
	RBB1	Tomber and Dore 1998 ROS BB1	Rossington Bridge	5	5 flat-rim dish with intersecting chevron burnish, Gillam 1976 no. 62 2 nd . Possibly RBB1. 502/unstrat.	26, 311, 15
	BBT1	Tomber and Dore 1998 ROS BB1?	Rossington Bridge?			4, 23
C	CT		Lincolnshire?			11, 120
DBY	DBY	Tomber and Dore 1998 DER CO	Belper area, Derbyshire		cAD140+	2, 75
F	CC4	Tomber and Dore 1998 ARG CC	Argonne area, France			9, 63
	NV1	Tomber and Dore 1998 LNV CC	Nene Valley		Mid-late 2 nd +	1, 2
GT	GTA1	Hard grey fabric with brown margins. Sparse, medium, subrounded quartz and coarse to very coarse angular grey inclusions- clay cognates or grog. Some non-reactive angular cream inclusions	Lincolnshire and Trent Valley	6	Jar with triangular rim formed by folding clay body in. Multiple shoulder grooves. Late first to early second century at Doncaster, Leary 2004 and Todd 1968 dated AD50-100). 621.	20, 430, 27
Mort	See					72, 3441,

Ware group	Fabric	Description	Source	Ill.	Description and dating	Quantities (nos, g, rim %)
arium	Hartley this report					197
Oxidised wares	O	Indeterminate oxidised ware	Uncertain			15, 108
	O OR FC	Indeterminate oxidised ware or fired clay	Uncertain			2,12
	OA A1	Orange. Moderate, fine quartz and sparse, medium, subangular quartz and sparse rounded red/brown inclusions. Sparse mica'.	Local	7-9	7 flat-rim carinated bowl. Warped rim, partially reduced and overfired. Gillam 1970 no. 217 AD110-130 Unstrat/502 8 underfired reeded-rim bowl with rounded body. Gillam 1970 nos. 214-5 AD80-125. 601 9 moulded rim flagon. CF Greene 1993 type 3 pre-Flavian/early Flavian. 617	30, 597, 64
	OA A2					7, 22
	OA B	Indeterminate medium sandy oxidised ware				23, 199
	OA B1	Orange, sandy with moderate to common, medium, subangular quartz and rare medium rounded red/brown inclusions	Local	10-12	10 copy of samian form 27 617 11 bowl with moulded rim. Similar to vessel at Flavian-Trajanic kilns at Derby, Brassington 1971, fig. 5 no. 15. 1341 12 bead-rim bowl as samian form 30 or 37. Unstrat. Probably Flavian-Trajanic if kiln of that date.	63, 503, 27
	OA B1P	Pinkish OAB1	local?			1, 27
	OB A	Indeterminate fine buff oxidised ware				18, 253
	OB A1	As OAA1 but buff/yellow	Local			2, 90
	OB A1/FLA 1	OBA1 or FLA1	Local?			1, 9
	OB A2	Pale buff, soft, micaceous with moderate, fine quartz and sparse fine rounded orange/brown inclusions. Micaceous	Lincoln	13	OBA2 tazze base. Fabric compares with legionary early wares at Lincoln (Darling 1984 fabrics 1- and 2). 104	11,259

Ware group	Fabric	Description	Source	Ill.	Description and dating	Quantities (nos, g, rim %)
		surfaces.				
	OBB 1	As OAB1 but buff/yellow	Local			4, 11
Reduced wares	GRA	Indeterminate fine grey ware	Unknown			24, 145
	GRA/OAA1	GRA 1 or OAA1 partially oxidised	Local or Coal Measures			1,14
	GRA 1	Hard. Smooth grey with white or pale grey core. Spare, fine, subrounded quartz and moderate, ill-sorted, medium to fine rounded black inclusions	Coal Measures	14-16	14 miniature everted-rim beaker. Small version of Flavian-Trajanic jar form. 615 15 facepot with applied eyebrows with cuts across eyebrows, possible applied clay horn and scar where corresponding right hand "horn" has dropped off, long straight nose, and incised eyeballs, pricked beard. Similar to type made at Caistor-by-Norwich in later 1 st century (Braithwaite 2004, type RB13C). 1341 16 lid with beaded rim 615	33, 439, 87
	GRA 2	Grey with moderate to common, fine, subangular quartz,.	Local	17-19	17 concave walled bowl, carinated. 502 18 narrow-necked jar. Simple long-lived type. 615 19 very small everted-rim beaker. Waster Gillam 1970 type 102, AD 80-120. 1194	52, 697, 162
	GRA 3	Light grey with brown margin and grey core. Soft with fine quartz and sparse, medium, rounded black inclusions	?London area/oghgate	20	Poppyhead beaker with panel of barbotine dots. Late 1 st -early 2 nd century. Monaghan 1987, type 2a2. 502	2, 11, 14
	GRA 4	Grey, hard with moderate, fine quartz and rare, medium rounded white inclusions	Unknown	21	Carinated, reeded rim bowl. Gillam 1970 nos. 214-5 AD80-125. 1323	10,71
	GRB	Indeterminate medium sandy greyware	Unknown			41, 442, 56
	GRB/GTA	GRB or GTA	Unknown			1, 3
	GRB 1 and GRB 1W	Sandy and fairly soft when not overfired. Moderate. Medium, subangular quartz and sparse,	Local	22-26	22 jar with short everted rim and small rusticated blob or barbotine dot. Flavian-Trajanic 1325 23 flanged hemi-spherical bowl, Marsh 1978 type 33 early 2 nd century. 1326. 24 rusticated jar. Slightly distorted. 1327.	280, 2335, 258

Ware group	Fabric	Description	Source	Ill.	Description and dating	Quantities (nos, g, rim %)
		medium, subrounded grey/black inclusions. Similar to OAB1GRBW as GRB1 but with light grey/white core			25 flat-rim carinated bowl. As no.7. 1331 26 GRB1W flat rim dish. Copy of BB1 type.Hadrianic-Antonine1326	
	GRB 2	Hard, grey with moderate medium/coarse subangular quartz.	Unknown, ? South Yorkshire			4, 45
	GRB 3	Grey with orange margins and grey core.. Moderate, medium, subangular quartz and rare and coarse, iron oxides	Unknown			1, 21
	GRB 4	Brownish grey moderate subangular and subrounded quartz and sparse brown inclusions	South Yorkshire/Doncaster			57, 579,94
	GRB 5	Dark grey black ware with brown margins and dark grey core. Moderate, well-sorted, medium, subrounded quartz. Includes some BB1 copies	South Yorkshire/Doncaster	27-30	27 everted-rim jar 615 28 dish with inturned rim Gillam 1970 no. 337, late first; Darling 1984 nos 43-44 dated Flavian-Hadrianic/Antonine but in this fabric probably Flavian-Trajanic 621 29 bowl with flat bifid rim. Flavian-Antonine, Roxby type S, Rigby 1976, Bidwell and Croom 1997, fig. 23 nos 47-8, Dodd and Woodward 1922 Pl. XXIV nos 85-9 and Mitchelson 1966 and Snape et al. 2002 fig. 32 no. 521355 30 rusticated jar or barbotine dot jar	54, 543, 94
	GRB 6	Medium to light grey. Hard with abundant medium to medium, coarse subrounded and rounded quartz. And sparse medium, rounded black inclusions	South Yorkshire/Doncaster	31	31 rusticated jar 1352	47, 1366, 74
S	samian		Gaul			72, 936,161
W	FLA	White ware, indeterminate	Local?			16, 195
	FLA 1	White with sparse, medium subangular	Local or	32-33	32 ring-necked flagon 1162 as FLA2 flagons	14, 457, 59

Ware group	Fabric	Description	Source	Ill.	Description and dating	Quantities (nos, g, rim %)
		quartz and red/brown inclusions. Finer version of FLA2	possibly Castleford/Aldborough?		33 triangular rim, ?honey-pot. Mid- to late 1 st century 617	
	FLA 1P	Pinkish FLA1	Local or possibly Castleford/Aldborough?			4,29
	FLA 2	White with sparse to moderate, medium subangular quartz and red/brown inclusions	Local or possibly Castleford/Aldborough?	34-37	34 ring-necked flagon 1112 35 ring-necked flagon 1162 36 facepot with incised applied eyebrows and vertical scratches for ?beard. Unusual both in fabric and long scratches for beard. 603 37 ring-necked flagon 1210 All flagons as Marsh and Tyers 1978 1b2 Gillam 1970 3-4 Flavian-Trajanic	52, 514, 200
	FLA 2P	Pinkish FLA2	Local or possibly Castleford/Aldborough?			4,36
	FLA 3	As OBA2 but white	Lincoln ?			3, 30, 40
	FLA 3/OBA2	White to buff FLA3	Lincoln ?	38	Knobbed lid. In fabric found in legionary deposits at Lincoln 1343	23, 34
	FLA 4	Tomber and Dore 1998 VER WH	St Albans type		Traded in North in Flavian-Trajanic period	1, 14
WS	FLB	AS OAB1 with traces of white slip	Local?	39	Bead-rim bowl as May Pl no 229 kiln waster Flavian-Trajanic 6021	49, 453,110

Table 2 fabrics, forms, illustrations and quantification

Bibliography

Berni Millet, P. 2008 *Epigrafía anfórica de la Bética. Nuevas formas de análisis*, Col Lección instrumenta, 29, Barcelona

Bidwell, P. T. and Croom, A. 1997 The coarse wares. In L.P. Wenham and B. Heywood *The 1968 to 1970 Excavations in the vicus at Malton, North Yorkshire*. Yorkshire Archaeol. Report 3, 61-103

- Braithwaite G. 2007 *Faces from the Past: A Study of Roman Face Pots from Italy and the Western Provinces of the Roman Empire*. BAR Internat. Ser 1651
- Brassington, M. 1971 A Trajanic kiln complex near Little Chester, Derby, 1968. *Antiquaries Journal* Vol. 51: 36-69.
- Buckland, P C, Magilton, J R and Dolby, M J, 1980 The Roman Pottery Industries of South Yorkshire: a review, *Britannia* 11: 145-64
- Callender, M.H. 1965 *Roman Amphorae*, London.
- Darling, M.J. 1984 *Roman Pottery from the Upper Defences*. Lincoln Archaeological Trust Monograph Series XVI-2.
- Dodd, P.W. and Woodward, A.M. 1922 Excavations at Slack, 1913-1915. *YAJ* 26, 93-143
- Evans, J. (1993) Pottery function and finewares in the Roman north. *Journal of Roman Pottery Studies* 6, 95-119.
- Evans, J. 2001 'Material approaches to the identification of different Romano-British site types', in James, S and Millett, M. *Britons and Romans: advancing an archaeological agenda*, 26-35, (Council for British Archaeology Research Report 125).
- Gillam, J. P., 1970, *Types of Roman Coarse Pottery Vessels in Northern Britain*, 3rd edition, Newcastle
- Gillam, J. P., 1976, 'Coarse fumed ware in northern Britain and beyond,' *Glasgow Archaeol. J.* 4, 57-89
- Greene, K. T. 1993 The Fortress Coarsewares. In W.H. Manning *Report on the Excavations at Usk 1965-76*. Cardiff, 3-121.
- Leary, R.S. 2004 *The Romano-British pottery from excavations at the High St, Doncaster*. Unpublished report for Archaeological Services (WYAS).
- Marsh, G, 1978 'Early Second Century Fine Wares in the London Area. In P. Arthur and G. Marsh' (eds) *Early Fine Wares in Roman Britain*. British Archaeological Reports British series 57, 119-223.
- Marsh, G and Tyers. P. 1978 'The Roman Pottery from Southwark'. In H. Sheldon et al. *Excavations at Southwark 1972-4*. Occasional Papers of the London and Middlesex archaeological Society No 1, London, 533-82
- May, T. 1922 The Roman Forts at Templeborough near Rotherham. Rotherham.
- Mitchelson, N. 1966 Roman Malton: the civilian settlement. Excavations in Orchard Field 1949-1952. *YAJ* XLI, 209-292.
- Monaghan, J 1987 *Upchurch and Thameside Roman Pottery* BAR Brit Ser 173
- Rigby, V., 1976, Coarse pottery, in I.M. Stead, *Excavations at Winterton Roman Villa and Other Roman Sites in North Lincolnshire*, Department of the Environment Archaeol. Rep. 9, London
- Rush, P., Dickinson, P. and Hartley, K.F. 2000 Roman Castleford Excavations 1974-85 Vol. III The Pottery. West Yorkshire Archaeology Service.

Simpson, G. Roman Manchester and Templebrough: The Forts and Dates Revisited. In C. and S. Hawkes. *Greeks, Celts and Romans*, Dent & Sons Ltd. London, 69-93.

Snape, M., Bidwell, P. and Croom, A. 2002 Aldborough Roman Town: Excavations by Miss D. Charlesworth, 1961-73 and by RCHM, 1959-60. *YAJ* 74, 29-112

Swan, V.G 2002 The Roman pottery of Yorkshire in its wider historical context. In P. Wilson and J. Price (eds) *Aspects of industry in Roman Yorkshire and the North*, 35-79. Oxbow Oxford

Todd, M., 1968, "Trent Valley ware": A Roman coarse ware of the middle and lower Trent Valley, *Transactions of Thoroton Society* 72: 38-41.

Tomber, R. and Dore, J., 1998, *The National Roman Fabric Reference Collection. A Handbook*, MoLAS Monograph 2. London

Willis, S. 2004 Samian Pottery: a resource for the study of Roman Britain and Beyond: the results of the English Heritage funded samian project: An E-Monograph. *Internet Archaeology* 17. <http://intarch.ac.uk/journal/issue17/willis-index.html>

APPENDIX 4 – SAMIAN POTTERY

G. Monteil

Introduction

A total of 69 sherds of samian ware recovered during evaluation (1023) and excavation (1023b) of the site were recorded for this report. It is unfortunate that out of the 43 sherds originally recorded during the assessment of the excavation samian material (1023b, Ford 2008); only 22 sherds could be located for this analysis report. The unstratified samian material has apparently since been discarded. The unstratified material was fortunately assessed in 2008 (Ford 2008) but the decorated vessels were not fully identified then and the chronological information they might have provided is now lost. As a result most of the decorated material catalogued here (D1 to 5) comes from the evaluation.

The fabric of each sherd was examined, after taking a small fresh break, under a x 20 binocular microscope and was catalogued by context number. Each archive entry consists of a context number, fabric, form and decoration identification, condition, sherd count, rim EVEs (Estimated Vessel Equivalents), rim diameter, weight, notes and a date range. The presence of wear, repair and graffiti was also systematically recorded. Rubbings of the decorated fragments were undertaken during analysis. They were mounted, scanned and submitted as illustrations.

The assemblage is small with 69 sherds representing 45 vessels for a total weight of 989g and a total rim EVEs figure of 2.02 (Table 1). The bulk of the samian ware comes from the defensive ditches (17 vessels) and *vicus* area (11 vessels) with only a single sherd recovered from one of the pebble lined ditches (ditch 3, fill 1331). Finally six come from modern deposits and ten were unstratified in evaluation trenches.

Condition

Most of the fragments are in poor condition with much of the original surfaces and slip poorly preserved. The average weight is nevertheless quite high at c. 22g with a figure of c. 35g for the evaluation and c.9g for the excavation.

The assemblage

The vast majority of the group is made up of South Gaulish vessels (Table 1) with 54 sherds, about half of which come from decorated vessels. Two from deposit 605 are particularly well preserved with several joining fragments, a Dr30 and a Dr37 (D1 and 2). The range of plain forms is limited with a few Dr27 cups, a well preserved cup form Dr27g in fill 621, a dish Dr36 and several dish fragments form Dr18/31.

Trajanic samian ware from Les Martres-de-Veyre is represented albeit by a single vessel form Dr37 (D4) with joining sherds recovered in two fills of ditch 8a (1143) and (1162). Two possible additional fragments from this vessel were identified in the unstratified material. Finally a little Central Gaulish material from Lezoux and a possible East Gaulish vessel are represented in the group, the range of forms is poor with decorated bowls Dr.30 and 37 represented in modern deposits 104 and 600, *vicus* layer 1355 and dish Dr18/31 in the same *vicus* layer 1355. The possible East Gaulish Dr18/31 was recovered from a fill of ditch 515.

Two vessels display evidence of repair, both decorated bowls. One, the Dr37 from Les Martres-de-Veyre shows a round hole through the decoration with the lead still *in situ*, the other a South Gaulish Dr37 from spread 1323 over ditch 4/4a also shows a round hole with lead *in situ* but on the band between the rim and decoration.

	South Gaulish			Les Martres			Lezoux			East Gaulish		Total		
	sh	wgh t	RE	sh	wgh t	RE	sh	wgh t	RE	sh	wght	sh	wgh t	RE
dec bowl	5	63										5	63	
dish	2	17										2	17	
DR18/31	7	29	0.17				1	7	0.0 3	4	8	1 2	44	0.2
DR18/31 R	1	3	0.03									1	3	0.03
DR27	3	16	0.06									3	16	0.06
DR27g	1	85	0.37 5									1	85	0.37 5
DR30	11	210	0.19				1	6				1 2	216	0.19
DR36	1	3	0.03									1	3	0.03
DR37	12	236	0.53	4	85	0.26 5	4	189	0.3 4			2 0	510	1.13 5
unid	11	31					1	1				1 2	32	
Total	54	693	1.38 5	4	85	0.26 5	7	203	0.3 7	4	8	6 9	989	2.02

Table 1: Samian forms and fabrics

Chronology

Though small the South Gaulish group from these two phases of work at Templeborough is later than the material recovered from Rocliffe (Dickinson 2005, 164), Castleford fort phase 1 (Dickinson and Hartley 2000, p.30) and perhaps more importantly to the samian material recovered from May's excavation (1922, Simpson 1973). In contrast to May's excavations, these two projects did not produce any form Dr.29s or Neronian material. The earliest vessel that can be dated precisely is the stamped Dr.27g recovered from the top fill of pit 620 in the vicus area which has a starting date of AD 70 (S1, fill 621). The stamps recovered from May's excavation were re-assessed and published in the Names on Terra Sigillata corpus (Hartley and Dickinson 2008a to 2012); when compared to the present group the different chronologies are clear to see (Fig. 1) in the pre-Flavian period and in the later Antonine period. This group lacks later samian material and typically Antonine and later 2nd c. fabrics and forms. The latest decorated bowl recovered is the one by Paternus iv from modern deposit (600) (D5).

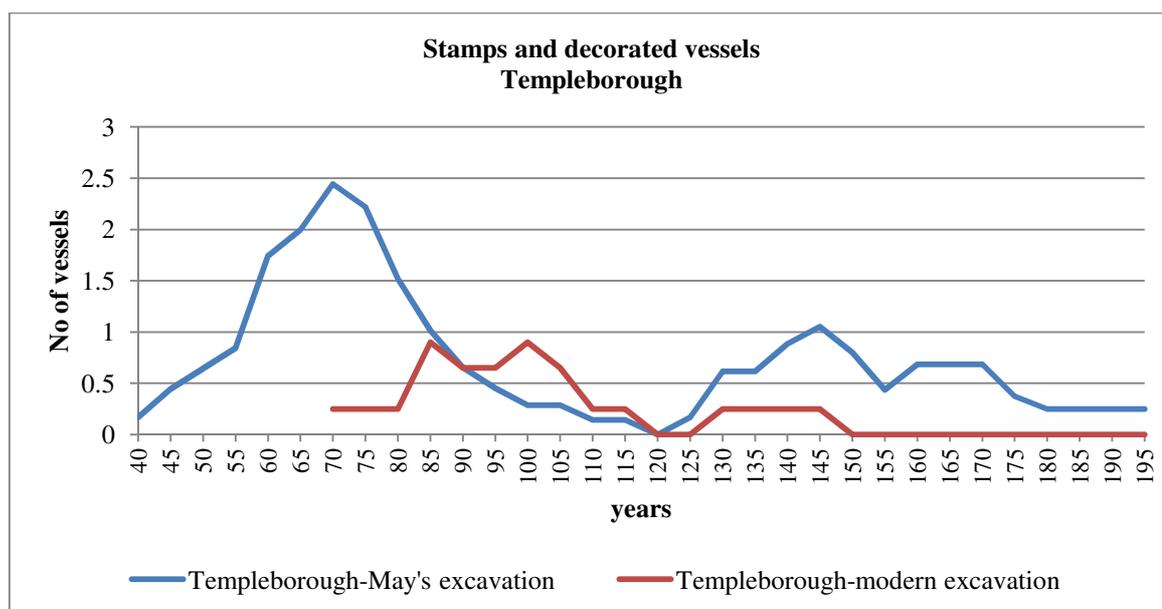


Fig. 1 Chronological distribution of the decorated and stamped samian ware from Templeborough (MNV)

Concluding remarks

The group is too small to undertake detailed or reliable comparative analysis especially of forms proportion but some trends are visible. Decorated vessels are well-represented within this small group and this fits with published profiles for extra-mural occupation at military site/*vici* (Willis 2005, table 35 and chart 14) and forts (*ibid*, chart 13). The relative frequency of samian forms from these two types of military sites in Britain is generally dominated by dish forms with decorated bowls in second place and cups in third position (*ibid*, charts 13 & 14) and this group broadly conforms. Though small the absence of graffiti and samian inkwell is perhaps a little surprising from such a group since both types of evidence for literacy are relatively common at military sites especially forts (Willis 2006, 108).

Potters' stamps

The following catalogue lists the potters identified in alphabetical order. Each entry gives the catalogue number, the excavation context number; potter's name (i, ii *etc*, where homonyms are involved); die form; form type, reading, pottery of origin, a reference to published drawing (where available) and date. Ligatured letters are underlined.

S1, (621), Censor i, die 3b, Dr.27g, **OFC.EN**, La Graufesenque, Hartley, Dickinson 2008b, p.335, AD 70-90.

Decorated samian catalogue

The following catalogue lists and identifies the decorated pieces recovered from the site that could be attributed to individual potters or groups of potters. Each entry gives the catalogue number, the excavation context number and details of the decoration.

The Inventory Numbers (Inv. No.) quoted for the South Gaulish vessels are taken from *European intake of Roman Samian ceramics*. <http://www2.rgzm.de/samian/home/frames.htm>

The letter and number codes used for the non-figured types on the Central Gaulish material –such as B223, C281, etc are the ones created by Rogers (1974). The figured-types referred to as Os. *** are the ones illustrated by Felix Oswald in his *Index of figure-types on terra sigillata* (1936).

South Gaulish-La Graufesenque

D1-(503)-Dr.37: a single abraded fragment with two chevron festoons linked by a straight horizontal line from which hangs a four-pronged tassel leaf. Each festoon is filled with a bird. This festoon and/or the birds are used by a number of late South Gaulish potters (*Biragillus i-* Inv. No. 0004380, *L. Cosius Virilis-* Inv. No. 0005521, *Mercator i-* Inv. No. 0005173, *L. Tr. Masculus* – Inv. Nos. 2001341, 0005076, 2005081) but appears particularly in the work of *Senus ii* with that tassel and straight line (Inv. Nos. 2005194, 2005202, 2005167, 2005154). AD 85-110

D2-(605)-Dr.30: Seven joining sherds with rim and decoration including ovolo and panels and three joining sherds from the base and lower part of the decoration also with panelled decoration that all probably belong to the same bowl. Some wear on the footring.

The figured types are head and left arm of what seems to be Bacchus Os. 597, an unidentifiable head, figured type Os.602 on top of a panel with leaf tips, the tale and back legs of a lion with grass tuft in panel above with little Pan Os.722 in the panel beneath. On the fragments from the lower part of the decoration are leaf tips fillers, a large column or altar and the feet and hem of Os. 883 like figure.

The ovolo looks like the one found on Dr.37s with stamps by *L. Tr. Masculus* who also used several of the figured types and motifs: Inv. Nos. 2005837, 2002488. Grass tuft and Os.602 are on Inv. No. 0005075, Pan Os. 722 is on Inv. No. 0005078, Os.883, Pan Os. 722 and Os.602 are on Inv. No. 2002487, the column/altar on Inv. Nos. 2002488 and 2002489. For a Dr30 with that ovolo, leaf tips filler, grass tuft and three of the figured types see also Inv. No. 1002937.

L. Tr- Masculus (Hartley and Dickinson 2012, p. 92-7) AD 85-105.

D3-(605)-Dr.37: Four joining sherds with ovolo and panelled decoration. The bull (Os1884), dog beneath, wavy line and the strange motif behind the bull are on a Dr.37 with that ovolo from La Graufesenque (Inv. No. 2003180). This ovolo is known for M. Crestio (Inv. Nos. 0004557, 0004577) but the rest of the motifs are not specific to him. AD 80-110.

Central Gaulish-Les Martres-de-Veyre

D4-Joining sherds from (1143) and (1162)-Dr.37: rim fragments repaired with a round hole through the ovolo and lead plug in situ. The ovolo is B28, beneath is a beaded border and a scroll with two examples of leaf H90, an example of rosette C194, two examples of rosette C280 and a winding wreath made out of several examples of bifid motifs (G284?). For a similar decoration see Stanfield and Simpson 1990, pl. 16 no. 198. *Drusus i.* AD 100-120.

Central Gaulish-Lezoux

D5-(600)-Dr.37: Two non joining fragments but with the same Venus and ovolo. The ovolo looks like B17 and the rest of the decoration is consistent with the work of Paternus iv (Roger's Paternus III). The Venus (Os. 281) and column of twisted motifs (U103) are on Rogers 1999 pl. 80 no. 7. The hare (Os 2063A?) and the bear (Os.1580) are not listed by Rogers for this potter

but a drawing on plate 80 (no. 4) has the hare. The beaded border and the rosette used at the junctions are consistent with the work of that potter too. *Paternus iv.* AD 130-150.

Acknowledgement

My warmest thanks to Geoffrey Dannell for his time and advice regarding some of the South Gaulish vessels.

Bibliography

Hartley, B.R. and Dickinson, B.M. 2008a *Names on Terra Sigillata. An Index of Makers' stamps and signatures on Gallo-Roman Terra Sigillata (Samian Ware). Volume 1 (A to AXO)*. Bulletin of the Institute of Classical Studies Supplement 102-01. Institute of Classical Studies, University of London, London

Hartley, B.R. and Dickinson, B.M. 2008b *Names on Terra Sigillata. An Index of Makers' stamps and signatures on Gallo-Roman Terra Sigillata (Samian Ware). Volume 2 (B to CEROTCUS)*. Bulletin of the Institute of Classical Studies Supplement 102-02, Institute of Classical Studies, University of London, London

Hartley, B.R., and Dickinson, B.M. 2008c *Names on Terra Sigillata: Volume 3 (Certianus to Exsobano)*, Bulletin of the Institute of Classical Studies Supplement 102-03. Institute of Classical Studies, University of London, London

Hartley, B.R., and Dickinson, B.M. 2009a *Names on Terra Sigillata. An Index of Makers' stamps and signatures on Gallo-Roman Terra Sigillata (Samian Ware). Volume 4 (F to Klum)* Bulletin of the Institute of Classical Studies Supplement 102-04. Institute of Classical Studies, University of London, London

Hartley, B.R., and Dickinson, B.M. 2009b *Names on Terra Sigillata: Volume 5 (L to Masclus i)*, Bulletin of the Institute of Classical Studies Supplement 102-05. Institute of Classical Studies, University of London, London

Hartley, B.R., and Dickinson, B.M. 2010 *Names on Terra Sigillata: Volume 6 (Masclus i-Balbus to Oxitus)*, Bulletin of the Institute of Classical Studies Supplement 102-06. Institute of Classical Studies, University of London, London

Hartley, B.R., and Dickinson, B.M. 2011a *Names on Terra Sigillata: Volume 7 (P to Rxead)*, Bulletin of the Institute of Classical Studies Supplement 102-07. Institute of Classical Studies, University of London, London

Hartley, B.R., and Dickinson, B.M. 2011b *Names on Terra Sigillata: Volume 8 (S to Symphorus)*, Bulletin of the Institute of Classical Studies Supplement 102-08. Institute of Classical Studies, University of London, London

Hartley, B.R., and Dickinson, B.M. 2012 *Names on Terra Sigillata: Volume 9 (T to Ximus)*, Bulletin of the Institute of Classical Studies Supplement 102-08. Institute of Classical Studies, University of London, London

May, T. 1922 *The Roman Forts at Templeborough near Rotherham*. Rotherham.

Oswald, F. 1936-37. *Index of figure-types on terra sigillata*, *Annals Archaeol Anthropol*, 23-24. Liverpool.

Rogers, G-B. 1974. *Poteries sigillées de la Gaule centrale, I, les motifs non figurés*. In supplément 28, GALLIA, Paris.

Rogers, G-B. 1999. *Poteries sigillées de la Gaule centrale, II, les potiers*. Two volumes, Revue archéologique SITES, Hors Série, 40, Lezoux.

Simpson, G. 1973 Roman Manchester and Templebrough: The Forts and Dates Revisited. In C. and S. Hawkes. *Greeks, Celts and Romans*, Dent & Sons Ltd. London, 69-93.

Stanfield, J. A. and Simpson, G. 1990. *Les potiers de la Gaule Centrale*, Revue archéologique SITES, Hors Série, 37, Recherches sur les ateliers de potiers de la Gaule Centrale, Tome V. Lezoux.

Willis, S. 2005. *Samian Pottery, a Resource for the Study of Roman Britain Beyond: the results of the English Heritage funded Samian Project. An e-monograph*. [Supplement to Internet Archaeology 17]: http://intarch.ac.uk/journal/issue17/willis_index.html

Willis, S. 2006 'The context of writing and written records in ink: the archaeology of samian inkwells in Britain'. In *The Archaeological Journal*, 162, 96-145

APPENDIX 5 - SMALL FINDS

Nicola Rogers

Introduction

Seven objects were provided for identification, of which three were of iron and four of copper alloy. X-rays of five of the objects were available to aid identification. All the artefacts were incomplete, and all corroded. Positive identifications were difficult to make because of the conditions of the objects, and to confirm identifications.

The Iron Objects

Two of the three iron objects appear to be fragmentary nails (context 104, Bag 16; context 503, Bag 12). It is not possible to identify (context 615, Bag 47) from the object and X-ray without further conservation investigation, but the X-ray suggests the object may be a chain link or swivel fitting.

Iron object from Context 1326 (Roman ditch fill): probable nail shank.

The Copper Alloy Objects

Two of the four copper alloy objects come from stratified deposits: (context 604, Bag 66) is a substantial but incomplete ring which may represent the remains of a Roman terret ring, used on harness to guide the reins. (Context 615, Bag 65) is extremely fragmentary, and thus very difficult to identify, but appears originally to have been discoidal; one of several X-rays hints at a possible pin fitting on the reverse but this is faint and inconclusive, and the object may not be up to further investigative conservation .

The two unstratified copper alloy objects comprise a Roman bow brooch fragment (US, Bag 67), and a possible strip fragment (US, Bag 68).

Context	Bag Number	Material	Object
104	16	Iron	Nail?
503	12	Iron	Nail shank?
604	66	Copper Alloy	Terret?
615	47	Iron	Chain link?
615	65	Copper Alloy	Fitting?
US	67	Copper Alloy	Bow brooch fragment
US	68	Copper Alloy	Fragment

Conclusions

Two of the objects (context 604, Bag 66) and (US, Bag 67) are of Roman date. The remainder of the assemblage appears undatable, and largely unidentifiable.

APPENDIX 6 - METALWORKING DEBRIS FROM TEMPLEBOROUGH

Rachel S Cubitt

This report deals with material from ARCUS excavations on the site of the Templeborough Rolling Mill, Rotherham. The site is known from earlier work to have been the location of a Roman fort (Chan 2006, 6).

Five items from Templeborough were subjected to visual assessment and are summarised in the table below.

Accession code	Context	Slag type	weight (g)	Comments
ROTMG:2006.2	128	Non-diagnostic ironworking slag	30	dense, flowed, red, highly magnetic
ROTMG:2006.2.40.2	1064	Vitrified hearth or furnace lining	18	rough clay exterior with black glassy material on interior, iron staining, flat curve suggests large diameter of original structure
ROTMG:2006.2.54	1272	Fired clay	28	no vitrification, similar fabric to VFL, thick and no outside surfaces so from thick walled structure
ROTMG:2006.2.32	2101	Fired clay	4	slagged surface
ROTMG:2006.2	104	Slag	48	waste from high temperature process, dark grey

Table 1. The debris from Templeborough

Outline of the material

The non-diagnostic slag is evidence of ironworking taking place but it is not possible to say whether this is related to smithing, smelting or another ferrous metal process.

The fragment of grey slag (context 104) is waste from a very high temperature process, probably post-medieval. XRF analysis is required to identify the composition of this fragment. It could relate to activity at the rolling mill.

The remaining fragments are evidence for a hearth or furnace structure. This material is non-diagnostic in that could be formed by a number of high temperature processes. The clay fabrics of the three fragments are very similar. Taken together their shape suggests a structure with a large diameter and thick walls.

Context information

Metalworking waste is not independently dateable so information about the contexts which produced these items was sought. The non-diagnostic ironworking fragment comes from the fill of a Roman pit. Fills higher in the pit contained pottery dating in the range 1st-3rd Century AD (Chan 2006, 3). However these features were later truncated by features relating to the rolling mill (Chan 2006, 28), so the finds cannot be securely tied to the Roman era.

Context 104 is the backfill of a twentieth century foundation cut containing both modern and Romano-British pottery (Chan 2006, 11). This fits with the proposal that this fragment derives from a post-medieval context.

Context 1064 was the primary fill of Ditch 2, a phase 1 fort defensive ditch.

Earlier excavations

Excavation of the Roman fort in the 1920s uncovered evidence of industrial activity. A smithy was uncovered (May 1922, 57). The finds catalogue includes lumps of glass waste (May 1922, 82), and fragments of small crucibles (May 1922, 80). Judging by their size and appearance, the latter might have been for the melting of small quantities of precious metal. If other fragments of fired clay hearth or furnace material were encountered these are not mentioned.

Discussion

The slag fragment from context 104 is more than likely from a relatively modern high temperature industry but XRF is needed to identify which. The dense and flowed nature of the non-diagnostic slag means it perhaps derives from very high temperature post-medieval ironworking. It is notable that both of these items come from a disturbed area of the site with modern features.

The fired clay vitrified furnace or hearth lining is much more reminiscent of material from pre Industrial Revolution processes. It is difficult to draw any conclusions from such a small quantity of evidence. This material probably dates from the Roman periods when, according the 1920s excavation finds, smithing, precious metalworking and glass working were all apparently taking place.

References

Chan, B. 2006 *Archaeological evaluation of Templeborough Rolling Mill nr. Rotherham, South Yorkshire*. ARCUS Unpublished report.

May, T. 1922 *The Roman Forts of Templeborough near Rotherham*.

APPENDIX 7 - CERAMIC BUILDING MATERIALS

J.M. McComish

The assemblage comprised 40 sherds of Roman material and two sherds of medieval date. For the most part the Romano-British sherds were too small to determine the original form, but bricks, box-flue tiles and roof tiles were present. The Romano-British material was for the most part underfired and seemed to represent poorly made bricks, with a smaller number of hard-fired items of better quality. In addition to the ceramic building material, a single sherd of micaceous sandstone was present which probably represents a stone floor tile.

Introduction and Methodology

The collection of ceramic building material (CBM) recorded here relates to an archaeological evaluation undertaken in 2006 at Templeborough Rolling Mill, Rotherham, South Yorkshire. Although this site was reported on (Chan 2006) the ceramic building material was not assessed for this report. In addition there were five sherds (from contexts 2101 and 2122) which were recovered during a watching brief in 2007, which had also not been catalogued.

A second collection of tile from the site was recovered in 2007 during open area excavations and a watching brief at the site. The 2007 collection was fully recorded by J. Tibbles, and is reported on in McCoy (2008, 29-34 and Appendix 4).

As the excavations at the Templeborough Rolling Mill site are to be taken to publication (Davies forthcoming) it was necessary to catalogue the unrecorded material from the evaluation in such a way as to conform with the methodology used by J. Tibbles when recording the 2007 CBM collection from the site, thereby enabling the two collections to be published as a single group. To this end, Tables 1 and 2 are in the format given by Tibbles (in McCoy 2008, Table 5 p30 and Appendix 4).

The 2006 assemblage comprises 42 sherds of CBM and one sherd of stone, with a total weight of 6,927g. The assemblage was examined by a x10 magnification lens, and the relevant information relating to form, weight (in grams) and surviving complete dimensions was catalogued, together with any other comments (Table 3). Full thin-section petrological analysis of the fabrics has not been undertaken, but three fabrics were noted on the Roman material (F1-F3 in the catalogue) and a fourth fabric (F4) was noted on the small quantity of medieval tile present. In addition to the CBM a single sherd of micaceous sandstone was present which was 32mm thick; this had a heavily worn upper surface and probably represents a stone floor tile.

Form	Quantity	Weight
Brick	1	1328g
Brick unidentifiable	5	2454g
Brick?/Tile?	1	256g
Tegulae	2	1314g
Imbrices	2	290g
Box-flue tiles	2	74g
Tile	2	30g
Form Unidentifiable	25	385g
Stone floor	1	722g

Table 1 – CBM: Summary of the assemblage

The Assemblage

Sherds of CBM were present in ten contexts (Table 2), and 99% of the assemblage was of Roman date, with 1% being of medieval date.

The Romano-British Assemblage

Forty sherds from ten contexts were present (Table 2). Seven of the contexts were of Roman date, ranging from pit and ditch backfills, to deposits including a possible floor surface; 54% of the Roman tile was recovered from these contexts. The remainder of the Roman CBM (46% of the total) occurred residually in contexts of modern date.

The bulk of the Roman material was in poor condition, being heavily fragmented, making it impossible to identify the original form in many cases. The majority of the Roman CBM (32 sherds weighing 6,114g) comprised underfired sherds which were heavily abraded, though there were also a small number of sherds of hard-fired CBM present (9 sherds weighting 6114g).

Context	Phase	Description	Wgt gms	Type
102	3	Made ground	1328	Brick
102	3	Made ground	56	Box flue
102	3	Made ground	114	Imbrex?
104	3	Modern foundation cut backfill	42	Plain
104	3	Modern foundation cut backfill	32	Ridge
104	3	Modern foundation cut backfill	18	Box flue
104	3	Modern foundation cut backfill	24	Tile
104	3	Modern foundation cut backfill	6	Tile
104	3	Modern foundation cut backfill	4	Unknown
104	3	Modern foundation cut backfill	2	Unknown
104	3	Modern foundation cut backfill	1	Unknown
104	3	Modern foundation cut backfill	1	Unknown
111	1	Backfill of possible pit	364	Brick
111	1	Backfill of possible pit	172	Brick
111	1	Backfill of possible pit	256	Brick/tile
516	1	Roman ditch fill	20	Unknown
516	1	Roman ditch fill	422	Tegula
601	1	Romano-British deposit	722	Floor?
615	1	Romano-British deposit	1080	Brick
615	1	Romano-British deposit	120	Brick
617	1	Possible Roman floor surface	60	Unknown
621	1	Romano-British pit fill	48	Unknown
621	1	Romano-British pit fill	24	Unknown
621	1	Romano-British pit fill	14	Unknown
621	1	Romano-British pit fill	12	Unknown
621	1	Romano-British pit fill	14	Unknown
621	1	Romano-British pit fill	16	Unknown
621	1	Romano-British pit fill	6	Unknown
621	1	Romano-British pit fill	6	Unknown
621	1	Romano-British pit fill	30	Unknown
621	1	Romano-British pit fill	10	Unknown
621	1	Romano-British pit fill	22	Unknown
621	1	Romano-British pit fill	10	Unknown
621	1	Romano-British pit fill	8	Unknown
621	1	Romano-British pit fill	8	Unknown

621	1	Romano-British pit fill	4	Unknown
621	1	Romano-British pit fill	1	Unknown
2101	1	Romano-British ditch fill	176	Imbrex
2101	1	Romano-British ditch fill	34	Unknown
2101	1	Romano-British ditch fill	12	Unknown
2101	1	Romano-British ditch fill	18	Unknown
2122	3	Modern drain fill	718	Brick
2122	3	Modern drain fill	892	Tegula

Table 2 – CBM: Summary of the assemblage in relation to context (Phase 1=Romano-British, Phase 2= Phase date unknown, Phase 3=Modern)

Bricks

Only one sherd of brick was present which had full surviving dimensions, this weighed 1,328g and measured 172mm long, 164mm wide and 40mm thick. This brick is not a standard size or shape for a Roman brick. The smallest types of Roman bricks are *bessales* which are square in plan and typically measure eight Roman inches square, which equates to 197mm², though a size range of 170-235mm has been recorded nationally (Brodrigg 1989, 34), and the only rectangular Roman bricks are *Lydions* which typically measure 1 x 1.5 Roman feet in size, equating to 297mm x 444mm (Brodrigg 1989, 40). The small rectangular brick from Templeborough should therefore be classed as a non-standard Roman brick. Roman bricks of non-standard sizes are known from various sites across Britain (these are listed in Brodrigg 1989, 57). In addition, three unusually small rectangular bricks are known from a hypocaust at the Heslington, 3km south-east of York, where they were used as basal tiles in three hypocaust pilae located adjacent to the walls of a building (McComish 2012, 189). The brick from Templeborough is smaller than any of the non-standard sized Roman bricks recorded by either Brodrigg or McComish, and presumably represents a brick manufactured for a specific purpose within a structure, though what this was is unknown. This brick was underfired and was in a light buff-coloured fabric (F3).

There were an additional five sherds which were classified as brick on the basis of their thickness. No length or breadth measurements survived on these sherds to indicate which type of brick they were in their original form (they are classed as “Brick Unidentifiable” in Table 1). Only two of these sherds had a complete surviving thickness, which were 31mm and 34mm thick respectively, the other three sherds were in excess of 36mm, 55mm and 63mm thick respectively. One of the sherds had finger drawn lines on the upper surface, what survived was in the shape of an X, but this was clearly part of a larger fret-shaped pattern, which probably represents keying lines. Similar finger drawn keying lines have been noted on a *bessalis*, a *Lydion* brick and 29 possible *parietalis* bricks in York (McComish 2012, 145, 182 and 192). The sherd which was 63mm thick had rain marks on the upper surface resultant from it being laid in the open to dry to the leather hard stage before firing; this sherd also had a slightly dish shaped upper surface, which possibly represents a manufacturing error. All of the bricks were underfired and in a light orange fabric (F2).

Roof tiles

There were two sherds of *tegulae*, both in a light orange underfired fabric (F2). The first sherd was 23mm thick with a flange 40mm thick and 40mm wide, while the second sherd was 24mm thick with a flange 47mm thick and 37mm wide. Smoothing lines parallel to the flange were

visible on one of the sherds, but the surface of the second sherd was too abraded for such marks to be visible. Neither sherd was from a corner of a tile and therefore no upper or lower cutaways were present, nor did any of the original bonding material survive.

There were two sherds identified as *imbrex*, which were 19mm and 21mm thick respectively. These were both in a hard-fired light red fabric.

Box-flue tiles

Two sherds of box-flue tiles (*tubuli*) were present, and in both cases part of two sides survived. One sherd was 14mm thick and though hard-fired in a light red fabric (F1), this sherd had very uneven exterior surfaces implying that it was badly made. The second sherd was 16mm thick, was in a light orange fabric (F2) and had a reduced core caused by reduced oxygen levels within the kiln during the firing process. Neither sherd was large enough to determine what form of keying had originally been present. In addition, they were too small for any traces of the vents to survive.

Unidentifiable by form

The majority of the sherds (21 sherds) from the site were unidentifiable by form as they lacked any surviving dimensions. In addition, there two sherds which were 16-17mm thick suggests that they were originally from roofing tiles, while a third sherd which was 19mm thick could have been brick or tile originally (this brick had been re-used having mortar and pebbles adhering to broken surfaces). The bulk of the unidentifiable material was underfired in either a light orange fabric (five sherds in F2) or a buff coloured fabric (sixteen sherds in F3), though there were three sherds which were hard-fired in a light red fabric (F1). No features of note were present on this material.

Medieval material

There was a single sherd of plain tile present together with a single sherd of ridge tile, which were forms that were typically in use from the 13th to 16th centuries. The sherds were too small for any noteworthy features to be present.

Discussion and recommendations

All of the Roman CBM was resultant from secondary deposition within backfill deposits and build-up deposits, with none being recovered from structural contexts, it is impossible therefore to determine how the CBM was originally used on the site. The high proportion of underfired poor quality sherds mirrors the pattern seen in the open area excavation, as recorded by J. Tibbles (McCoy 2008, 34-5), though it is impossible to determine if this represents one underfired batch, or whether the material represents 'seconds' originally intended for less-affluent buildings. The range of forms seen suggests that at least one building in the vicinity had a tiled roof and that there was a hypocausted building nearby.

The potential for further research on the Roman CBM is very limited, due to the small size of the collection and its highly fragmented nature. It is recommended that a selective discard policy be adopted, with samples of the various forms and fabrics being retained, but with much of the unidentifiable material being discarded. Retention of a suitable sub-sample would be of use as a reference point for any future collections of CBM recovered in Templeborough.

The medieval CBM is of limited archaeological potential as it is likely to represent re-deposited material. No further work is deemed necessary on the medieval CBM.

References

- Brodribb, G. (1989). *Roman Brick and Tile*. Wolfenboro, New Hampshire: Alan Sutton.
- Chan, B., 2006. *Archaeological evaluation at Templeborough Rolling Mill nr. Rotherham, South Yorkshire*. ARCUS Report 1023.2
- McComish, J. M., 2102. *An Analysis of Roman Ceramic Building material from York and its immediate Environs*. University of York, MA dissertation.
- McCoy, M., 2008. *Archaeological Mitigation at Templeborough Rolling Mill nr. Rotherham, South Yorkshire*. ARCUS Report 1023b.2(1)

CBM Catalogue

Context	Fabric	Form	Wgt gms	L	B	T	Comments
102	F3	Brick	1328	172	164	40	Underfired. Abraded upper surfaces
102	F1	Box flue	56			14	Part of two sides present, badly made with uneven surfaces
102	F1	Imbrex?	114			19	
104	F4	Plain	42			15	
104	F4	Ridge	32			11	
104	F2	Box flue	18			16	Part of two sides present, reduced core
104	F1	Tile	24			16	
104	F2	Tile	6			17	Reduced core
104	F2	Unknown	4				
104	F2	Unknown	2				
104	F2	Unknown	1				
104	F1	Unknown	1				
111	F2	Brick	364			34	Finger drawn lines in X shape on upper surface, probably keying lines
111	F2	Brick	172				Smooth upper surface, over 36mm thick
111	F1	Brick/tile	256			19	Reused mortar and pebbles adhering to base, upper surface and a broken edge
516	F2	Unknown	20				
516	F2	Tegula	422			23	Flange 40mm high and 40mm wide. Soothing lines on upper surface parallel to flange. Underfired. Abraded.
601	S0	Floor?	722			32	Worn upper surface
615	F2	Brick	1080				Three adjoining sherds, in excess of 63mm thick, rain marks on upper surface. Upper surface slightly dished.
615	F2	Brick	120				Over 55mm thick, part of base and side.
617	F1	Unknown	60				Well fired
621	F3	Unknown	48				All the sherds in context 621 has one smooth surface with all other surfaces broken off. Underfired and abraded.
621	F3	Unknown	24				
621	F3	Unknown	14				
621	F3	Unknown	12				
621	F3	Unknown	14				
621	F3	Unknown	16				

621	F3	Unknown	6				
621	F3	Unknown	6				
621	F3	Unknown	30				
621	F3	Unknown	10				
621	F3	Unknown	22				
621	F3	Unknown	10				
621	F3	Unknown	8				
621	F3	Unknown	8				
621	F3	Unknown	4				
621	F3	Unknown	1				
2101	F1	Imbrex	176			21	
2101	F1	Unknown	34				
2101	F2	Unknown	12				
2101	F1	Unknown	18				
2122	F2	Brick	718			31	Underfired and abraded.
2122	F2	Tegula	892			24	Flange 47mm high and 37mm wide, underfired and abraded.

Table 3 – CBM Catalogue in Context Order (L= length, B= Breadth, T=Thickness).

APPENDIX 8 – QUERN

Liz Wright

Assessment was conducted on a single fragment of quern stone which was recovered as an unstratified find from the fill of Ditch 1. It is fragment of the lower stone of a lava quern of imported Roman type. The fragment represents about one fifth of a quern with an estimated diameter of 400mm. The vertical edge which is 83mm high shows decorative finishing in the form of vertical lines at 10mm intervals. The quern thickness towards the centre is 90mm but would have been greater than 110mm, giving a greater inclination to the grinding surface. The grinding surface is inscribed with a pattern of radial lines, at approximately 20mm intervals at the edge of the quern. There are no signs of the central eye of the quern.

The quern stone itself is of a medium grey vesicular lava with a few small black and white phenocrysts and is similar to that from the Iron Age, Mediaeval and Roman quarries at Mayen in Germany (also called Niedermendig and Andernach lava). This example is heavier and denser than those more frequently encountered as a result of its smaller vesicles, which may suggest it came from a different area of the quarry. The quern is also thicker than usually encountered, so may either have been thicker when new or else have been discarded when relatively little worn. The rather primitive radial harp pattern inscribed on the grinding surface could suggest a relatively early date for this quern or else that it had been redressed by a less skilled hand at a later date.

The quern thickness, dressing pattern and denser raw material may all hint at an earlier date for the use of this quern, perhaps the 1st century AD. Other querns of lava are known from earlier excavations at Templeborough, examples of which are now in Rotherham Museum stores. Import from the Mayen quarries in Germany would have been relatively easy using the Rhine, the Humber and the Don rivers for transport.

APPENDIX 9 – GLASS

Hugh Willmott

A very small assemblage of glass, consisting of five vessels and windows, was recovered from the excavations at Templeborough. All is Roman in date, and therefore related directly to the occupation of the fort.

The most complete vessel, G1, is the lower side from a blue/green conical jug. This has a tapering body that would originally have had a long narrow neck and an applied angular ribbon handle, although these elements are now missing. The body of the vessel has been decorated with the application of simple spiral trails that have been smoothed, or marvered, flat into the body of the vessel. This type of jug is a common tableware of the late 1st and 2nd centuries AD, although they are more usually decorated with vertical rather than spiral trails. However, a very similar blue/green example with spiral trailing was found in a late Neronian/early Flavian pit at the Roman legionary fortress at Usk (Price 1995, 179 no 101).

The other two vessels are more fragmentary. The 1st, G2, is the thick curved shoulder from a blue/green prismatic bottle. These are the most common form of vessel glass found in contexts dating from AD 43 until the end of the 2nd century (Price & Cottam 1998, 191-200). Such vessels could be cylindrical in cross-section, or more commonly square, although unfortunately it is not possible to determine which the Templeborough example was. The final vessel fragment, G3, is harder to identify. It is a thinly-blown blue/green shoulder, from the point where it joins a now missing neck. Although it might be an unguent bottle, its broader diameter resembles that of a convex flask, a more complete example of which was also found in a late Neronian/early Flavian pit at the legionary fortress at Usk (Price 1995, 177 no 96).

The two remaining fragments, G4-G5, are from portions of window panes. This thick glass was formed by casting molten, but still viscous, glass onto a bed of sand and then pulling it into a squared or rectangular shape. Unlike later windows, this glass was not fitted into wooden frames, but appears to have been cemented directly into place, as evidenced by the remains of mortar on some fragments such as those found at the Roman legionary fortress at Caerleon (Zienkiewicz 1992).

Catalogue

G1: 10 joining fragments of lower tapering body and low pushed in base from a conical jug. Decorated with applied and marvered spiral trails ending 1.5-2cm above the base, the base and lower side show quite heavy abrasion and wear. Blue/green glass with little weathering. Last third of the 1st century to the third quarter of the 2nd century AD. Base diameter 110mm. Context (1341).

G2: 4 joining fragments of curved shoulder from a large prismatic bottle. Blue/green glass with little weathering. Mid 1st to end of the 2nd century AD. Context (1337).

G3: 1 small fragment of upper shoulder and very lower neck, possibly from a convex flask. Blue/green glass with no weathering. Mid- to late 1st century AD. Context (1330).

G4: 1 fragment of cast window glass with no edges. Blue/green glass with light weathering. 1st to 3rd century AD. Thickness 4mm. Context (1331).

G5: 1 fragment of cast window glass with no edges. Blue/green glass with light weathering. 1st to 3rd century AD. Thickness 3mm. Context (1326).

APPENDIX 10 - ENVIRONMENTAL

Ellen Simmons

Sampling and recovery

Three soil samples were taken from three separate ditch fills at Templeborough, Rotherham (1023b). Processing for charred plant remains was carried out using a water separation machine. The flots were collected in sieves of 1mm and 300µm mesh, and the heavy residue in a 1mm mesh, before being dried.

A preliminary assessment of the flots was made by scanning all fractions under a low power microscope (x7 – x45), and recording the abundance of the main classes of charred plant material present. Residues were sorted by eye for organic remains and artefacts.

Material represented

No charred cereal remains or wild/weed plant seeds were present in these samples although one charred nutshell fragment was present in the Ditch 4, sondage 3 sample. This sample also contained significant numbers of charcoal fragments larger than 5mm³, and therefore of a suitable size for wood identification. Some charcoal fragments larger than 5mm³ were also present in sample 2, which was taken from Ditch 2, sondage 2.

This lack of material is likely to be due to the contexts sampled not being those where charred waste from crop processing or food preparation became deposited, as such material would usually be expected to be present at a Roman fort and *vicus* site.

APPENDIX 11 - SOIL SAMPLES

Dr Roderick Mackenzie

The purpose of this assessment has been to check whether two of the soil samples recovered contain any evidence of metal production or working. The samples were processed by an environmental archaeology specialist, before being assessed for archaeometallurgical material. The results of the assessment are summarised below.

Table 7 - Summary of soil samples assessed for archaeometallurgical materials.

Context No.	Sample No.	Description
1341	5	Soil sample with low abundance of charcoal, possible spheroidal hammerslag and products of iron corrosion. Fragments of pottery also present.
1337	6	Soil sample with low abundance of charcoal and very low abundance of possible spheroidal hammerslag. Fragments of pottery also present.

Summary

Sample 5 contains fragments of charcoal, typically 0.25cm^3, albeit in a relatively low abundance. The sample also contained a low abundance of possible spheroidal hammerslag and some evidence of iron corrosion, no flake hammerscale was found in the sample. The corrosion appears to have originated from one small piece of iron that was in prolonged contact with the soil; metallic iron was not found in the sample. It was noted that the sample contained small fragments of pottery.

Sample 6 contains a similar abundance and size of charcoal fragments as sample 5. The sample also contains a very low abundance of possible spheroidal hammerslag, but no flake hammerscale. Sample 6 was also found to contain some fragments of pottery and possible mortar.

From the type and abundance of materials present in the samples, and other archaeological evidence, it is unlikely that ironworking on a workshop scale was being carried out either at, or in close proximity to the excavation.

The charcoal in the samples may well be 'domestic' in origin, and the amount of possible spheroidal hammerslag suggests that if iron smithing was being carried out, it was only on a very small scale or temporary basis.

Recommendations

No further archaeometallurgical work is recommended.