

A1 Dishforth to Barton Improvement Field 61a, Healam Bridge Gas Main Diversion, Summary Archaeology Report

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1.0 INTRODUCTION

- 1.1 This summary report presents the interim results of archaeological excavation undertaken in advance of the diversion of an existing high-pressure gas main at Healam as part of the upgrading of the A1 dual carriageway to motorway standard (Fig. 1). The work was undertaken within the scheduled monument at Healam near Pickhill, North Yorkshire (SM No. 34736/01 and 02).
- 1.2 Investigations were undertaken within Field 61a located to the west of the A1 (Fig. 2). The excavations comprised a stopple pit (14m x 42m), a short length of linking pipe trench (3m x 28m) and a reception pit (13m x 13m). A series of twelve small test pits was also excavated within the field in order to establish the depths of subsoil and topsoil protecting the archaeological horizons.
- 1.3 The existing gas main was aligned north to south and ran slightly to the west of the centre line of the stopple pit. Installation of the main had severely truncated archaeological features in the western side of this trench. The connecting pipe trench and the reception pit were located beyond the area of disturbance associated with the existing gas main.
- 1.4 The identified features included part of a cemetery containing 19 inhumation and cremation burials, a series of ditches defining probable enclosures, the remains of two earthen banks, evidence for three timber built structures, a series of human footprints, a cobbled surface and numerous pits. The only features that could potentially have pre-dated the Roman period were a series of possible Iron Age ard marks identified at the base of the sequence in the reception pit. The pottery assemblage predominately dated from the 2nd century to late 3rd century AD with some later 4th century material being recovered from the uppermost horizons. The excavated remains lay on the edges of a depression close to the south side of Healam Beck which had been subject to periodic flooding in the past and contained both alluvial and shallow peat deposits in the lowest levels..

2.0 LOCATION, GEOLOGY AND TOPOGRAPHY

2.1 The gas main diversion was undertaken within field 61a to the west of the A1 around 1.5km to the east of Carthorpe and 0.5km to the north of Healam House Farm (Fig. 1). Excavations were undertaken within the settlement area associated with Healam Bridge Roman Fort and within an angle of Healam Beck. The site was centred on SE 3560 7680.

- 2.2 The solid geology of the area comprises Permian and Triassic sandstones overlain by sands, gravels and seams of clay. The soils have been designated as Wick 1 association, incorporating deep well-drained coarse loamy brown earths.
- 2.3 The excavations were centred on a low point of the field. Generally the site was situated on a gentle west-facing slope, which fell from a height of 32m AOD to 30m AOD adjacent to Healam Beck.

3.0 RESULTS

- 3.1 Archaeological features were identified within all excavated areas, several of which broadly corresponded to linear anomalies identified by a previous geophysical survey of the area (Fig. 3). The anomalies appeared to represent a series of narrow rectangular enclosures aligned eastnorth-east to west-south-west which were arranged perpendicular to the A1. These enclosures formed part of the *vicus* to the south of the fort.
- 3.2 A summary plan of the archaeological features which were investigated has been used to illustrate the initial interpretation presented in this report (Figs 3 and 4). The relevant context numbers have been shown for features referred to specifically in the text.
- 3.3 The site was divided into three distinct areas. The southern half of the stopple pit represented slightly higher ground characterised by a natural red orange sand deposit with areas of weathered bedrock visible at a depth of c.0.4m. The northern area of the stopple pit and the pipe trench were situated within a lower area of the field and were characterised by a natural grey clay deposit at a maximum depth of c.2m. This material was overlain by waterlogged organic layers and alluvial deposits that resulted from the flooding of Healam Beck. The reception pit occupied higher ground on a gradual west-facing slope. It was characterised by a natural sand deposit at a depth of c.1.6m overlain by a series of sandy alluvial deposits.

Southern area of the stopple pit (Fig. 3)

3.4 The earliest feature identified within the southern end of the stopple pit was ditch 8099. This feature was aligned north-west to south-east and was *c*.2m in length. The ditch continued to the north into the stand off area and was cut by ditch 8040 to the south. It seemed likely that ditch 8099 turned to the east and onto the course of ditch 8040)as the truncated remains of an earlier ditch were identified at the eastern trench edge.

- 3.5 The later ditch (8040) was aligned east-north-east to west-south-west and was traced for a distance of *c*.15m. It perpetuated the line of a linear geophysical anomaly identified to the east that comprised part of a series of enclosures. The ditch was cut on its southern edge by a burial 8240. The associated skeleton had been placed face down into the grave, however, the pit was too small for the remains and body was in an unusual position. The skull had become detached, presumably during decomposition, and the forearms were below the chest (i.e. in front of the body). The lower right leg was folded back on itself and the lower left leg was missing. A group of five copper alloy finger rings was recovered from the base of the grave, adjacent to the left leg.
- 3.6 Two further inhumations (8126 and 8247) were identified to the south of ditch (8040). The easternmost burial 8126 (Plate 1) was aligned west to east and was crouched facing south. The right arm was folded back to the shoulder and the left arm lay across the waist. A twisted copper alloy bracelet encircled the left wrist. A group of iron hobnails was recorded around the feet suggesting the individual was interred wearing boots. The remains of an infant (8170), possibly neonatal, were identified within the same grave approximately 0.2m to the west of the adult skull.
- 3.7 Burial 8247 was aligned east to west and was supine with the skull tilted slightly to the right and facing forward. The right arm was flexed slightly with the hand at the pelvis. The left arm was folded across the waist and overlay the right forearm. A copper alloy bracelet encircled the right wrist.
- 3.8 A large group of pits (8233) was identified c.10m to the north of the graves. The group comprised a series of conjoined irregular pits ranging from 0.2m wide x 0.2m long x 0.1m deep up to 1.9m wide x 1.8m long x 0.6m deep. The fills of the pits contained moderate quantities of cobbles, animal bone and Roman pottery. They appeared to represent a series of waste pits, possibly associated with domestic occupation of the site.
- 3.9 A further inhumation (8279) was identified *c*.4m to the north of the pit group 8233 and was located immediately adjacent to a ditch 8209. The grave was very small in size (0.46m x 0.29m x 0.07m) and contained the remains of an infant. The burial was aligned west to east and was supine. The arms were flexed slightly at the elbows and the legs were brought forward over the body.
- 3.10 Ditch 8209 was aligned east-north-east to west-south-west and comprised multiple re-cuts with overall dimensions of c.2.3m x 0.9m. It was traced for a distance of 15.5m and appeared to

represent a boundary ditch dividing the higher ground to the south from the northern wetland area. The heavily truncated remains of a further ditch (8480) was identified at the western trench edge, c.9m to the north of the western end of the ditch 8209. This lay at a right angle to ditch 8209 and may be connected with one of the re-cuts within the ditch. Unfortunately, the intervening area was severely truncated by the installation of the existing gas main and a direct relationship could not be established.

3.11 The remains of two phases of a possible bank were identified within the eastern side of the trench located between ditch 8209 and the wetland area. The bank was constructed from redeposited natural material, presumably upcast from excavation of the adjacent ditch. Two small pits were identified cut into these deposits that contained cremated human remains (8259 and 8348). The earliest cremation (8259) was inserted into the primary bank material. It had a diameter of 0.23m and a depth of 0.08m, and only a little of the bone appeared to be represented. This feature was then sealed by a second, more substantial, layer into which the second cremation (8348) had been inserted. This cremation had a diameter of 0.4m, a depth of 0.06m and contained larger fragments of bone.

Northern area of the stopple pit and the pipe trench (Fig. 3)

- 3.12 The wetland area extended from the central part of the stopple pit to the northern end of the pipe trench. It comprised multiple organic layers interleaved with occasional sandy layers, which represented alluvial deposition relating to periodic flooding of the area. Only occasional sherds of Roman pottery were recovered from these horizons together with some animal bone and a fragment of wood with a rectangular cross-section. Archaeological features identified within this area included several human footprints, pits, deposits of dumped refuse, the remains of an earthen bank and multiple ditches.
- 3.13 A series of four human footprints (8251: Plate 2) was identified impressed into the upper level of the organic material centrally within the stopple pit. They represented a linear series of impressions formed by a right foot followed by two left foot impressions then a further right foot. The prints were formed by a shoe or boot with a length of *c*.22cm. They were sealed by a deposit of alluvial sand that contained a fragment of Roman pottery.
- 3.14 Only one of the four pits identified within the northern area of the stopple pit, (pit 8093), contained diagnostic material. This pit had a diameter of 0.95m and a depth of 0.19m. It contained a complete lower quernstone, a bone needle and a complete greyware bowl.

- 3.15 A series of dump deposits (8339) was identified overlying both the northern edge of the organic material within the pipe trench and the south-western corner of the reception pit (not illustrated). The deposits appeared to represent domestic refuse and included a significant finds assemblage of animal bone and Roman pottery, together with an amber bead, a silver Roman coin, a lead spindle whorl, and a sharpened animal tooth.
- 3.16 The remains of a second possible bank (8374) was identified in section at the western trench edge within the northern area of the stopple pit. It was recorded for only a short distance before it was truncated by the existing gas main. The bank was aligned approximately east-north-east to west-south-west and was 2.1m wide x 0.3m high. It was constructed from rounded cobbles set within a sandy clay matrix. This feature did not extend into the eastern area of the stopple pit.
- 3.17 The majority of the ditches within this area were aligned east-north-east to west-south-west and were traced for the full width of the stripped areas, presumably defining enclosure boundaries similar to those identified by the geophysical survey to the east. The ditches were cut from different levels within the organic deposits and the overlying alluvial layers and therefore represented multiple redefinition of these boundaries.

The reception pit (Figs. 3 and 4)

Phase 1

3.18 The earliest features identified to the north of the organic deposits and within the reception pit were a series of possible and marks (8497). The features were located within the south-west corner of the reception pit and comprised regular scarring of the surface of the subsoil on two separate alignments (north-south and east-west). The ard marks were the result of ploughing, possibly within the Iron Age.

Phase 2

3.19 The earliest features to yield Roman pottery were a gully (8455) and a parallel beam slot (8457) located within the south-west corner of the reception pit. The features were aligned from north to south and were traced for a distance of 5.2m. A series of five equally spaced postholes (8469) were identified running from north to south adjacent to the beam slot. It is possible that these features represented part of a building. A further parallel ditch (8517) was encountered approximately 3m to the east of gully 8455 which may have been associated with the same phase of activity.

- 3.20 The primary features located in the north-western area of the reception pit comprised pit 8536 cut by shallow ditch 8453, which was traced for a distance of 4.8m from north to south and appeared to have been intentionally backfilled with a charcoal-rich deposit (8452). Two narrow gullies (8499 and 8520) were also identified at this level running from north to south for a distance of 3.2m and a further gully (8357) ran perpendicular to these features for a distance of 13m, widening at its western extent. Pit 8356 was identified at the eastern edge of the investigation area and was truncated by later ditch 8310.
- 3.21 A number of alluvial deposits were identified sealing the earliest sequence of archaeology described above. They were identified within the western half of the reception pit and appeared to represent the upper limit of flooding. Finds recovered from these deposits included a silver coin, pieces of worked flint, and a number of copper alloy and lead objects.

Phase 3

- 3.22 The alluvial deposits were cut by a number of features which included ditch 8382, which ran from north to south for a length of 4.7m and contained Roman pottery and glass. The deposits were also post-dated by a small cemetery comprising an adult burial (8351), an adolescent burial (8265) and eight neonate burials (8319, 8342, 8404, 8406, 8290, 8507, 8287 and 8286).
- 3.23 Adult burial 8351 was identified at the eastern edge of the reception pit. The grave measured 1.64m in length, 0.75m in width and 0.33m in depth and the body was interred with the head to the east. The skeleton was supine with the head resting on a pillow stone and tilted forward onto the chest. The right arm was raised over the chest and the left arm was resting across the waist. A single Roman coin was recovered from the fill of this grave cut.
- 3.24 The remains of an adolescent burial (8265) also lay towards the eastern edge of the reception pit with its head to the west. The skeleton was supine and had been truncated from the waist down by later ditch 8019. Only the skull, upper body and left forearm remained *in situ*. The top of the skull had also been removed, possibly by later agricultural activity.
- 3.25 A series of eight neonate burials was identified within the area of the reception pit, all of which cut into the alluvial deposits and associated features described above. Burials 8319 and 8342 were interred in small oval cuts up to 0.3m in depth and were oriented south-west to north-east and east to west respectively. Skeleton 8319 was supine, whereas 8342 had been buried in the foetal position on its right side. The latter two burials were overlain by a rectangular layer of large stones (8249) and delimited to the south by a wall (8250). This suggested the graves may have been placed within a designated burial area or may have been deliberately buried within the foundation of a building.

- 3.26 Burials 8404 and 8406 were cut into the fill of gully 8357 and had also been placed in oval cuts to a depth of 0.20m. The remains were aligned from east to west and from north to south respectively. Skeleton 8404 was only partially intact and appeared to be supine whereas skeleton 8406 was better preserved and was laid in the foetal position on its right side.
- 3.27 Neonate skeleton 8290 (Plate 3) was buried in a shallow cut aligned from south to north. The remains survived in excellent condition and were laid in the foetal position on the right side. Neonate burials 8286, 8287 and 8507 were all aligned from north to south and the grave cuts for all three burials were barely perceptible due to dry ground conditions. The remains of neonate burial (8286) had been interred in the foetal position lying on its left side and a large iron nail was recovered from the fill of this cut. Only a few bones of neonate skeleton 8507 remained *in situ* but it appeared to be supine. Neonate burial 8287 was also recovered in a poor condition, but could be seen to be lying in the foetal position on its left side.
- 3.28 The majority of the burials described above were sealed by further alluvial deposits 8017 and 8018 which extended approximately 10m across the trench from the west. This suggested there had been a period of extensive flooding following the deposition of the burials and prior to the next phase of activity in this area. Finds recovered from these deposits included two fragments of glass, a lead strip and two copper alloy coins.

Phase 4

- 3.29 A number of features were identified cutting alluvial deposits 8017 and 8018. These features included cremation burial 8273, a line of postholes (8537), ditches 8019 and 8310 and the north-western corner of a building (8538). The line of five postholes (8537) ran from north-east to south-west. It was cut by a curvilinear ditch (8019), which extended for a distance of 7.15m within the investigation area and followed the same alignment as the postholes, curving slightly eastwards at its northern end. It is possible that ditch 8019 was recorded as a cut edge (2125) within Test Pit 1 located approximately 10m to the south of the reception pit. Finds recovered from the ditch included two fragments of glass and sherd of a Roman face pot. A small pit (8148) with an associated flue was cut into the fill of ditch 8019. It contained a large quantity of burnt clay and charcoal and probably represented a small oven.
- 3.30 Ditch 8019 appeared to enclose an area to the south-east which contained the remains of a building (8538). A foundation layer of sand (8227) was overlain by a potential floor surface (8322) comprising a thin layer of clay. A compact metalled surface (8021: Plate 4) overlay 8322 which measured 3.63m in length by 2.17m in width and had a maximum depth of 0.05m. The jaw of a horse (8213) was laid between the two floor surfaces and 0.13m to the east of it

the teeth of the horse had been placed separately. Two large postholes (8427 and 8435) were also associated with this building. Posthole 8435 was located directly beneath the northwestern corner of metalled surface 8021 and posthole 8427 was situated 1.40m to the east beneath the northern edge of the metalled floor surface. Both postholes were filled with large packing stones and would have held posts of a substantial size. The remains of a later wall (8317), oriented from north to south, was identified to the west of floor surface 8021. It measured 2.60m in length by approximately 0.50m in width and comprised one course of stones bonded with mortar. A spread of stones lay to the immediate west of this wall, which possibly represented the collapsed make-up of the wall. A further wall (8047) was identified immediately to the north of floor surface 8021, which ran from east to west for a distance of 1.65m to the edge of the investigation area. It measured 0.54m in width and was bonded with clay rather than mortar.

3.31 Drainage / boundary ditch 8310 was a steep-sided ditch, which ran from north to south for a distance of 4.30m to its southern terminus and truncated earlier pit 5356. Finds recovered from the fills of the ditch included a copper alloy coin, a ring and an ear spoon/scoop.

Phase 5

3.32 Ditch 8036 was the latest feature identified in the sequence within the area of the reception pit. It truncated the terminus of ditch 8310 and also ditch 8019. It was oriented north-east to southwest and measured 2.74m in width, 1m in depth and was traced for a length of approximately 12m to its north-eastern terminus. Although this ditch was not identified in the geophysical survey it was probably associated with parallel ditches 8040 and 8209 in the stopple pit which represented narrow land divisions perpendicular to the line of the Dere Street located to the east. Ditch 8036 was re-cut by ditch 8167 and subsequently 8097 which were both of similar dimensions to the original ditch and were traced over a distance of 5m to their south-western termini.

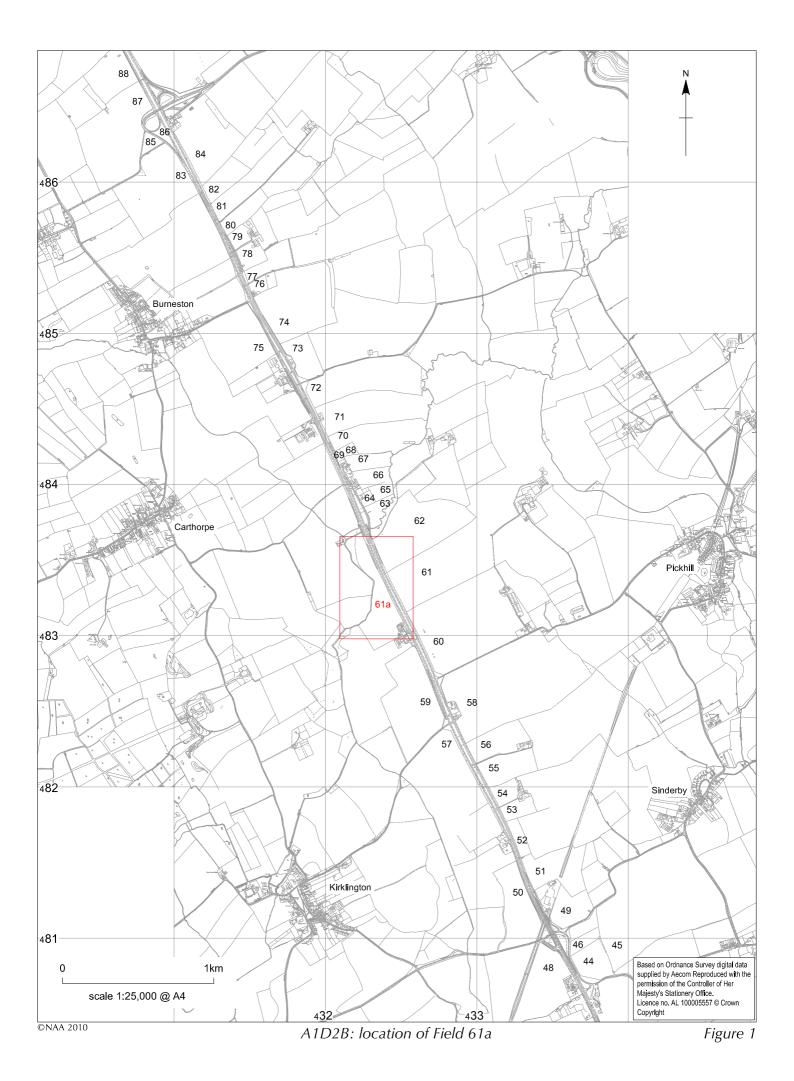
Test Pits

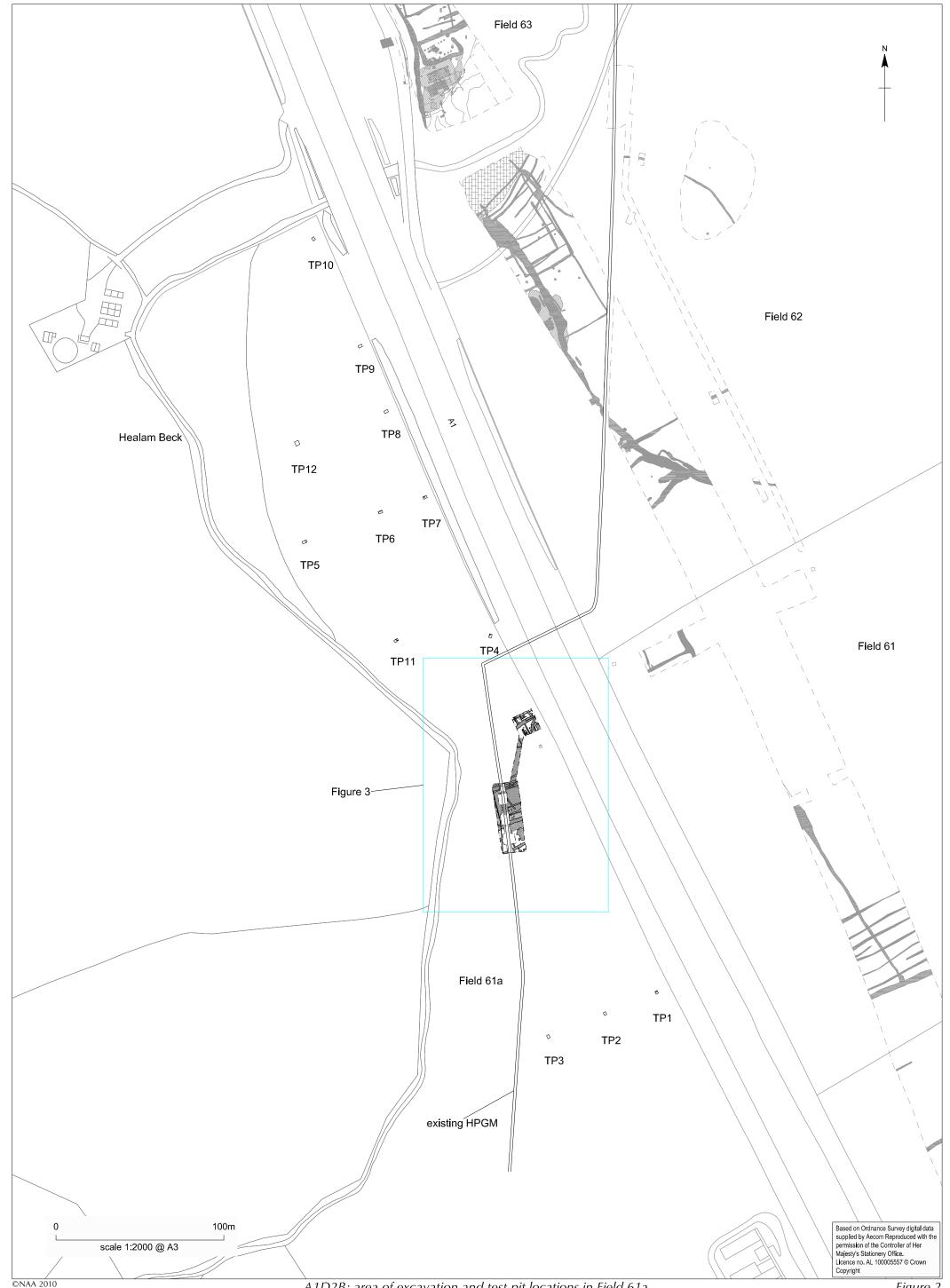
3.33 A total of twelve machine-dug test-pits were excavated in Field 61a, to the north and south of the main areas of investigation to determine the depth of soils overlying *in situ* Roman features/deposits. Features of probable Roman date were exposed within five of the interventions, and a limited number of abraded sherds of Roman period pottery were also recovered. The depth findings are presented in table form in Appendix A and the test pit locations are illustrated in Figure 2.

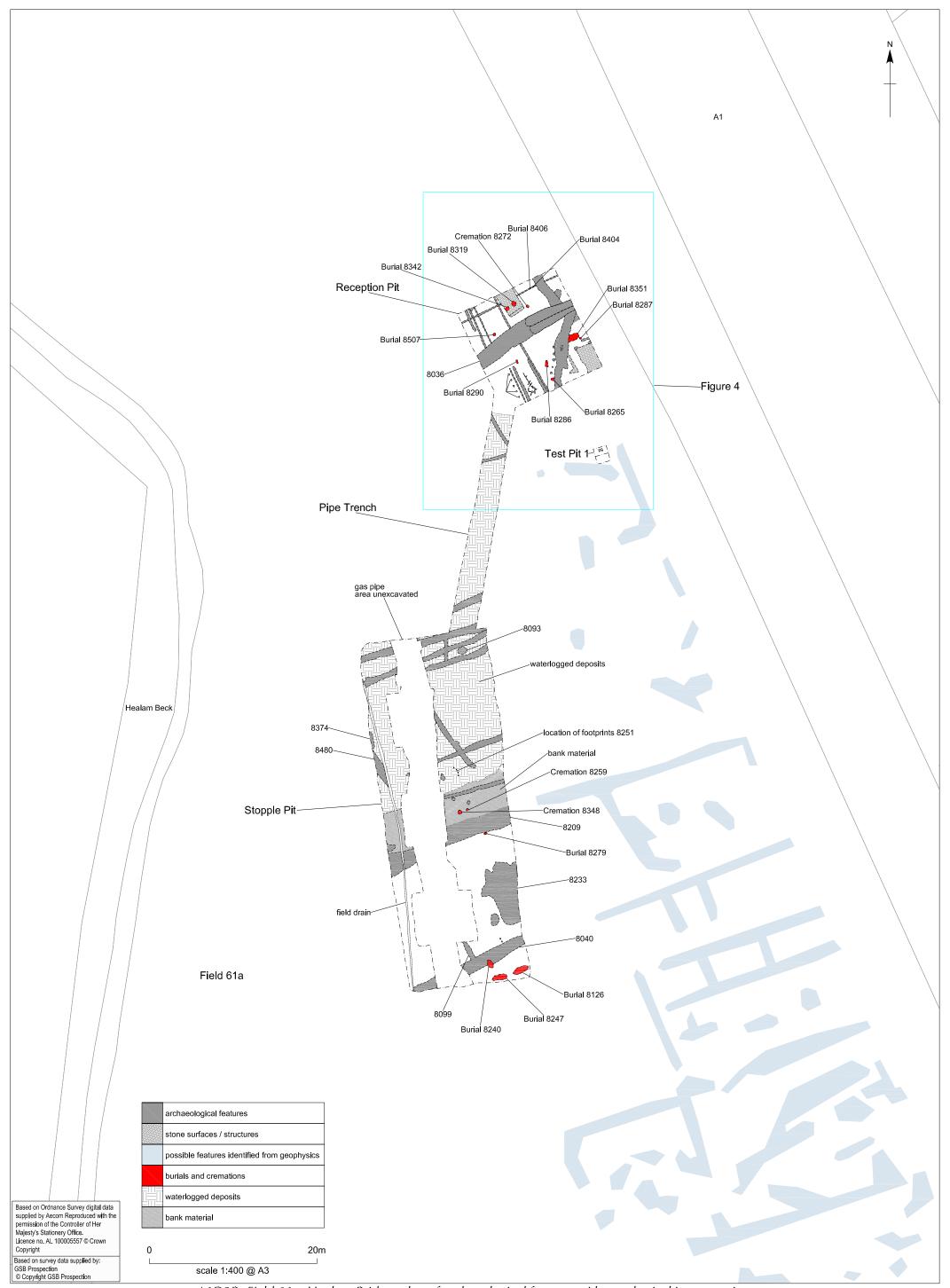
4.0 DISCUSSION

- 4.1 Excavations undertaken to the west side of the existing A1 at Healam Bridge predominantly exposed features relating to Roman settlement and burial within the *vicus* area on the periphery of a wetland area adjacent to Healam Beck. The only features identified that potentially predate the Roman period were a series of ard marks resulting from ploughing, possibly during the Iron Age. Many of the Roman phases of activity were separated by material deposited during episodes of flooding of the area. One of these flood events sealed a series of human footprints within the stopple pit.
- 4.2 Evidence for a minimum of three buildings was identified within the area of the reception pit. There was evidence for post-built structures, at least one beam-slot, sequential floor surfaces and a mortared stone wall. None of the structures were fully exposed due to the restricted area of excavation, therefore their overall dimensions could not be ascertained. However, it was clear from the size and spacing of the postholes that they represented varying types of structures. The building identified in the south-east corner of the reception pit had an internal metalled surface of a high quality suggesting it may have been a domestic building.
- 4.3 In total, 19 burials were identified to both the south and north of the wetland area. They comprised 16 inhumations and three cremations. The inhumation burials were predominantly those of neonatal infants, although six adults were also identified. The remains were interred in various positions and upon different alignments, however the neonatal burials potentially constitute part of a discrete, segregated cemetery. Three of the adult burials were accompanied by personal items including bracelets and finger rings.
- 4.3 The majority of the ditches identified in the excavated areas were aligned east-north-east to west-south-west and were consistent with the pattern of ditched roadside enclosures identified to the east by the geophysical survey. Two of the features corresponded directly with recorded geophysical anomalies, but the depth of deposits identified over the majority of the excavation limited the usefulness of the geophysical survey evidence. The depth of deposits acted to preserve evidence for two possible earthen banks which may have been placed to prevent or limit flooding.
- 4.4 The excavation demonstrated that there was a greater depth, range and complexity of deposits in the area than had been previously suggested by the evaluation work undertaken in the mid 1990s, which was unforeseen. Furthermore, the high pressure gas main which had been

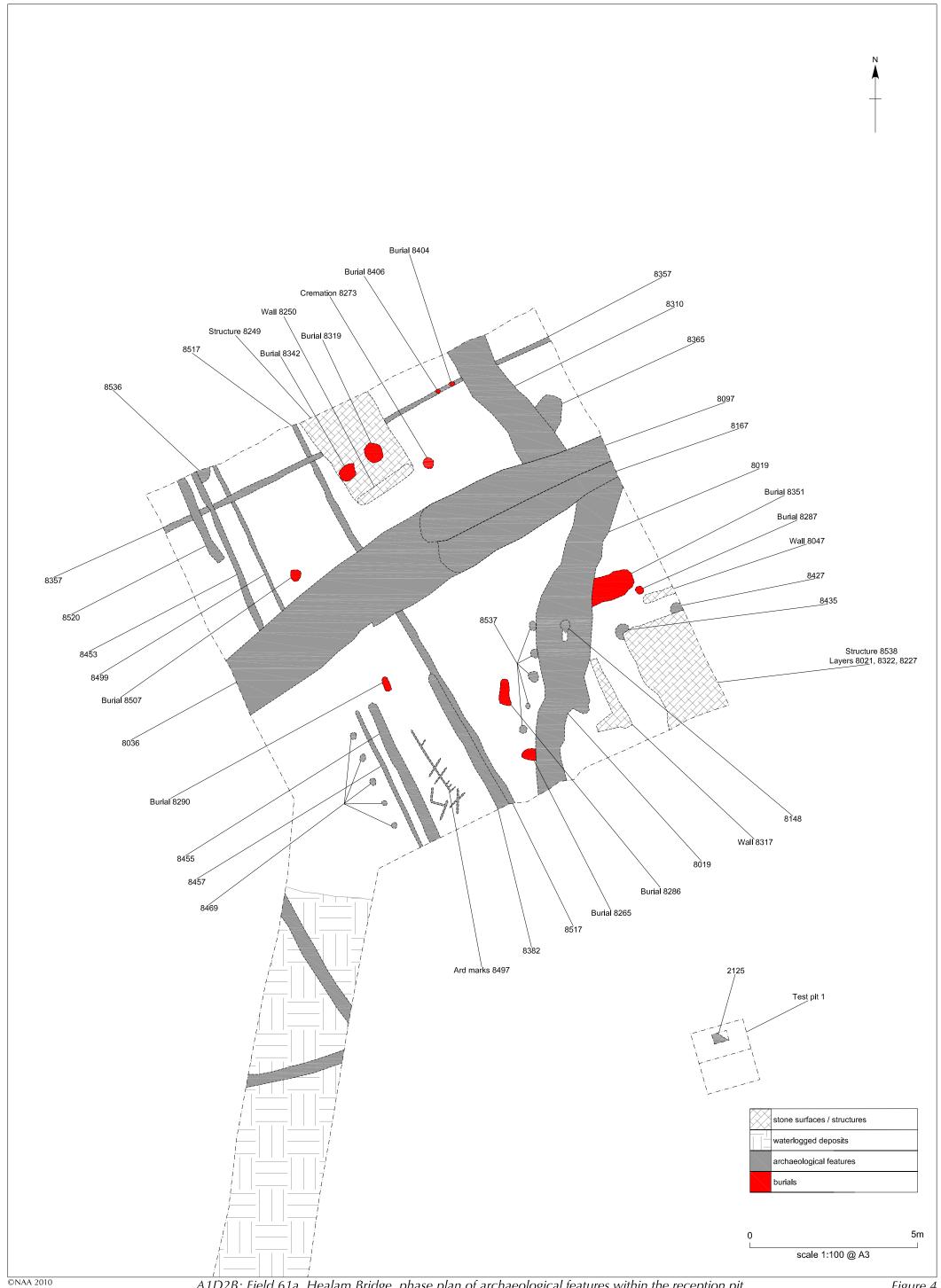
constructed in the 1970's without any accompanying archaeological investigation was found to have damaged archaeological remains within only a relatively narrow corridor.







A1D2B: Field 61a, Healam Bridge, plan of archaeological features with geophysical interpretation





A1D2B: Field 61a Healam Bridge, Burial 8126 Plate 1



A1D2B: Field 61a Healam Bridge, Footprints 8251



A1D2B: Field 61a Healam Bridge: Burial 8290





A1D2B: Field 61a, Healam Bridge: Metalled Surface 8021

Results of Test Pits in Field 61a, Healam Bridge

Test Pit	Location NGR	Dimensions	Topsoil Depth	Subsoil Depth	Depth of Archeological Layers from Ground Level	Character of Archaeological layers	Depth of Cut Features from Ground level	Character of Cut Features	Fill of Cut Features
1	432439 E 483218 N	1.7m E-W 2m N-S	0.37m	N/A	0.37m	N/A	0.37m	Linear feature on NE-SW alignment [9198]	Silty sand with charcoal flecks, no finds
2	432409 E 483205 N	1.7m E-W 2m N-S	0.35m	0.18m	0.53m	Buried soil with 8 sherds of Roman period pottery. Depth of deposit unknown (9202)	N/A	N/A	N/A
3	432357 E 483192 N	1.7m E-W 2m N-S	0.32m	N/A	Clean subsoil identified at 0.32m	N/A	N/A	N/A	N/A
4	432341 E 483431 N	1.7m NW-SE 2m NE-SW	0.42m	N/A	0.42m	N/A	0.42m	Linear feature on E-W alignment [9199]	Silty sand, no finds
5	432230 E 483487 N	1.7m NE-SW 2.5m NW-SE	0.28m	0.24m	0.52m	Dump deposit with frequent charcoal, animal bone, CBM and pot frags. 0.4m thick (9200)	N/A	N/A	N/A
6	432275 E 483504 N	1.7m N-S 2.5m E-W	0.34m	N/A	0.34m	N/A	0.34m	Linear feature on SW-NE alignment [9201]	Silty sand with charcoal flecks, animal bone and CBM
7	432302 E 483513 N	1.7m N-S 2.5m E-W	0.36m	0.08m	0.44m	Loosely metalled surface throughout Test Pit base (9205)	0.44m	Cut of probable pit [9203] Cut of probable cremation [[9204] Cut of gully on SE-NW alignment [9209]	Pit contains charcoal flecks, cremation contains bone and charcoal
8	432278 E 483564 N	1.7m N-S 2.5m E-W	0.53m	0.07m	0.60m	Densely packed pebbles - possible consolidation layer (9206)	N/A	N/A	N/A
9	432263 E 483603 N	1.7m N-S 2.5m E-W	0.31m	0.46m	Clean subsoil identified at 0.46m	N/A	N/A	N/A	N/A
10		1.7m E-W 2.5m N-S	0.36m	N/A	Clean subsoil identified at 0.36m	N/A	N/A	N/A	N/A
11		1.7m N-S 2.5m E-W	0.32m	0.21m	() 53m	Buried soil with animal bone, depth unknown	0.53m	Cut of gully on SE-NW alignment [9207]	Sand with animal bone
12		2.5m SW-NE 2.5m SE-NW	0.34m	0.41m	Clean subsoil identified at 0.41m	N/A	N/A	N/A	N/A

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