

## 5. RESULTS

### 5.1 Pre-fort features

A number of probable prehistoric features were identified within the 2010 trench. Some of these clearly pre-dated the fort, as they were cut by the foundation of the barracks block located within the excavation and were much lighter in colour than the Roman features. Other probable prehistoric features with no relationship to the Roman archaeology were identified by this colour difference (see Illus 4). Although none of these features produced finds, they were interpreted as prehistoric rather than representing an earlier phase of Roman activity on the site. Most obvious of these was a shallow linear ditch cut by the foundations of the barracks building, and a possible four-poster structure located within the footprint of the building.

### 5.2 The fort

#### 5.2.1 Ditches and rampart

A section across the defences on the north-west side of the fort was excavated in Trench 2 (Illus 3). Three parallel ditches were identified here, which would have formed the outer defences of the fort (Contexts 123, 125, 127). These ditches were all a U-shaped profile with a maximum depth of 0.8m and *c* 4m wide. A spread of soil was recovered from the inner ditch, sealing the primary silting deposit of probable turves which could have come from the levelled remains of the rampart. The outer two ditches showed no evidence of silting and appeared to have been filled directly (and deliberately) with the spread from the rampart.

In the 2010 excavation the three ditches covered a total area of 13.5m from the inner edge of the inner ditch (C293) to the outer edge of the outer one (C252) (Illus 4). The inner and outer ditches were similar in size, approximately 3m wide and 1.5–1.6m deep, while the middle ditch (C270) was smaller, 2.3m wide and 1.1m deep. All three ditches had steep, V-shaped sections with vertical-sided ‘ankle-breaker’ slots, 0.35m wide, at the base. The inner ditch was markedly asymmetrical, sloping more gently on the inner edge towards the rampart.

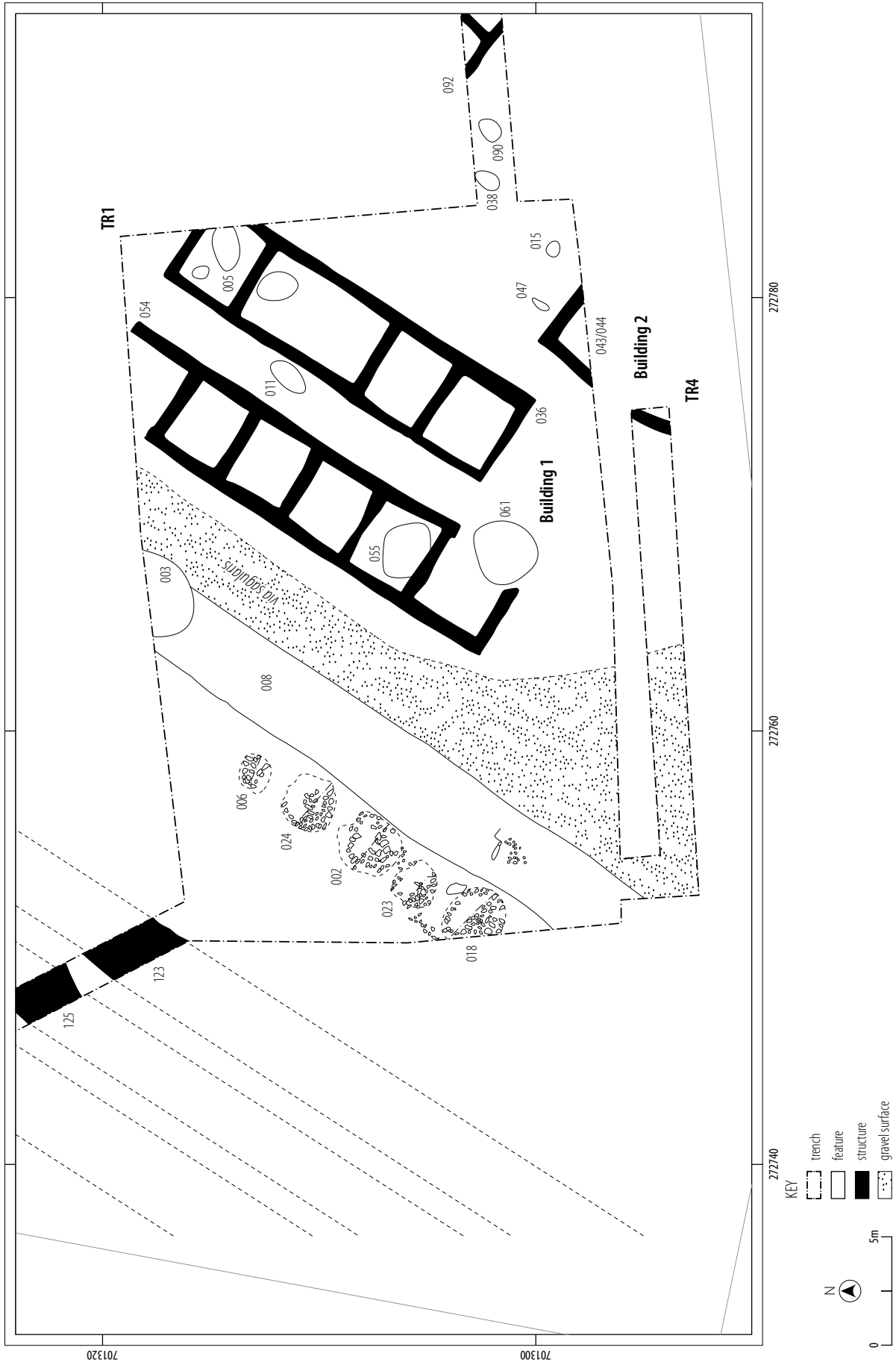
The fills of all three ditches contained a comparable sequence of deposits, which suggested that they had been deliberately partially backfilled at some stage to leave shallow-sided ditches less than half the original depth. Following this partial backfilling, which must reflect the initial slighting of the fort’s defences, fine silty deposits accumulated within all three ditches, reflecting gradual silting and soil development over an extended period.

To the south of these ditches were the remains of the turf rampart. The rampart was 6m wide and survived as an upstanding deposit up to 0.15m thick, with a distinctive soft, silty and almost stone-free texture. This material overlay a truncated buried soil no more than 0.1m thick, with no turf line visible, indicating that the area must have been de-turfed prior to the rampart’s construction. While no structure could be discerned within the core of the rampart, which presumably consisted of randomly dumped turf, it was edged on either side by distinct lines of patchy, pale yellow silt approximately 0.5m wide (C285 and C286). These deposits must represent the facing or revetting of the rampart with clay or stacked turf.

#### 5.2.2 The intervallum road (*via sagularis*)

A gravel surface, interpreted as the *via sagularis*, was identified running diagonally across Trenches 1 and 4 from north-east to south-west (Illus 6) and in two areas in the 2010 trench (Illus 4). In Trenches 1 and 4 it measured a maximum of 6.2m wide and appeared to turn towards the south-east. A narrow drainage ditch was identified running along the west edge of the road capped by stone slabs.

The surface of the intervallum road survived in two areas in the 2010 excavation, the central section truncated away. In both locations, a cobbled surface no more than 2m wide was flanked by much more extensive, though patchy and discontinuous, spreads of gravel. The cobbled surfaces were fairly loose and unconsolidated, and it is possible that the finer upper surface of the road had washed off, resulting in the spreads of gravel to either side. Several pits in the area between the turf rampart and barracks building would seem to predate the road surfaces, since layers of stone continuous with the cobbled surfaces were slumped into the upper fills of the pits.



Illus 6 Plan of Trenches 1 and 4. © Headland Archaeology (UK) Ltd

### 5.2.3 Metalworking

A group of very shallow pits, cut into a layer of gravel immediately north of the intervallum road in the 2010 excavation, contained concentrations of ironworking slag (Illus 4). No actual structures relating to metalworking (such as smithing hearths or smelting furnaces) were found and it is possible that the main focus of this activity lay further to the south-east, beyond the limit of excavation. Fragments of slag were also found in a very shallow but well-defined pit (C010), located approximately 7m further to the west; and in one of the fills of Pit C146 to the south: these may derive from the same source.

A narrow linear feature (C257) was excavated between the metalworking features and the cobbled road surface, running parallel to the line of the defences. This appeared to be a foundation trench similar to those defining buildings in the interior of the fort, with a square profile 0.4m wide. A similar feature (C244) was seen at the opposite end of the site and it is possible that these were the remains of timber buildings located between the *via sagularis* and the rampart.

### 5.2.4 Ovens and furnace

Parallel to the north-west side of the *via sagularis* in Trench 1 was a line of five ovens (C002, 006, 018, 023 and 024). These were in varied states of preservation, but all were roughly circular in plan, 2–3m in diameter, and of identical construction. The main structure in each case comprised a circular wall constructed of roughly squared stone blocks bonded with yellow clay. The ovens had paved floors which, in all cases, were sealed by the collapsed reddened clay domes that originally covered the structures. It is likely that the ovens had been built at the back (the south-east edge) of the turf rampart and may have been slightly set into it, as at Fendoch in Perthshire (Richmond & McIntyre 1939: 137–8). A large spread of burnt material was identified to the east of the ovens as the accumulated rake-out from the ovens (C008). This material built up to such a degree that it eventually encroached on the *via sagularis*. Analysis of the charcoal content of the rake-out demonstrated that oak and hazel were the dominant wood species present and

were probably the main source of fuel. The only significant concentrations of charred grain (mostly barley) associated from the ovens came from within oven C024 and from the rake-out (C008). The grain may reflect that ovens were used for roasting grain as well as baking.

Adjacent to the ovens the badly disturbed remains of a metalworking furnace were identified (C003). This comprised a shallow irregular hollow 4.3 × 3.3m wide, no more than 0.2m deep, filled with slag and daub. Analysis of the industrial waste (6.5 ‘The industrial remains’ below) suggests that the material derives from an ironworking shaft furnace. It would appear that the garrison had a smith among its ranks, and that iron was being smelted on site and not simply worked. The furnace also contained a deposit with several iron objects, including a spiked loop (SF202, probably from a timber structure) and a bar fragment (SF003). The presence of pottery sherds and concentrations of charred grain in the same deposit implies that the industrial waste was not in situ and this was a dump of material after the furnace was no longer in use.

### 5.2.5 Buildings

The foundations of seven rectangular timber buildings (Illus 3, 4, 6 & 7) were clearly identified within the interior of the fort. These have each been interpreted as barracks blocks to house the soldiers, their equipment and horses. Fragments of further buildings were also exposed within the trenches.

#### 5.2.5.1 Building 1

Immediately to the south-east of the intervallum in Trench 1, a series of construction trenches were identified which formed two rectangular structures aligned north-east to south-west (Illus 3 & 6). The west structure (C054) measured 23m in length but continued beyond the edge of the trench. It was 4.6m in width and subdivided into rooms each measuring 3.6m in length. The east structure (C036) was more complete and measured 18.2m in length by 4.6m in width, and was subdivided into rooms each measuring 3.6m in length, with one double room in the centre measuring 7.2m.

The similarity between the two structures is striking. They lie parallel to each other, separated



Illus 7 Plan of Trenches 3 and 5. © Headland Archaeology (UK) Ltd

by a central gap measuring 2.6m wide, and were divided into uniformly sized rooms. It seems likely that together they represent two wings of a corridored building. The construction trenches for both wings measured 0.4m in width and 0.2m in depth on average. In places the base of the cut had slight depressions, which were interpreted during the excavation as the impressions of the bases of upright timber posts. A single post pipe for a squared post was identified, measuring 0.13m square. Bent nails and charcoal fragments were recovered from the fill throughout the construction trenches of the building. A sample taken from the fill of C054 (C053) produced charcoal which was identified as hazel and oak with smaller quantities of alder, a probable indication of the types of wood used in the construction of this building.

#### 5.2.5.2 *Building 2*

The north-west corner of a second building (defined by construction trenches C043 and C044 – Illus 3 & 6) was identified at the south-east corner of Trench 1 and in Trench 4. Two post holes associated with Building 2 contained structural evidence. One of these (C015) contained a post pipe, suggesting that the post had rotted in situ. The post pipe was square in plan and, as in Building 1, measured 0.13m square. The second post hole (C047) was elongated and may have held a double post setting. The posts here appear to have been removed and the feature was backfilled with a deposit (C046) containing burnt wattle and daub and a number of bent iron nails. A sample from C046 produced large quantities of carbonised cereal grain, which may represent food stored in the vicinity, if not in Building 2 itself.

#### 5.2.5.3 *Buildings 3 and 4*

Features identified to the east in Trench 3 undoubtedly represent other buildings of similar construction to those seen in Trench 1. Less can be said about their layout due to their limited exposure in a 2m-wide trench. Linear construction trenches (C092, 095 and 098) appear to represent a building aligned north-west to south-east, divided along its length with larger rooms to the north-east and smaller rooms to the south-west (Illus 3 – Building 3). Another building with similar

layout and dimensions was seen to the north-east (defined by construction trenches C056, 114, 115 and 116) (Illus 7 – Building 4). A number of other construction trenches which probably represent further buildings were recognised between Buildings 3 and 4.

#### 5.2.5.4 *Building 5*

The foundations of a timber building covered the north-east half of Trench 5, consisting of vertical-sided trenches 0.35–0.50m deep (C023, 025, 034 and 037 – Illus 7). The foundation trench along the south-west side (C023) probably represents the front of the building. It was deeper than the others, with the variation in depths probably reflecting post-in-trench (rather than sleeper-beam) construction, although no trace of individual post holes or post pipes could be seen. From the limited area exposed, the foundations appear to define a row of rooms, at least one of which was 3.7m wide and 2.4m deep, across the front of the building, with another row of rooms to the rear.

Parallel with C023, 2.4m to the south-west, was another foundation trench (C006), only 0.25m deep, punctuated by three post holes 0.6m deep (C011, 016 and 060). Post holes C011 and C016 were exactly opposite the foundation trenches C025 and C034; this, along with the precise alignment and spacing of C006 with C023 (identical to the spacing between C023 and C037), strongly suggests they all formed part of the same building, with C006 perhaps representing an open veranda along its front. The backfill of all the foundation trenches was remarkably sterile, with no trace of charcoal or artefacts.

Two steep-sided, sub-rectangular pits (C014 and 029) were located centrally within two rooms of Building 5. Neither pit showed any sign of weathering; their primary fills consisted of black silt deposits with very high concentrations of charcoal in the base, which merged into paler upper fills containing lesser (though still appreciable) quantities of charred material. While numerous pits, thought to be related to the demolition of the fort, were identified in Trenches 1–4 (see 5.3.3 ‘Demolition pits’ below), Pits C014 and C029 are distinctive in that they seem to be precisely located within the rooms of

the building and thus potentially related to its occupation, rather than destruction.

#### 5.2.5.5 *Building 6*

Two linear features in Trench 5 (C007 and 049), located to the south-west of Building 5, are thought to be foundation trenches for another timber building (Illus 7). Both features were relatively slight, less than 0.3m deep, and contained backfill deposits barely distinguishable from the surrounding subsoil. Linear C007 terminated 4.8m from the south-east corner of the excavation, linear C049 adjoining it at right angles and extending to the south-west. A small circular depression at the junction of the two features (C052), and a pronounced widening and deepening (C054) at the south-west end of C049, may represent post holes related to the building.

Building 6 is unlikely to be contemporary with Building 5, since it has a markedly different orientation. It is also close enough that it would probably have interfered with access to this structure if they had been contemporary builds. The slight nature of the foundations of Building 6 and its pale colour may indicate that this was an earlier building, potentially a temporary structure occupied during the construction of the fort, or an early building within the fort that was abandoned before it was completed.

#### 5.2.5.6 *Building 123*

The south end of the 2010 excavation contained the foundations of a timber building. Enough of the ground plan was exposed to give its overall dimensions as 18.2 × 9m. It was divided into five two-room units, each 3.6m wide.

Fifteen large pits were cut into the floor of Building 123, with only two of the eight rooms more than half-exposed not containing pits. These features had been dug within the rooms of the building and mainly respecting the line of the walls, indicating that they were excavated while the walls were still visible, even if only as a ruin. These pits were also characterised (as were those in the intervallum zone) by the complexity of their fills: all contained multiple deposits, which suggested that they had lain open for a time before being eventually backfilled, possibly

in several stages and with occasional cases of recutting. One pit (C049) contained a large quantity of nails and other items including sling shots while another (C009) contained an early 1st-century AD strap junction decorated in the Mirror-style of southern England (see 6.3.2.2 '2010 finds' below; Illus 11).

Three rooms, fully or partially exposed on the south-west side of the building, each contained linear trenches aligned north-east to south-west, slightly offset from the centre of the room. These features were detached from the foundation trenches of the building at either end, and although they were a similar width, they tended to have more rounded profiles and had quite different fills, consisting of dark brown organic silt. These potentially represent drains in the floor of the building.

A section of foundation trench was identified to the south-east of Building 123. This may represent another building, or the continuation of Building 123.

### 5.3 Abandonment of the fort

There is strong evidence that the fort was abandoned, with some of the buildings showing signs of being removed and burnt, the ditches deliberately backfilled and the ramparts slighted. The identification of rubbish pits cutting through the foundations of Building 1 and within the interior of the fort, containing broken pottery, ironwork and sling shots, shows that there was effort put into concealing rubbish prior to departure.

#### 5.3.1 Ditches and ramparts

The ditches on both sides of the fort appear to have been deliberately backfilled, which reduced their depth considerably and presumably made them ineffective as defensive works. Turf identified within the inner ditch suggests that the rampart was also slighted at this time. On the north-west side of the fort the rampart survived as a spread of soil which sealed the ditches, which may suggest that the bank may also have been deliberately slighted here during the evacuation of the fort.

### 5.3.2 Buildings

Some of the buildings appear to have been deliberately dismantled prior to abandoning the fort. The evidence of this is most striking in Building 5 where, overlying the majority of the cuts for the foundation trenches, was a layer of dark, charcoal-rich silt (C010, 012, 017, 032, 035, 038, 040, 042 and 059), nowhere more than 0.1m thick. This layer appears to represent an episode of burning that concluded the use of the building. Since no trace of posts was seen in the foundations, it seems likely that the superstructure of the building had been dismantled and the posts removed when the fire occurred. A dark brown layer (C005), up to 0.2m thick, overlay much of the dark charcoal-silt layer covering Building 5. This soil horizon was located within a slight hollow and remained unaffected by subsequent ploughing or modern disturbance and contained finds of exclusively 1st-century Roman date.

Almost all the finds from the 2008 excavation derive from the charcoal-rich destruction layer overlying the foundations of Building 5, the backfill of Pits C014 and 029, and from the overlying soil layer C005. The metalwork is of particular interest, including a number of items interpreted as tools – a blacksmith's punch (Illus 10:4), a fine file (Illus 10:5) and a thin knife blade tip (Illus 12:6), which may reflect activities carried out by occupants of the building. The punch and the file were both found in Pit C029, hinting at a possible use of the pit as a tool store, although their presence may be accidental. Concentrations of hobnails and *lorica hamata* chain mail links throughout the charcoal-rich destruction deposits were probably items of broken and discarded equipment not considered worth salvaging. A copper alloy carrying handle (Illus 10:2), possibly from a casket, came from C005. Quantities of nails, an iron T-clamp (Illus 12:12) and fragments of daub presumably derive from the structure of the building itself. The pottery assemblage included a high proportion of samian ware, which is consistent with identification of the building as living quarters where food preparation and consumption were taking place. Environmental samples from contexts relating to the charcoal-rich destruction layer produced high concentrations of

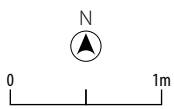
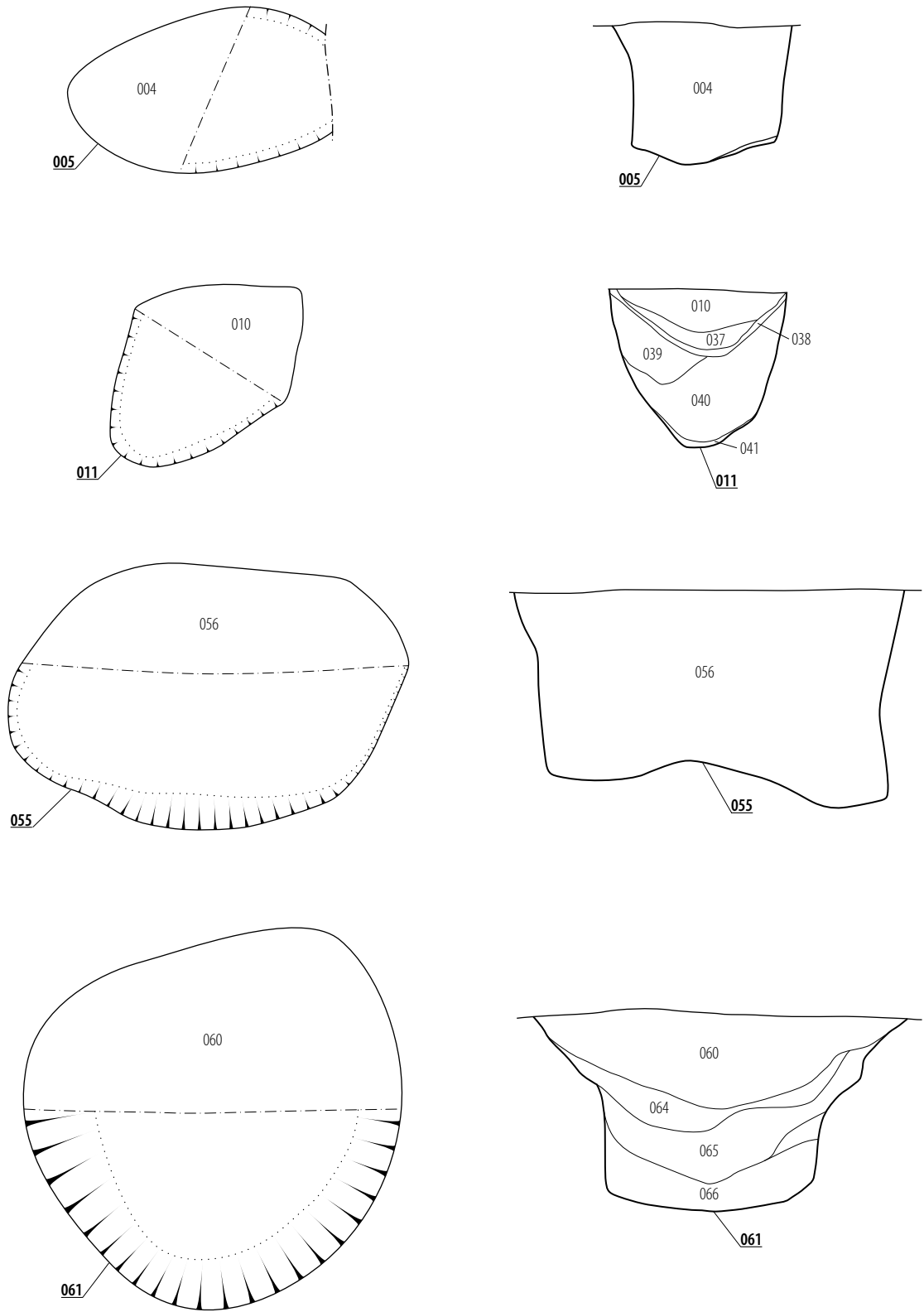
cereal grain, mostly spelt wheat and barley, which probably reflect food preparation and/or storage within Building 5.

### 5.3.3 Demolition pits

Four large rubbish pits were identified cutting the construction trenches of Building 1, suggesting that they may be related to the abandonment of the building and of the fort (Illus 6 & 8). The majority of the artefacts from this trench came from these pits. Two of the pits were extremely large, very similar in shape, and are likely to relate to the destruction of Building 1. The backfill of oval Pit C055 (C056) comprised dark brown sandy silt with numerous sherds of pottery. The upper fill of oval Pit C061 (C060) comprised dark brown silty clay with moderate inclusions of gravel and charcoal, and contained quantities of pottery including samian and mortarium sherds and an iron intaglio ring (Illus 10:3).

Two less substantial rubbish pits also truncated Building 1. Pit C005 (Fill C004) contained large quantities of pottery and nails, and other finds included two javelin heads (Illus 12:8, cat no. 9 not illus) and a chain link (Illus 12:15). See 6.4.4 'Catalogue of iron' below. Charred barley and (less common) wheat grains recovered from the fill may relate to food production or storage within Building 1. Pit C011 lay in the corridor between the two wings of Building 1. As with some of the other pits, the upper fill of the pit (C010) contained the most finds, in this case a fragmentary catapult bolt head (cat no. 10), a C-shaped iron timber clamp (cat no. 13, not illus) and amphora sherds. See 6.4.4 'Catalogue of iron'. A sample of the fill contained significant quantities of charred cereal grain, principally barley, a similar assemblage to that from Pit C005.

Further pits were identified in a service trench adjacent to the north entrance to the school building (not illus), although the trench was only 0.5m wide and did not go deep enough to impact on the basal fills of the pits. However, the upper fills of two pits were investigated and these produced a number of clay sling shots (see Illus 9; 6.2 'Fired clay sling shots' below) which were presumably buried deliberately.



Illus 8 Sections through demolition pits (Trench 1). © Headland Archaeology (UK) Ltd