ARCHAEOLOGICAL SERVICES
DURHAM UNIVERSITY

on behalf of
Keepmoat Homes

Land at former riding school Red Hall Darlington

post-excavation full analysis

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1. Summary

The project

1.1 An archaeological excavation took place on land at Red Hall, Darlington. The excavation comprised two large areas, one focused on a Roman site, and one on a late 19th century country house. Following post-excavation assessment, radiocarbon dating and further artefactual analysis was conducted in relation to the Roman site. The results of the assessment and analysis have been incorporated into this full analysis report.

1.2 The works were commissioned by Keepmoat Homes and conducted by Archaeological Services Durham University.

Results

1.3 The earliest evidence of occupation on the site was in the form of two flint tools found in Trench 1. These probably relate to short-term occupation of the site in the late Mesolithic to early Neolithic periods. The River Skerne lies approximately 150m north, and this location may have been exploited for resources such as fish, animals and plants. The flints were probably discarded in the vicinity during hunting or processing activities relating to these resources.

1.4 The next phase of occupation was represented by a short gully at the north end of the trench containing Iron Age pottery, and radiocarbon dated to the 2nd to 1st centuries BC.

1.5 A series of features were identified which probably relate to the edge of a Roman settlement site. Several shallow intercutting gullies and pits were identified, along with a large boundary ditch which truncated the Iron Age gully. The size of the ditch may indicate that it was defensive, with the defended area, and the main focus of settlement, lying beyond the excavation to the north. The ditch was radiocarbon dated to the 2nd to 4th centuries AD. The majority of the gullies and pits were identified to the south of the ditch, and may indicate subsidiary enclosures associated with it, or relate to a different phase of activity. It is likely that the gullies are roughly contemporary, but may date from different phases which cannot be distinguished. The intercutting relationships between several features indicate a longevity of occupation on the site, which is reflected in the wide range of dates seen in the pottery assemblage. Radiocarbon data from one of the gullies to the south of the ditch indicated a date of the 3rd to 4th centuries AD.

1.6 Artefactual evidence indicates a Roman date. The pottery assemblage comprised a range of local traditional ware and Roman pottery, including Samian. The quantity of local traditional ware recovered may indicate that the settlement originated in the Iron Age, or else that there was a continued reliance on such wares into the second century, which is paralleled on similar sites in the region. Despite only 79 pottery fragments being recovered from the features, at least 28 vessels were represented, including both table and kitchen wares. There were vessels from a number of different sources, consisting of imported, traded and locally-produced wares. The assemblage represents a site with wide-spread use of Roman pottery.

1.7 Palaeoenvironmental evidence indicated background levels of domestic activity, indicating the cultivation of spelt wheat and use of grassy heathland resources. This evidence is consistent with a late prehistoric or Romano-British date.

1.8 Comparison with other sites in the region indicates that the settlement at Red Hall is one of many of this date in the area. Despite the small amount of features identified, the artefacts suggest a fairly long-lived settlement, and a variety of vessels are represented in the pottery assemblage. This indicates that occupation was present in the immediate vicinity, even though no roundhouses or evidence of buildings was identified. This evidence, taken with the palaeoenvironmental data and compared to several other similar sites, suggests that the settlement at Red Hall is quite typical of this period in the area.

1.9 In the second excavation trench, the substantial remains of a 19th-century country house known as Red Hall were recorded. The wall foundations stood between one and six courses high. The earliest foundations consisted of well-built limestone walls, and there was a later brick and stone glasshouse extension. The main, larger rooms of the house that would have been used by the family who lived there were located in the western half of the building, with the service wing, consisting of smaller rooms with practical purposes, to the east. These included a possible scullery and a series of larders, with an archway at the base of one of the walls possibly indicating the presence of a wine cellar. Various internal features, such as floor surfaces, steps and a boiler room were recorded, as well as several phases of external yard surface. Associated drains, culverts and pipework were also identified. 18th- to 19th-century pottery and glass were recovered amongst the demolition material, along with animal bone fragments and several iron and copper alloy objects, including a coin of George V dating to 1917.

1.10 The results of the project do not warrant independent publication, but will be publically available via OASIS and the Historic Environment Record, and will be suitable for inclusion in any relevant future synthesis of archaeological sites of this type in the region.

2. Project background

Location (Figure 1)

2.1 The site is located on land at Red Hall, Darlington (NGR centre: NZ 3092 1557). Housing was to the south, with open grassland and mature trees to the north and east. To the west was McMullen Road, with an industrial estate beyond. The River Skerne ran to the north. The site is located within the Haughton-le-Skerne Conservation Area (Darlington Borough Council 2014).

Development

2.2 The development is residential.

Objective

2.3 The objective of the scheme of works was to identify, excavate and record significant archaeological features within the area in advance of development.

Research Objectives

2.4 The regional research framework (Petts & Gerrard 2006) contains an agenda for archaeological research in the region, which is incorporated into regional planning policy implementation with respect to archaeology. In this instance, the scheme of works was designed to address agenda item Riv: Roman Native and civilian life.

Specification

2.5 The works have been undertaken in accordance with a Written Scheme of Investigation provided by Archaeological Services Durham University (reference DS17.395r) and approved by the planning authority. Trench 2 could not be excavated to its original proposed size of 30m by 50m due to the location of mature trees and undergrowth; however, the trench was extended slightly to the north and east to maximise coverage of the archaeological remains.

Dates

2.6 Fieldwork was undertaken between 30th October and 29th November 2017. This report was prepared for September 2018.

Personnel

2.7 Fieldwork was conducted by Daniel Adamson, Hilary Andrews, Matthew Claydon, Jonathan Goldberg, Stuart Johnston, Jeff Lowrey, Meghan McCarthy, Adam Mead, Dr Stephanie Piper, Andy Platell, Alan Rae, Jenny Richards, Laura Watson, Rachel Wells, Hannah Woodrow and Rebekah Watson (supervisor). UAV photography was undertaken by Mark Woolston-Houshold. This report was prepared by Rebekah Watson, with illustrations by Linda Bosveld and finds illustrations by Dr Rob Young. Specialist reporting was conducted by Alex Croom (Roman pottery), Dr Helen Drinkall (lithics), Dr Louisa Gidney (animal bone), Jennifer Jones (other artefacts), Dr Stephanie Piper and Lorne Elliott (palaeoenvironmental) and F Wild (Samian). Sample processing was undertaken by Jonathan Goldberg, Stuart Johnston, Lauren Kancle, Adam Mead and Laura Watson. The Project Manager was Daniel Still.

Archive/OASIS

2.8 The site code is **DRS17**, for **D**urham **R**iding **S**chool **2017**. The archive is currently held by Archaeological Services Durham University and will be transferred to the County Durham Archaeological Archives in due course. The palaeoenvironmental residues

were discarded following examination. The flots and charred plant remains will be retained at Archaeological Services Durham University. Archaeological Services Durham University is registered with the Online AccesS to the Index of archaeological investigationS project (OASIS). The OASIS ID number for this project is archaeol3-327350.

Acknowledgements

2.9 Archaeological Services Durham University is grateful for the assistance of personnel from Darlington Library and Centre for Local Studies in facilitating this scheme of works.

3. Landuse, topography and geology

3.1 At the time of the excavation, the development area comprised open grassland used for recreation. A sports pitch with goal posts and a concrete basketball court stood in the south-west corner of the area. A copse of mature trees stood in the north-west of the area.

3.2 The area occupied a gentle south-facing slope with a mean elevation of approximately 50m OD.

3.3 The underlying solid geology of the area comprises Permian and Triassic calcareous mudstone of the Roxby Formation, which are overlain by Devensian diamicton till (www.bgs.ac.uk). Artificial deposits of made ground are recorded to the immediate west of the area.

4. Historical and archaeological background

Previous archaeological works

4.1 A geophysical survey was conducted on the site (Archaeological Services 2016b). This identified probable soil-filled features, possibly reflecting ditches and gullies, across the north-western part of the site (Figure 2). Two distinct orientations of former ridge and furrow cultivation were also detected. Probable building debris associated with the now demolished Red Hall and the former riding school buildings were identified in the north-east of the area, along with modern and existing features, including a service, goal posts and a basketball court.

4.2 A subsequent archaeological evaluation (Archaeological Services 2017b) comprising the excavation of eighteen trial trenches was then conducted. The remains of a large ditch identified on the geophysical survey were excavated in Trench 1 (Figure 2); pottery and glass recovered from the ditch indicated that it was Roman in date. An undated shallow gully was recorded in Trench 2. Five walls were uncovered in Trench 15. These walls were the remains of Red Hall, shown on historic Ordnance Survey maps of the site, and subsequently demolished. The preservation of the walls indicated more significant remains of the Hall may survive than had been envisaged. These features were the focus of the most recent excavations (Archaeological Services 2018b).

4.3 The site lies to the south of the medieval village of Haughton-le-Skerne and is likely to have been used as agricultural land at that time. Evidence of this, in the form of upstanding ridge and furrow, has been previously noted on aerial photographs

(Archaeological Services 2004) and was detected in the geophysical survey. The area was in use as parkland around Red Hall in the post-medieval period.

4.4 The wider landscape has been exploited throughout prehistory as well as through the Roman and medieval periods. A medieval moated manor site has been excavated at Red Hall estate, around 200m to the east. Geophysical survey was recently undertaken across this site (Archaeological Services 2016a).

4.5 Darlington expanded dramatically throughout the post-medieval period, with industrial intensification and the railway bringing prosperity to the town. However, the survey area remained largely undeveloped with the exception of the now demolished Red Hall and riding school to the north-east. Red Hall housing estate was constructed in the 1970s.

5. The excavation

Introduction

5.1 Two trenches were excavated on the site, one in the north-west corner and one in the north-east (Figure 2). The first of these (Trench 1) was located over Trenches 1 & 2 of the archaeological evaluation, where a large ditch and a small gully were identified. The second trench was located within a clearing among a copse of trees, over Trench 15 of the evaluation, where five stone walls were recorded. Both trenches were excavated using a machine equipped with a toothless ditching bucket, under constant archaeological supervision. Trench plans, sections and elevations can be seen on Figures 3 to 6. Context data is summarised in Table 1.1, and a table of rooms relating to Trench 2 is provided in Table 1.2; these labelled rooms can be seen on the trench plan on Figure 5.

Trench 1

5.2 This trench was located in the north-west corner of the site and measured approximately 30m by 45m. The natural subsoil varied between an orange clay and orange-yellow sandy clay [3], which was identified between 0.3m and 0.6m below the ground surface (a mean elevation of 50.13m OD at the northern end of the trench, sloping down to an average elevation of 48.67m OD at the southern end of the trench).

5.3 A linear gully [F13=F32: 5.8m+ by 1.0m, 0.15m deep] was identified in the north-western corner of the trench, extending from the trench edge in a south-westerly direction. This was filled by a grey-brown silty clay [12=31] containing Iron Age pottery fragments.

5.4 A large ditch [F25=F28=F34=F41: 29m+ by up to 5m, 1.2m to 1.5m deep] crossed the northern part of the trench on a roughly east/west alignment, truncating the south-western end of gully [F13]. A slump deposit of brown-orange sandy silt [30: 0.3m deep] was recorded on the northern slope at the eastern end of the ditch; animal bone was recovered from this deposit. Above this was an orange-grey sandy silty clay [24=27=40: between 0.9m and 1.4m deep], containing occasional lenses of redeposited natural subsoil [26=29: 0.1m to 0.3m deep], animal bone, and pottery dating from the 2nd to the 4th century AD. Overlying this deposit at the western end of the ditch was a brown silty clay [33=39: up to 0.7m deep], also containing Roman pot fragments. In the centre of the trench, a recut was identified within the ditch

[F21: 2.85m wide, 0.85m deep], filled with an orange-grey sandy silty clay [20] (Photo 2). More fragments of 2nd-century pottery and animal bone were recovered from this deposit. Radiocarbon analysis of one of the earlier ditch fills indicates a date of 120-330 AD for this feature, consistent with the dates of the pottery. This feature corresponds to the ditch identified in Trench 1 of the archaeological evaluation.

5.5 In the south-west corner of the trench several gullies were identified. The first of these entered the trench from the western side, running eastwards for 7.2m before terminating [F43=F45: 0.7m wide, up to 0.1m deep]. This was filled by a brown-grey sandy silt [42] for much of its length, with a brown-grey silty clay [44] filling the terminus. A trace of hammerscale was recovered from this deposit in post-excavation. Approximately 1.1m east of gully [F43] was a short curvilinear gully [F53: 3.7m by 0.65m, 50mm deep], filled with a brown-grey sandy silt [52]. It is possible that this reflects a continuation of [F43]. Around 1.6m south of gully [F53] was a short linear gully [F51: 2.25m by 0.5m, 50mm deep], aligned roughly east/west and again filled with a brown-grey sandy silt [50]. Boggy ground conditions made it difficult to identify the full extent of the gullies, which was hindered further by the extreme shallowness of the features; no artefacts were recovered from most of these features. The gullies may be the truncated remains of land divisions.

5.6 Gully [F51] was cut by a roughly linear gully [F19=F47=F49=F55=F57: 18.6m+ by 0.6m, up to 0.27m deep] on a north-east/south-west alignment. This was truncated at the north-eastern end by a tree bowl, and extended beyond the edge of the trench to the south-west. It was filled by a grey-brown silty clay [18=46=48=54=56], from which Iron Age or Roman pottery and heat-affected stones were recovered. Radiocarbon analysis indicates a date of 220-390 AD for this feature. This gully corresponded to the gully identified in Trench 2 of the archaeological evaluation.

5.7 A further short slightly curvilinear gully [F5=F36: 3.8m by 0.4m, up to 0.15m deep] was identified in the centre of the trench (Photo 1), filled with an orange-grey sandy silt [4=35]. A Mesolithic flint microlith and a piercer were recovered from this deposit along with part of a probable iron nail, indicating that the flint artefacts were residual. Like many of the other gullies, this feature was very shallow, and the western extent of it was unclear. To the east, it was truncated by another curvilinear gully [F38: 1.7m by 0.4m, 0.15m deep], aligned roughly north-east/south-west and filled with an orange-grey sandy silt [37]. Both ends of this gully were truncated by a large tree bowl.

5.8 A probable pit [F11=F15: 1.9m by 0.85m, 0.12m deep] was identified around 6m north of gullies [F5] and [F38]. This was roughly oval in shape and filled by a grey-brown sandy silty clay [10=14]. Cutting straight through the centre of this was a short linear gully [F7=F9=F17: 5.3m by 0.6m, up to 0.2m deep], aligned north-east/south-west and filled with a brown-grey silty clay [6=8=16].

5.9 Cutting the large boundary ditch [F25] at the western end was a field drain [F23: 2m+ by 0.3m, *c*.0.5m deep] on a north-east/south-west alignment. A ceramic drain was present in the base of the cut, which was then filled with a brown sandy silt [22] from which post-medieval pottery was recovered. Several other field drains were identified within the trench, on various different alignments.

5.10 A layer of brown sandy silty clay subsoil [2: 0.1m to 0.3m deep] was present across much of the trench, covering all the features, tree bowls and drains. Immediately above this was a layer of black-brown sandy silt topsoil [1: 0.2m to 0.3m deep].

Trench 2

5.11 A roughly T-shaped trench was dug, measuring approximately 54m by 34m along its longest axes. The trench targeted the remains of a large country house. The natural subsoil, an orange-yellow-brown clay [102], was identified between 0.3m and 0.85m below the ground surface (a mean elevation of 53.25m OD across the trench).

5.12 Red Hall appears in detail on the 1st edition Ordnance Survey map of 1855. Walls corresponding to those on the map survived up to 0.65m high across the trench. In most cases the walls were sub-floor foundations; there were only four rooms with surviving floors, all on a lower level to the main building, with steps leading down into them. The walls formed the remains of an extensive country house, comprising at least 25 ground floor rooms, with associated pipework, drains and later extensions, as well as external yard surfaces.

Phase 1 – Original construction of the hall

5.13 The original stone structure [F106] was built within construction trenches [F127] cut through the natural subsoil [102], which were backfilled with a yellow-brown sandy clay [126]. However, the majority of the construction cuts and fills were not visible due to the location of drainage features, surfaces and later extensions to the building. The original hall comprised at least 25 rooms on the ground floor, the foundations of which were constructed of neatly squared and faced limestone with a rubble core, bonded with pink limestone mortar. Preservation of the foundations was best at the east end of the trench, where the walls stood up to 6 courses high, decreasing to 2 courses at the western end. The main entrance, on the northern side of the house, was almost completely destroyed, with only partial remains of one course surviving.

5.14 There were several rooms constructed on a grand scale, in particular rooms A, C and D (see Figure 5 for key), with rooms A and C showing evidence for bay windows, the one in room A being particularly large. Two further bay windows were possibly located in rooms E and AA, with the main entrance being on the north edge of room G, although this area was badly truncated so it is difficult to say for certain from the archaeological evidence alone. These rooms, along with further smaller rooms B, F, I, J, K, L, Q, R, S, T, U, V, W, Y and Z, were aligned roughly east/west along a linear corridor (H).

5.15 A curved stone culvert [F105] was recorded running through rooms I and J; this had been constructed at the same time as the foundations, which were built around it (Photo 3). This was capped by large slabs of sandstone [F103] that would have lain underneath the floor surface when the building was still standing. 241 fragments of wine bottle glass were recovered from the fill of the culvert, a dark brown sandy silt [104], as well as 14 fragments of window glass, a sherd of porcelain and a goose femur. Part of a pipe that ran out of the culvert was still *in situ* at the northern end, where it exited the house.

5.16 Another stone culvert [F143] was recorded in room S, aligned roughly north/south alongside a stone wall [F125]. Both of these features ran beneath the main wall

foundations of the room (Photo 4), indicating that they were constructed either before or at the same time as the main building. However, further excavation was not possible due to flooding caused by bad weather.

5.17 In room R, at the eastern end of the corridor, the top of an archway [F124] was recorded at the base of the foundations on the southernmost wall (Photo 5, Figure 6). Ten keystones of the archway were visible built into the foundations, but were less clear on the external side of the wall, as they were partially obscured by mortar. Further excavation of this feature was impossible due to flooding. The archway may relate to a cellar.

Phase 2 – Internal features and external drainage

5.18 At the north-eastern corner of the house, three lower level rooms were identified (rooms U, V and Y), with two steps [F131] leading down to them from room J (Photo 6). A partially surviving floor surface [F118], comprised of large sandstone slabs, was recorded, surviving particularly well in rooms V and Y, with evidence of a well-worn pathway from the steps into room U.

5.19 Another floor surface was identified in room Q, which had three steps [F130] leading down into it from corridor H (Photo 7). The room had a floor of sandstone paving [F108], with a possible workbench [F129] along the western side of the room. This consisted of three courses of stonework capped by the same sandstone paving slabs used in the floor. However, this may not have been the uppermost surface, as this was level with the top course of wall foundations and therefore some of the bench may have been truncated during demolition. Along the eastern side of this room were a series of partitions [F128], constructed out of sandstone slabs and with a slightly raised concrete floor; these partitions had been heavily damaged during demolition. Fragments of ceramic sink and the remains of an iron lock mechanism were recovered from the rubble in this room.

5.20 A short section of wall [F122] was identified separating rooms F and G. The purpose of this wall is unclear, as it was not keyed in to the main foundations of the house [F106] and only two courses remained. As it is located near the main entrance, it could possibly be associated with the staircase.

5.21 External features of the original building were also recorded. These included a garden wall [F123] at the western end of the trench and several culverts – one running along the external side of the western wall of room D [F133], and two aligned roughly north/south ([F109] and [F110]), heading away from the southern side of the main building. The two southern culverts were connected to a drain running along the southern wall of rooms A and C. This drain was covered by large roughly hewn slabs of sandstone [F120], which were placed diagonally against the wall foundations (Photo 8). Part of a drainpipe was still *in situ* where drain [F120] and culvert [F110] joined.

Phase 3 – Extensions and installation of services

5.22 An extension was added on to the south side of the building, consisting of a series of brick walls [F113]; the main wall was two courses high on a concrete foundation, with the bricks laid widthways, in order to form a wider wall, creating room M, to the south of rooms K and L (Photo 9). Further brick walls were added onto the south of this, forming rooms O and X, and standing up to five courses high. These bricks

were laid lengthways, thus making for narrower walls. Room X continued beyond the edge of excavation. The eastern wall of room O consisted of a short stretch of stone wall [F117] which was up to two courses high and incorporated a drain (Photo 10). A further stone wall [F117] was also present to the west of room O, to create room N. These south-facing rooms were for a glasshouse extension.

5.23 A further extension was created to the south and west of room Q. This comprised a stretch of brick wall [F115] at least four courses high, and a short section of stone wall [F116], which connected this extension to the main part of [F113]. These walls formed room P, within which lots of services, pipes and manholes were visible beneath the rubble.

5.24 A small sandstone wall [F121] cut across corridor H and through room I. The construction of this wall was quite rough, and it only stood two courses high. Brickwork [F112] relating to the installation of pipes and manholes was recorded in rooms K, L, P and O. These walls stood up to 4 courses high on a concrete foundation. Cast iron pipework [F111] was identified within the ducts formed by these brick and stone walls. Further pipework was identified cutting through wall [F122] between rooms F and G and continuing out of the building, and another short length of pipe was recorded north of room B.

5.25 Several other features were recorded within the building, though their place within the timeline of the evolution of the house is unclear. One of these features was a large concrete slab [F132], located on the eastern side of room W. The slab had two rectangular sockets cut into it, and its location on an external wall indicates that it may have been a side entrance into the house. A feature interpreted as a chimneybreast [F119] was recorded in room J. This was constructed out of brick, but set within an alcove within the original wall foundations [F106], perhaps indicating two phases of fireplace. It is possible that this room was the kitchen, with rooms U, V and Y as some arrangement of larder and/or scullery, accessed directly from the north-east corner.

5.26 A brick vaulted boiler room [F107] was located in room Z (Photo 11). Much of the western part of the ceiling vault had been destroyed during demolition, but some survived on the eastern side. The room itself was filled with demolition rubble, which was partially excavated at the western end. This established a depth of at least 0.55m (the floor was not reached). The inner face of the western wall was rendered, with an inscription reading "July '31 Martin Watson", along with some indecipherable figures (Photo 12). This could relate to the installation date and the fitter of the boiler or could alternatively be graffiti.

Phase 4 – External features

5.27 Several phases of external yard surface were identified at the eastern end of the trench. A plain concrete surface [F114] was recorded to the east of room U, extending beyond the north-east corner of the trench. To the east of room V was another concrete surface [F134], though this one was very fragmented. East of rooms Z and S was a concrete surface [F135] with a herringbone pattern etched into the western half of it. Overlying this was a brick surface [F136], with two areas laid down in a herringbone pattern and separated by an area where the bricks were laid lengthways and widthways. Overlying the south-west corner of the brick surface was a very fragmentary concrete surface [F137]. East of room W was another concrete

surface [F138]. These four distinct areas of yard surface were all separated by stone wall foundations [F106] aligned east/west.

5.28 East of the yard surfaces was a small area of cobbled surfaces. This consisted of a northern patch of small cobbles [F139], a central patch of large cobbles [F140] and a southern patch of large oblong cobbles [F141], which were partially overlain by concrete surface [F138]. Very fragmentary remains indicated that the small cobbles [F139] may have been present to the south of [F141], but were destroyed during demolition. The extent of the cobbled surfaces was delineated to the east by a row of oblong kerbstones [F142].

5.29 A grey gravelly deposit [F144] identified in the northern part of the trench is likely to be related to the driveway in front of the main entrance of the house.

5.30 A rubble-filled deposit [101] overlay much of the trench, and filled the rooms. This relates to the demolition of Red Hall, and contained frequent finds relating to the building itself, including architectural fragments, pipework, window glass and a decorative drain cover, as well as an early 20th-century coin.

5.31 Overlying the entire trench was a black-brown clayey loam topsoil [100: up to 0.2m deep].

6. The artefacts

Pottery

Summary

6.1 The assemblage consists of 79 sherds of Roman pottery, weighing 1422g (Tables 1.3 and 1.4). The pottery was quantified in its fabric categories by weight, sherd count and estimated vessel equivalents (EVEs, i.e. percentages or surviving rim diameters) in accordance with the recommendations of the Study Group for Roman Pottery (Darling 1999). Fabrics were identified visually to magnifications of up to X20 using a hand lens or binocular microscope.

Results

Samian ware

6.2 The excavation produced three sherds of samian ware, all Central Gaulish and of Antonine date. From context [27] came an abraded sherd of form 33 base, with the edge of the frame of the potter's stamp, but no surviving lettering. From context [39] came two sherds, one of rim, one of footring, presumably from the same dish of form 31 or its rouletted variant, probably dating to the second half of the second century AD.

Reduced ware with black core

6.3 Reduced fabric with a well-defined black core, very thin partial cream margins, wider brown to pink margins and dark grey surfaces. Other than fine sand tempering, there is only an occasional soft brown inclusion. This is a locally produced ware, and has been found at Newsham and Greta Bridge (unpublished) and at Ingleby Barwick (fabric R11: Evans and Mills 2013, 72). It has been found in contexts dating to the late second century, although it is unclear how long it continued in use (Figure 7a).

Yorkshire grey ware

6.4 There were base and body sherds from two separate vessels, likely to come from one of the third-century Yorkshire kiln sites.

Local tradition ware

6.5 Small-scale, household production of this hand-made ware, using a variety of different tempers, first started in the late Iron Age and continued throughout the Roman period. Although typically it is only found in very small quantities on sites making extensive use of Roman-style pottery vessels, it was noted at Faverdale, Darlington that local traditional wares still dominated the assemblage in the second century, despite the availability of Romano-British wares (Gerrard 2012, 83).

6.6 The fabrics are divided into groups according to the type of tempering used. Household production means that even within these groups the pottery will come from numerous different sources.

6.7 Fabric 1.1: Micaceous fabric, typically black with usually one or both surfaces oxidised, defined by the large angular fragments of dolerite up to 12mm across. These often project from the surface, and are usually abundant.

6.8 Fabric 4.2: Tempered with plentiful white and semi-transparent quartz grains *c.*1mm in size. Fairly soft, handmade fabric with dark grey core and brown to buff surfaces.

6.9 Fabric 4.3: Tempered with very fine white quartz grains (less than *c.*1mm in size), giving the fabric a very glittering surface. Fairly soft, handmade fabric in dark grey fabric, sometimes with oxidised surfaces.

Catalogue

6.10 1. [39] Jar with squared decorated rim and external shoulder bevel, in a non-typical mid to pale grey fabric with oxidised patches over the rim, which has slight pie-crust decoration on the internal edge. Both the shape and the decoration of this vessel are unusual. The sherd is too small to be certain of its exact sit, but it may have been flat-topped like Iron Age examples from Thorpe Thewles, Cleveland and West Brunton, Northumberland (Swain 1987, fig. 45, nos 40 (with slight finger impressions, probably relating to its construction, along the rim) and 53 (finger-tip impressions on shoulder); Hodgson *et al* 2006, fig. 83, no. 9). Decoration on Iron Age pottery in north-east England is rare, and more typically takes the form of impressions on the upper surface of the rim (cf Swain 1987, fig. 44, no. 102; fig. 45, no. 23; fig. 46, no. 182). It is very unusual to have decoration on the internal edge of the rim. LTW 1.1 (Figure 7b).

6.11 2. [27] Beaker with devolved cornice rim. Second century. ARG CC (Figure 7d).

6.12 3. [27] Plain-rimmed dish, imitating BB1. Reduced ware with black core (Figure 7a).

6.13 4. [27] Flanged bowl. This vessel has an oxidised core and plentiful quartz inclusions slightly larger than typical in BB1, but is likely to be a variant of that ware. The interior surface has the remains of a dark grey surface, but this has been removed entirely from the exterior. Sherds from a definite BB1 bowl in context [100] show how a burnished black surface finish can break up and erode away in these soil

conditions, leaving a very granular, patchy grey and brown surface with a very different appearance. BB1 from unknown source (Figure 7c).

6.14 5. [27] Mortarium with a straight grooved rim and black iron slag trituration grit. The rim form is that used by Swanpool, but the vessel is in a Crambeck fabric: a similar vessel from York is dated to the fourth century (Hartley 1995, 313, no. 66). CRAM WH (Figure 7e).

Discussion

6.15 The majority of the pottery (84% by sherd count) came from the large ditch [F25], which can be dated to the late third or fourth century although containing some much earlier, residual material. The site as a whole produced a high proportion of local traditional ware, making up 43% by sherd count and probably representing ten vessels (Figure 7b). This quantity of the ware could indicate some form of Iron Age settlement in the area, or else a continued reliance on such wares in the second century, as happened at the settlement at Faverdale, Darlington and other sites in the Tees Valley (Gerrard 2012, 83; Proctor 2012, 170). Material certainly of second-century date consists of imported table wares in the form of two Antonine samian vessels and a colour-coated beaker (Figure 7d).

6.16 The main fill of ditch [F25] includes a body sherd of a BB1 cooking pot with obtuse angle lattice with a line above (mid third century or later), two BB1 flanged bowls (late third century; see Figure 7c) and a Crambeck mortarium, the only possible fourth-century vessel from the site (Figure 7e). The whole assemblage has produced very little calcite-gritted ware and no examples of Crambeck reduced ware, both of which would be expected in late third-century groups as well as in those of the fourth century. It is possible that the mortarium, made in the white ware fabric which was in use from *c.*280, should have a slightly earlier date on this site.

6.17 Although the assemblage is small, a minimum of 28 vessels in a range of forms is represented, including both table and kitchen wares. There are vessels from a number of different sources, consisting of imported, traded and locally-produced wares, and represents a site with wide-spread use of Roman pottery.

Later pottery

Results

6.18 Eighteen sherds (118g wt) were recovered from three contexts. Demolition backfill context [101] produced the largest number (13); context [22] had 4 sherds and culvert fill context [104] just one.

6.19 The pottery is all late 18th and 19th century. As well as plain whiteware from [101], transfer printed whiteware came from both [101] and [22] – all of it well-executed. One sherd of glazed coarseware came from [101]. Sherds of china and porcelain were found in [101] and [104]. The sherd from [101] is a china rim sherd from a hollow ware vessel with hand-painted internal decoration; that from [104] is a porcelain flatware rim sherd with a brown painted line along the rim and dark blue sprigged decoration – slightly in relief – below this.

6.20 The assemblage is small, but later 19th century pottery (e.g. sponged ware) and 20th century forms are absent.

Animal bone

Results

6.21 The majority of the identifiable faunal remains were recovered from contexts [20-40], fills of the large boundary ditch [F25=F28=F41], and were associated with Iron Age and Romano-British pottery. A few finds from contexts [101 and 104] are of 19th/20th century date. Preservation within the ditch fills varied, with the better-preserved bones being brittle and breaking on lifting. The less well preserved bones have extensive degradation of the cortex with teeth reduced to enamel fragments. Several fragments represent complete bones which have been broken during excavation and not all of the pieces have been collected. The recent finds are in good condition. All identifiable fragments were counted. The sheep size category indicates rib.

6.22 The species present are listed in Table 1.5. It can be seen that identifiable cattle fragments were present in all seven ditch fills, but sheep/goat remains were only recovered from four of these contexts. The epiphysial ends are all fused examples from adult animals, but the cattle teeth are at a range of wear stages, indicating the presence of some immature animals. The oldest animal, as indicated by teeth, is a mandible from context [40] with a complete tooth row giving a Mandible Wear Score of MWS 40. This bone was intact in the ground but broke on lifting. Horse is represented in the ditch by one unworn mandibular tooth. No dog bones were found, but a cattle calcaneum from context [29] has been gnawed.

6.23 The more recent finds have a very different species composition, with an absence of cattle fragments but sheep, goose and oyster found. The goose femur is a large and robust domestic specimen, broken in excavation.

Clay pipe

Results

6.24 Two pipe stem fragments came from demolition backfill context [101]. One is undecorated and unstamped. The other, which is oval in section and has prominent mould lines, has an all over vine and leaf design; it is likely to be late 18th/19th century.

Lithics

Summary

6.25 The assemblage is small with only three pieces of flint recovered from a single gully fill [4] in Trench 1. Environmental evidence from this gully indicates an Iron Age or Roman date for the feature, so the artefacts were incorporated into the fill from earlier occupation in the area. The small size of the assemblage does not allow in-depth analysis, but a number of conclusions can be drawn, which will be discussed below. The artefacts and their attributes are detailed in Table 1.6.

Results

Methodology

6.26 The assemblage was analysed using a combination of technological and typological criteria. Conditional variables such as preservation, rolling, patination and surface sheen aim to identify evidence of post-depositional disturbance and use methodologies taken from Ashton (1998). Technological assessment is based on aspects such as cortex, butt type, flake types, flake termination and percussion and are derived from terminology and definitions detailed in Ashton (1998), Ashton and

McNabb (1996), Andrefsky (1998) and Whittaker (1994). Typological classification is based on attributes of knapped material discussed in Butler (2005), with additional specialist typologies consulted and referred to where needed.

Raw material

6.27 Flint does not exist naturally in chalk deposits in the Durham area. The only source is small quantities located in the derived deposits of boulder clay in the region. The natural fragment is orange-brown rougher grained flint and could potentially derive from these deposits. In contrast, the other two pieces are on finer-grained light grey and grey brown flint and the most likely origin of these is deposits derived from the Yorkshire coast (Young 1984a, 1984b; Robinson and Foulds 2017).

Assemblage

6.28 The assemblage is made up of three artefacts, two tools and a piece of natural flint. The natural fragment (Figure 7f) only has one surface that shows slight signs of fracturing and given the appearance of the rest of the sides it is likely this is the result of natural damage and not human working.

6.29 The second piece, a tiny beautifully retouched microlith, is in mint condition (Figure 7g). The light cream patination and slightly glossy sheen to the surface suggests that very little post-depositional disturbance has occurred. The piece has no cortex and the degree of working indicates it comes from the end of a core reduction sequence as a finished tool. A crescent shape is produced by shallow semi-invasive scalar retouch on one surface and invasive, parallel retouch on the other, running the length of the curved edge. At the distal end this retouch forms a pronounced sharp tip. The shape and size is more reminiscent of microlith types such as the lunate or crescent (Butler 2005). However, the retouch on microliths usually serves to blunt the edge, whereas in the example from this site the retouch serves to create a sharp cutting edge. Invasive retouch is also usually more of an early Neolithic component (Waddington 2004). This provides some interesting questions and will be discussed in more detail below.

6.30 The third artefact is a retouched tool, with four main scars on the dorsal surface showing removals from both distal and proximal directions (Figure 7h). It is soft-hammer struck and the lack of cortex indicates the piece also comes from the later (tertiary) stages of core reduction. The retouch is steep and semi-invasive, extending along 50% of the edge, from the tip, half way down both sides and forms a pronounced point at the distal end. Whilst the shape suggests use as an arrowhead or point, retouch is present only on the dorsal surface, whereas points such as leaf-shaped arrowheads have retouch on both surfaces and are generally thinner in profile (Butler 2005). The artefact has a thick triangular cross-section with the retouch aiming to create a steep sided point. This and the lack of any form of thinning suggest it is a piercer.

Discussion

6.31 The small nature of the assemblage does not allow for comments on the distribution of material across the site or reliable comparisons with similar sites. However the location may offer some form of interpretation. The gully which contained the flint is situated in the western part of the site, approximately 150m south of the River Skerne, which may have afforded many riverine resources such as fish, animals and plants which could have been exploited for food or materials (Waddington 1998,

182). The lack of post-depositional disturbance suggests the artefacts have not moved far from where they were deposited. Unlike more substantial occupations, this location appears to be a transitory place, where limited tools were discarded either in passing or during some small scale processing activity in the area.

6.32 The small size of the invasively retouched crescent suggests affinities with Mesolithic microlith artefacts, however it is quite unusual in character. The piece is more extensively retouched than would usually be expected in a microlith, where retouch is more abrupt and non-invasive. The thicker edge and base appears deliberately fractured and the form would lend itself to hafting in a microlith tradition, on the shaft of an arrow or spear. One alternative is that it may be a broken leaf-shaped arrowhead as the invasive retouch is more in keeping with an early Neolithic date, but these are normally larger, more invasively retouched and with more of a thinned base to enable hafting. To haft this securely as a point would leave very little above the shaft. In addition, the long straight edge and base have been deliberately broken, rather than occurring as a result of natural damage, which also disproves the arrowhead suggestion. On balance this most likely dates to the later Mesolithic or potentially the transition between the Mesolithic and early Neolithic, given that the technology shares affinities with both.

6.33 The piercer is most likely of a similar date given its smaller size and fine retouch. Mesolithic piercers tend to be smaller and more finely crafted than in later periods, whereas in the early Neolithic such tools tend to be larger, hard-hammer struck and display slightly more minimal retouch (Butler 2005, 110,126).

6.34 In conclusion, the assemblage represents the discard of tools associated with hunting or processing of plant or animal products, during a short-term occupation in the surrounding area. The technology suggests a Mesolithic date, although a mix of traditions hints that these may have been deposited towards the end of the later Mesolithic or early Neolithic transition.

Glass

Results

6.35 A total of 317 pieces of bottle, vessel and window glass came from three contexts, the majority (255) from culvert fill [104]. The assemblage was dominated by 19th century wine bottle fragments.

6.36 Land drain fill context [22] had 22 pieces:
x16 fragments of clear, unweathered bottle glass from several vessels, including pieces from the same vessel embossed 'IMPERIAL' and 'MOR..' and 'PINT'. Another vessel had the embossed words 'RID..' and 'DARLINGT..'. 19th/20th century
x5 mid-green, clear, unweathered wine bottle body sherds. 19th/20th century.
x1 base and part wall of a mould-blown, thick, unweathered, mid-green bottle with slight kick-up, embossed 'VAUX'S STOUT'. Later 19th century.

6.37 Demolition backfill context [101] had 40+ pieces:
x20 clear, unweathered bottle body sherds. 20th century.
x2 clear, unweathered ornamental vessel sherds, including part base. 19th/20th century.
x4 flat, unweathered and slightly weathered, flat, clear and blue/green clear window glass sherds, 1.5 – 5.5mm thick. 19th/20th century.

x14 weathered and slightly weathered, thick, green ?wine bottle body sherds, plus an indeterminate number (<10)of similar sherds encased in lumps of mortar.

6.38 Culvert fill [104] had 255 pieces total, mainly from wine bottles:
x14 pieces of clear, unweathered flat window glass 1 – 2.5mm thick. 19th/20th century.
x241 sherds of mid and dark green wine (where identifiable) bottle glass, unweathered, slightly weathered and weathered, including pieces of base, body, neck and rim. Two bases from straight-sided bottles had measurable dimensions of 95mm diam. The shape of complete or fragmentary string rims from 11 different bottles gave a mid-19th century date.

Building materials

Results

6.39 Land drain fill context [22] had a small chunk of brick with no measurable dimensions. It is in a hard, red fabric with little visible temper but occasional, minute slaggy inclusions. ?19th century.

6.40 A small piece of glazed earthenware service pipe and two joining pieces of hard, matte black ?hearth tile were found in [101]. Late 19th/20th century.

Iron objects

Results

6.41 A total of 19 iron objects were recovered, 18 from demolition backfill layer [101]. The remaining object came from the environmental sample from context [4]. This is a small, circular (9mm diam), totally corroded, probable nail head. It appears to be slightly domed and there is the suggestion of a broken-off shank on one side.

6.42 Context [101] produced:
13 corroded nails, several complete, including two modern wire nails, one 19th century cut nail and 10 forged nails up to 81mm long, with circular and rectangular heads. A length of thin (1mm) wire was also recovered. All post-medieval.

6.43 The front and one side of a rectangular door lock plate, 192 x 113mm, the sheet iron 2.5mm thick. Much of the corroded iron mechanism survives on the reverse. The front has a decorative copper alloy keyhole surround. 19th century. The object was photographed for the site archive.

6.44 A complete (in two pieces) circular cast iron drain/vent cover 282mm diam x 19mm thick. The back is flat. The piece is perforated all over with bands of alternating diamond and constricted rectangle shapes and has a small central circular perforation. Too small for a manhole cover, this is likely to be a drain or heating vent cover, possibly from a greenhouse. Photographed for the site archive. 19th century.

6.45 A complete, small iron knife, SF3, came from demolition backfill context [101]. It is 155mm long with a parallel-sided, round-topped blade 88mm in length. No bolster survives. The integral tang or handle is circular in section, 8mm diam, terminating in an integral, near-globular finial, 14mm diam. The knife was X-radiographed and corrosion products removed to reveal form and surface detail.

6.46 The knife is unusual in having a large diameter integral tang/handle, with no evidence for any further, more decorative layers. The knife appears to be intact, though highly corroded. No exact parallels could be found, but its size and the general shape of the blade suggests a date in the late 17th or early 18th century.

6.47 Part of a possible barrel padlock, SF4, 112mm long x 45mm wide. The object was probably originally diamond shaped in section, but only half now survives. The internal mechanism may have been lost, but the two diamond-shaped end plates appear intact. It was observed on X-radiograph 7293, was surface cleaned and revealed to be a 19th or early 20th century door lock catch plate, decorated with a copper alloy edge strip.

Copper alloy objects

Results

6.48 An enigmatic fragmentary object, SF1, came from context [20], a re-cut within ditch [F25], which produced pieces of 2nd century Roman pottery. SF1 is a piece of curving but now bent and distorted wire, 218mm long, with both ends broken. The wire is square in section, 3 x 3mm at its more intact end, tapering slightly and becoming sub-rectangular, c2.5 x 3mm, at the more damaged end (Photo 13).

6.49 The intact end is shaped into a rounded arch, originally c32mm wide, which appears to be original. In the centre of this is a small, integral tab 3mm long and 3 x 5mm in section, fairly roughly fashioned by hammering it out of the wire, which is slightly flattened here. The patina on this tab is partly disrupted, but the tab's shape and size seem to be complete. The remainder of the wire length is now bent and distorted, with some loss of patination.

6.50 Under X10 magnification, the wire surface is irregular, suggesting it was wrought. There are also numerous, longitudinal, discontinuous, shallow scratches, probably acquired during use. Where intact, the patination is smooth and grey/green in colour, suggesting a high tin content. As high-tin alloys were not used for wire production, where a tin content of just 1-3% was usual (Dungworth 1995, 114), this would indicate that the finished copper alloy wire was probably tin-coated.

6.51 No parallels or suggestions for function have been found for this object, though its surface appearance, patination and association with dated Roman pottery strongly suggests that it is ancient.

6.52 Five copper alloy objects came from [101]. These comprise two probable roofing nails, c.37mm long with flat heads; a short length of three strand wire inside ?rubber housing; a piece of thick (3.5mm) wire bent into a rounded hook 40mm long with a circular eye (11mm diam) at the end - possibly a curtain hook; a minimally worn 1d of George V, dated 1917. All post-medieval to modern.

Fuel residues

Results

6.53 A small quantity (40g wt) of cinder, probably domestic in origin, was recovered from context [101].

7. The palaeoenvironmental evidence

Methods

7.1 Palaeoenvironmental assessment was carried out on eight bulk samples taken from the fills of gullies, a ditch and a pit, following archaeological evaluation and excavation of the site (Archaeological Services 2017b; 2018b). Radiocarbon evidence indicates an Iron Age and Romano-British origin for the features in Trench 1. A summary of radiocarbon results is provided in Table 1.7. Samples were manually floated and sieved through a 500μm mesh. The residues were examined for shells, fruitstones, nutshells, charcoal, small bones, pottery, flint, glass and industrial residues, and were scanned using a magnet for ferrous fragments. The flots were examined at up to x60 magnification using a Leica MZ7.5 stereomicroscope for waterlogged and charred botanical remains. Identification of these was undertaken by comparison with modern reference material held in the Palaeoenvironmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (2010). Habitat classifications follow Preston *et al.* (2002).

7.2 Selected charcoal fragments were identified, in order to provide material suitable for radiocarbon dating. The transverse, radial and tangential sections were examined at up to x600 magnification using a Leica DMLM microscope. Identifications were assisted by the descriptions of Schweingruber (1990) and Hather (2000), and modern reference material held in the Palaeoenvironmental Laboratory at Archaeological Services Durham University.

7.3 The works were undertaken in accordance with the palaeoenvironmental research aims and objectives outlined in the regional archaeological research framework and resource agendas (Petts & Gerrard 2006; Hall & Huntley 2007; Huntley 2010).

Results

7.4 The gully fills [4, 6, 12, 18, 44] from the site comprise small quantities of fragmented hazel and oak charcoal, vesicular clinker/cinder, coal/coal shale and a range of charred botanical remains. These include charred cereal grains of wheat and barley, in addition to taxa indicative of grassy heathland such as heather twigs, false-oat grass tubers, rhizomes, monocot stems and heath-grass caryopses. Weed seeds of arable (brome), ruderal (cleavers, ribwort plantain, common chickweed), wetland (sedges) and wide niche (goosefoots, grass family, docks) environments are also represented. The cereal grains are in overall poor condition, however two grains exhibit the characteristic oval shape and parallel-sided morphology of spelt wheat (*Triticum spelta*; Jacomet 2006). The presence of diagnostic spelt wheat chaff confirms the use of this cereal crop at the site.

7.5 Sparse finds from the samples comprise small fragments of unburnt and calcined bone, fired clay, and pottery. Heat-affected stones were noted in [18], and three pieces of worked flint and a corroded metal object were recovered from [4]. A trace of hammerscale is present in [44].

7.6 The fills of ditch [F25] produced a similar range of finds and charred plant remains to the gully fills at the site, however the preservation of the palaeobotanical remains is in better condition. Additional taxa of wetland (blinks) and wide niche (buttercup, cinquefoils) habitats are represented, as is a single twisted awn fragment of indeterminate cereal species. The scarcity of modern roots from this sample, which are highly prevalent in the other features from the site, reflects the greater depth of

the feature. Pit fill [11] produced few palaeoenvironmental remains beyond traces of charred heather twigs, tuber/rhizomes and a single dock nutlet.

7.7 The results are presented in Tables 1.8 and 1.9. Material for radiocarbon dating is present in most of the samples, although some of this material may be unsuitable due to long-lived species or insufficient weight of carbon.

Discussion

7.8 The gully and ditch fills contain evidence for background levels of domestic activity and indicate the cultivation of spelt wheat at the site, with barley also present. The use of barley and spelt wheat crops is typical of Iron Age and Roman settlement sites in this region (Greig 1991; Hall & Huntley 2007). Charred plant debris reflecting grassy heathland is also often recorded on sites of late prehistoric or Roman date in northern England. This charred material may reflect the remains of gathered hay for fodder or bedding, or the remnants of burnt turves (Hall 2003). The evidence is consistent with the radiocarbon and pottery dating for the features.

8. Radiocarbon dating

8.1 ANS radiocarbon dating and calibration were carried out by the Scottish Universities Environmental Research Centre (SUERC), East Kilbride, Scotland. The charred macrofossil material selected for three individual dates provided adequate carbon for accurate measurement in each case, and analyses proceeded normally. Sample information and results are summarised in Table 1.7, and details of the results and calibrations are presented in Appendix 3.

9. Conclusions

9.1 The earliest evidence of occupation on the site was in the form of two flint tools found in Trench 1. These probably relate to short-term occupation of the site in the late Mesolithic to early Neolithic periods. The River Skerne lies approximately 150m north of the gully from which the flints were recovered, and this location may have been exploited for resources such as fish, animals and plants. The flints were probably discarded in the vicinity during hunting or processing activities relating to these resources.

9.2 The next phase of occupation was represented by a short gully at the north end of the trench containing Iron Age pottery, and radiocarbon dated to 2nd to 1st centuries BC.

9.3 A series of features were identified which probably relate to the edge of a Roman settlement site. Several shallow intercutting gullies and pits were identified, along with a large boundary ditch which truncated the Iron Age gully. The size of the ditch may indicate that it was defensive, with the defended area, and the main focus of settlement, lying beyond the excavation to the north. The ditch was radiocarbon dated to the 2nd to 4th centuries AD. The majority of the gullies and pits were identified to the south of the ditch, and may indicate subsidiary enclosures associated with it, or relate to a different phase of activity. It is likely that the gullies are roughly contemporary, but may date from different phases which cannot be distinguished. The intercutting relationships between several features indicate a longevity of occupation on the site, which is reflected in the wide range of dates

seen in the pottery assemblage. Radiocarbon data from one of the gullies to the south of the ditch indicated a date of the 3rd to 4th centuries AD.

9.4 Artefactual evidence from the features indicates a Roman date. The pottery assemblage comprised a range of local traditional ware and Roman pottery, including Samian. The quantity of local traditional ware recovered may indicate that the settlement originated in the Iron Age, or else that there was a continued reliance on such wares into the second century, which is paralleled on similar sites in the region. Despite only 79 pottery fragments being recovered from the features, at least 28 vessels were represented, including both table and kitchen wares. There were vessels from a number of different sources, consisting of imported, traded and locally-produced wares. The assemblage represents a site with wide-spread use of Roman pottery.

9.5 Palaeoenvironmental evidence indicated background levels of domestic activity, indicating the cultivation of spelt wheat and use of grassy heathland resources. This evidence is consistent with a late prehistoric or Romano-British date.

9.6 There are several comparable sites to this settlement in the region. Although the features on this site consist of only a large boundary ditch, several gullies and a pit, the artefactual and palaeoenvironmental evidence indicates long-term occupation of the site, meaning it is likely that further features were present beyond the edge of the excavation to the north. Therefore, it can justifiably be compared to other sites where more archaeological features have been identified, as this difference may simply be due to the size of the area excavated.

9.7 One of these comparable settlements lies just 2.4km to the south of the site, at Firth Moor, Darlington. This site comprised several ditches and gullies that were interpreted as possible roundhouses or barrows. In comparison to Red Hall, these features were unenclosed but the pottery and palaeoenvironmental evidence pointed towards domestic occupation from the Bronze Age through to the Roman period, so for at least part of that time the two settlements were contemporary neighbours (Archaeological Services 2018a).

9.8 Another similar site in the vicinity is at Forrest Park, Newton Aycliffe, approximately 6.3km to the north-west of Red Hall. This settlement was probably a farmstead, consisting of a single roundhouse within a large square boundary ditch, with associated gullies both inside and outside the enclosure, located at the top of a hill. Again, the finds and palaeoenvironmental data indicated an Iron Age/Roman date (Archaeological Services 2018d). It is possible that the settlement at Red Hall was of a similar layout to this, with the features identified during the works representing the boundary ditch and either external or internal gullies – no roundhouses were identified during the geophysical survey (Archaeological Services 2016b) which may indicate that any potential dwellings lay to the north of the excavated area.

9.9 Another Iron Age/Romano-British farmstead was identified at Hulam Farm, Castle Eden, around 25km to the north-east of the site. This comprised a large boundary ditch enclosing several roundhouses and gullies, with some external features, with occupation potentially extending into the early medieval period (Archaeological Services 2017a).

9.10 Approximately 25km north-west of the site is another comparable site at Upper Mountjoy, Durham. This has been very recently excavated, and comprised an extensive series of ditches, gullies, pits and postholes. Although no large boundary ditch was identified, this site is similar to Red Hall in that no occupational features such as roundhouses were identified, perhaps indicating that the ditches were land divisions associated with a settlement in the immediate vicinity. The palaeoenvironmental data suggests an Iron Age/Romano-British date for the features (Archaeological Services 2018c; forthcoming).

9.11 It is clear even from this small selection of sites, that the settlement at Red Hall is just one of many of this date in the area. Despite the small amount of features identified within the trench, the artefacts suggest a fairly long-lived settlement, and a variety of vessels are represented in the pottery assemblage, more than were found from any of the sites above. This indicates that occupation was present in the immediate vicinity, even though no roundhouses or evidence of other buildings was identified within the trench itself. The palaeoenvironmental evidence from Red Hall provided very similar results to the samples taken from the sites mentioned above. It appears that even from the limited evidence from this site, the settlement at Red Hall is quite typical of this period in the County Durham area.

Red Hall

9.12 In Trench 2, the substantial remains of a 19th-century country house known as Red Hall were recorded. The wall foundations stood between one and six courses high. The earliest foundations consisted of well-built limestone walls, and there was a later brick and stone glasshouse extension. The main, larger rooms of the house that would have been used by the family who lived there were located in the western half of the building, with the service wing, consisting of smaller rooms with practical purposes, to the east. Various internal features, such as floor surfaces, steps and a boiler room were recorded, as well as several phases of external yard surface. Associated drains, culverts and pipework were also identified. 18th- to 19th-century pottery and glass were recovered amongst the demolition material, along with animal bone fragments and several iron and copper alloy objects, including a coin of George V dating to 1917.

9.13 Red Hall is marked on the 1st Edition Ordnance Survey Map of 1855. It was built between 1830 and 1836 to a design by Philip Wyatt, the architect of Wynyard Park. It was in the Tudor Gothic style, replacing an earlier red-brick house owned by the Colling family (Meadows & Waterson 1993, 69). The Hall was built for a Captain Robert Colling and his wife Elizabeth, who had been recently recompensed for the construction of the Stockton and Darlington Railway through their estate. The couple were childless and on his death in 1863, the house was left to his wife and later inherited by his nephew, another Robert Colling (Kirkland 2003, 34).

9.14 Meadows & Waterson (1993, 69) state that the house was sold to the Haggie family in the 1920s but a sale catalogue for the estate survives that is dated 1912. This lists the rooms within the Hall as follows: "*Large Drawing Room, Dining Room, Billiard Room, Library and Double Entrance Halls, Handsome Stone Staircase with beautiful Elizabethan Window, 6 Principal Bedrooms, Dressing Rooms, Bathroom, Lavatory, Linen Cupboard, Housemaid's Closet, Servants' Rooms, Butler's Pantry, Kitchen, Scullery, Larders, Wine Cellars, Conservatory and Vinery adjoining, Motor Garage,*

Coach Houses, Stables, Electric Storage and Store Houses". It also states that the hall was fitted with electric lighting (Pallister 1912, 7).

9.15 As the foundations were generally in such a good state of preservation it was possible to tentatively assign the remains of the rooms to the inventory of rooms listed in the sale catalogue (see Table 1.2). For instance, the largest rooms A, C and D would correspond to three of the main four rooms in the building, the drawing room, dining room, billiard room and library. Certain rooms in the service wing to the east can also be determined. Rooms U, V and Y are most likely larders – being on a lower level with a paved stone floor would make the rooms cooler, and the location of larders was recommended to be connected to the kitchen and on the north side of the house, out of the sun (Kerr 1865, 286). Room Q could be interpreted as the scullery – sinks may have been installed in the partitions and the workbench could have been used for draining and storing the cleaned crockery and cooking equipment. Sculleries were generally paved and separate from larders, so that any steam or vapours coming from them would not affect the stored food (Kerr 1865, 285). However, a scullery would usually directly adjoin the kitchen – "*there must on no account be any intervening space between them*" (*ibid*, 284) so that "*family traffic and servants crossing and intermingling*" could be avoided (*ibid*, 355) – but the entrance to room Q is clearly from the corridor. The eastern part of corridor H may have been separate to the rest and clearly defined as part of the service wing, which would make the location of the scullery less of an issue, or alternatively the scullery could have been located in room T or one of the other rooms. However, as no indicative features survive in any of the other service wing rooms, further interpretation is impossible. The archway in room R may indicate the location of the wine cellars.

9.16 Cartographic evidence can also be utilised to trace the evolution of Red Hall. For example, as mentioned above, the house is first seen on the 1st Edition OS map of 1855, and is shown to be the same size on the 2nd Edition, released in 1897. The glasshouse extension was constructed after this date but before 1912, when it is mentioned in the sale catalogue above. It is clearly visible on the 3rd Edition OS map of 1916. Several other outbuildings have also been built to the east of the main house by this point, perhaps relating to the motor garage, coach houses and stables.

9.17 In 1965 the estate was bought by Darlington Council. A riding school was licensed to use the Hall and grounds and a housing estate was constructed to the south. The house was derelict at this time and was eventually demolished, though accounts differ on the exact date of this, ranging from the 1960s to the 1980s.

9.18 Several photographs of the house were taken prior to demolition, most showing the building in a state of disrepair (accessed at http://dre.durham.gov.uk/). By studying these images, the plan of the house becomes clearer, particularly the northern part that was more severely truncated (Figure 5). One photo shows the western wall of the Hall, with the bay window in room A and two west-facing windows in room D (ref. DR08040). Another photo is a view of the main entrance on the north side of the house, before the Hall fell into such a dilapidated state (ref. DR07325). This is particularly helpful as so little of this wall survived. From this photo it is possible to identify the rectangular bases of the large bay windows on the plan, on the northern walls of rooms E and AA. Also visible on the left hand side of this image is a diagonal wall, forming what appears to be a one-storey passageway. This corresponds to the

diagonal wall in room I, perhaps used as a passageway to the kitchen (possibly room J). This passageway can also be seen on another photo, which also shows more of the eastern part of the Hall, the 'service wing' (ref. DR08041). The rooms at this end of the house were much smaller, with four lower rooms, probably larders and a scullery, and a boiler room all located at this end of the building. Rooms J and U (the possible kitchen and larder) are visible to the left of the image.

9.19 Two photos show views of the southern side of the Hall. Although much of the ground floor is obscured by foliage in one (ref. DR08039), the protrusion of the bay window indicated in room C can be seen on the upper floor. It is also possible to vaguely discern a doorway in the centre of the wall, which would open into room B, suggesting this was a small porch to access the garden. The last photo shows the conservatory and vinery in greater detail (ref. DR08038). It is possible to identify the separate areas of rooms M, N and O, though room X (only identified as a stretch of brick wall continuing out of the trench to the south of room O) may not be a separate room, but part of room O. On the photographs the western part of the conservatory with a peaked roof looks like it extends to the edge of the bay window of room C. However, wall foundations were only identified to the south of room M. This indicates that room N and O form the part of the conservatory with the sloping roof and that the western part did not survive within the trench, perhaps having shallower foundations and being more severely truncated during demolition. To the right of the conservatory image a stone wall extends from room M, corresponding to [F116], part of room P. However this appears to extend straight across to the south wall of room Q, which was not the case in the trench (see Figure 5). The chimneybreast [F119] in room J can also be identified at the back of this photo.

9.20 The results of the project do not warrant independent publication, but will be publically available via OASIS and the Historic Environment Record, and will be suitable for inclusion in any relevant future synthesis of archaeological sites of this type in the region.

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DR08039 – South elevation of Red Hall, looking north
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DR08040 – West elevation of Red Hall, looking east
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DR08041 – North elevation of Red Hall, looking south-east
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Appendix 1: Data tables

Table 1.1: Context data

The • symbols in the columns at the right indicate the presence of artefacts of the following types: P pottery, B bone, M metals, G glass, W wood, F flint, O other materials.

No	Area	Description	P	B	M	G	W	F	O
1	1	Topsoil							
2	1	Subsoil							
3	1	Natural subsoil							
4	1	Fill of gully [F5]			•			•	
F5	1	Cut of gully							
6	1	Fill of gully [F7]							
F7	1	Cut of gully							
8	1	Fill of gully [F9]							
F9	1	Cut of gully S/A [F7]							
10	1	Fill of possible pit [F11]							
F11	1	Cut of possible pit							
12	1	Fill of gully [F13]	•						
F13	1	Cut of gully							
14	1	Fill of possible pit [F15]							
F15	1	Cut of possible pit S/A [F11]							
16	1	Fill of gully terminus [F17]							
F17	1	Cut of gully terminus S/A [F7]							
18	1	Fill of gully [F19]	•						•
F19	1	Cut of gully							
20	1	Fill of ditch [F21]	•	•	•				
F21	1	Cut of ditch, recut of ditch [F25]							
22	1	Fill of land drain [F23]	•			•			•
F23	1	Cut of land drain in ditch [F41]							
24	1	Fill of large ditch [F25]	•	•					
F25	1	Cut of large ditch							
26	1	Redeposited natural in ditch [F21]							
27	1	Main fill of large ditch [F28]	•	•					
F28	1	Cut of large ditch S/A [F25]							
29	1	Fill of large ditch [F28]	•	•					
30	1	Slump deposit in large ditch [F28]		•					
31	1	Fill of gully [F32]							
F32	1	Cut of gully S/A [F13]							
33	1	Fill of large ditch [F34]							
F34	1	Cut of large ditch S/A [F25]							
35	1	Fill of gully [F36]							
F36	1	Cut of gully S/A [F5]							
37	1	Fill of possible gully [F38]							
F38	1	Cut of possible gully							
39	1	Upper fill of large ditch [F41]	•	•					
40	1	Lower fill of large ditch [F41]		•					
F41	1	Cut of large ditch S/A [F25]							
42	1	Fill of gully [F43]							
F43	1	Cut of gully							
44	1	Fill of gully terminus [F45]							•
F45	1	Cut of gully terminus							
46	1	Fill of gully [F47]							
F47	1	Cut of gully S/A [F19							
48	1	Fill of gully [F49]							
F49	1	Cut of gully S/A [F19]							
50	1	Fill of shallow gully [F51]							
F51	1	Cut of shallow gully cut by gully [F49]							
52	1	Fill of shallow gully terminus [F53]							
F53	1	Cut of shallow gully terminus							
54	1	Fill of gully [F55]							
F55	1	Cut of gully S/A [F19]							

No	Area	Description	P	B	M	G	W	F	O
56	1	Fill of gully [F57]							
F57	1	Cut of gully S/A [F19]							
100	2	Topsoil							
101	2	Demolition/backfill deposit	•	•	•	•	•		•
102	2	Natural subsoil							
F103	2	Stone capstones of curved culvert [F105]							
104	2	Fill of curved culvert [F105]	•	•		•			
F105	2	Curved culvert							
F106	2	Foundations of large stone structure							
F107	2	Brick vaulted boiler room, room T							
F108	2	Paved stone floor, room Q							
F109	2	Stone culvert							
F110	2	Stone culvert							
F111	2	Cast-iron pipework							
F112	2	Brick walls to enclose pipework [F111]							
F113	2	Brick walls for glasshouse extension, rooms M, N, O & X							
F114	2	Concrete yard surface							
F115	2	Brick wall extension							
F116	2	Stone wall between extensions [F113] and [F115]							
F117	2	Stone walls for glasshouse extension, room N							
F118	2	Paved floor in rooms U, V & Y							
F119	2	Brick chimneybreast							
F120	2	Stone drain covers along S side of building							
F121	2	Stone wall for services							
F122	2	Stone wall extension cut by [F112]							
F123	2	Garden wall, W side of building							
F124	2	Archway in foundation of room R							
F125	2	Stone wall in room S							
126	2	Fill of construction cuts [F127]							
F127	2	Construction cuts							
F128	2	Stone partitions with concrete flooring, room Q							
F129	2	Possible work bench, room Q							
F130	2	Steps down into room Q							
F131	2	Steps down into room Y							
F132	2	Stone with square holes in, room W							
F133	2	Stone culvert							
F134	2	Concrete yard surface							
F135	2	Patterned concrete yard surface							
F136	2	Brick yard surface above [F135]							
F137	2	Concrete yard surface above [F136]							
F138	2	Concrete yard surface							
F139	2	Cobbled surface (small cobbles)							
F140	2	Cobbled surface (large cobbles)							
F141	2	Cobbled surface (large oblong cobbles)							
F142	2	Kerbstones							
F143	2	Stone culvert, room S							
F144	2	Driveway							

Table 1.2: Table of rooms

Key: Phase 1 – Original construction of the hall, Phase 2 – Internal features and external drainage, Phase 3 – Extensions and installation of services, Phase 4 – External features

Room on plan	Phase	Features to note	Potential use
A	1	Bay window to west	Main room*
B	1	Probably doorway to south	Back porch
C	1	Bay window to south	Main room
D	1		Main room
E	1	Possible bay window to north	Main room/entrance hall?
F	1	Later disturbance due to pipework	Possibly related to staircase?
G	1	Main entrance; later disturbance due to pipework	Entrance hall
H	1		Corridor/hallway
I	1	Culvert; Later disturbance due to pipework	Access to kitchen/service wing?
J	1, 3	Curved culvert and chimneybreast; access to rooms U, V & Y	Kitchen?
K	1	Later disturbance due to pipework	Main room
L	1	Later disturbance due to pipework	Main room
M	3		Conservatory
N	3		Vinery
O	3	Pipework	Vinery
P	3	Pipework	Service wing
Q	1, 2	Paved floor, workbench and partitions, with steps from room H	Scullery?
R	1	Archway built into foundations	Access to possible cellar?
S	1	Culvert and wall foundations in base	Service wing
T	1		Service wing
U	1, 2	Paved floor	Larder?
V	1, 2	Paved floor	Larder?
W	1, 3	Concrete slab with sockets	Side entrance porch?
X	3	Extends out of trench	Vinery
Y	1, 2	Paved floor, steps from room J	Larder?
Z	1, 3	Contains brick vaulted boiler room	Service wing
AA	1	Possible bay window to north	Main room/entrance hall?

*Main rooms: Drawing room, Dining room, Billiard room, Library, Entrance halls (impossible to identify further)

Table 1.3: Roman pottery by context

Context	Sherds	Comments	Spot date	Wt
12	4	(1) scraps of LTW	IA+	7
18	4	(1) body sherds of calcite-gritted ware	IA - eC5	50
20	5	(1) thick-walled body sherds of LTW	C2+	161
		(2) body sherds of DOR BB 1 cooking pot		20
24	2	(1) body sherd DOR BB 1 cooking pot with groove above obtuse angle lattice	250+	16
		(2) scrap of LTW		6
27	50	(1) base of samian cup with illegible incomplete stamp	c.270+; possibly C4	100
		(2) Crambeck mortarium in Swanpool form		9
		(3) rim of ARG CC beaker		5
		(4) body sherds of LTW with sooted and rilled ext		32
		(5) thick body sherds of LTW		539
		(6) body sherds of calcite-gritted ware		24
		(7) BB1 flanged bowl		10
		(8) BB1 everted cup rim, body sherd with obtuse angled lattice and bowl/dish base sherd		53
		(9) reduced ware quartz-gritted flanged bowl		54
		(10) reduced ware with black core plain-rimmed dish		50
		(11) grey ware and reduced ware sherds		63
		(12) scrap of pot or fired clay		4
29	2	(1) body sherds BB1 cooking pot	C2+	12
39	8	(1) beaded rim from large bowl (form 30, 37 etc), and footring from cup. Samian	C2+	9
		(2) decorated rim from LTW vessel		76
		(3) body sherd of LTW		19

Key

ARG CC	Argonne colour coated ware
BB1	Black burnished ware fabric 1
DOR	Dorset
LTW	local traditional ware

Table 1.4: Roman pottery by fabric

Fabric	NRFRC	Wt (g)	no	EVE %
Samian		18	3	4
Mortarium				
Crambeck	CRAM WH	100	1	10
Fine wares				
Argonne Colour coated	ARG CC	5	1	24
Coarse wares				
SE Dorset black burnished 1	DOR BB 1	67	7	8
Black burnished 1, other sources		197	14	28
Calcite gritted	HUN CG	74	5	
Reduced with black core		50	7	18
Yorkshire grey ware		44	4	
Unclassified reduced wares		26	3	
LTW dolerite tempered, fabric 1.1		103	10	10
LTW quartz grain, fabric 4.2		32	3	
LTW fine quartz grain, fabric 4.3		706	21	
Total		**1422**	**79**	**92**

Key
LTW = Local traditional ware
NRFRC = National Roman Fabric Reference Collection code (Tomber and Dore 1998)

Descriptions for the fabrics with National Reference Collection codes in Table 1.4 can be found in Tomber and Dore 1998. Other fabrics are described below, or within the pottery catalogue; illustrated examples are listed below each entry.

Table 1.5: Animal bone fragment count for the species present

Context	20	24	27	29	30	40	39	101	104
Cattle	4	2	5	2	1	2	3		
Sheep/goat	1	3	2				1		
Sheep size								1	
Horse						1			
Goose									1
Oyster								3	

Table 1.6: Catalogue of the lithic assemblage

Typology	Raw material, colour and type	Percussion	Cortex	Rolling	Dorsal scar count	Patination/ staining	Preservation	Butt type	Termination	Break nature	Length (mm)	Width (mm)	Thickness (mm)
Microlith	grey brown flint	soft hammer	none	mint	1	slight, cream	whole	obscured	obscured	n/a	14.42	6.15	2.38
Piercer	grey flint	soft hammer	none	mint	4	moderate, cream	whole	marginal	obscured	n/a	25.33	12.48	5.68
Natural fragment	orange brown flint	n/a	none	fresh	n/a	slight, cream	n/a	n/a	n/a	n/a	9.64	7.73	4.27

Table 1.7: Summary of radiocarbon dating

Context	Sample	Laboratory code	Material	$\delta^{13}C$	Radiocarbon Age BP	Calibrated date 95.4% probability
12	4	SUERC-79368 GU47469	Charred barley grain	-24.4	2076 ± 32	184 (93.3%) 19 cal BC 12 (2.1%) 1 cal BC
18	5	SUERC-79369 GU47470	Charred spelt-type wheat grain	-22.3	1745 ± 32	225 (95.4%) 388 cal AD
24	6	SUERC-79370 GU47471	Charred barley grain	-22.5	1814 ± 32	125 (86.9%) 260 cal AD 280 (8.5%) 325 cal AD

[[The calibrated age ranges are determined using OxCal4.2.4 (Bronk Ramsey 2009); IntCal13 curve (Reimer *et al.* 2013)]]

Table 1.8: Palaeoenvironmental data (excavation)

Sample		1	2	3	4	5	6	7
Context		4	6	10	12	18	24	44
Feature number		5	7	11	13	19	25	45
Feature		Gully	Gully	Pit	Gully	Gully	Ditch	Gully
Material available for radiocarbon dating		(✓)	(✓)	-	✓	✓	✓	(✓)
Volume processed (l)		16	9	6	18	12	14	15
Volume of flot (ml)		100	100	100	200	80	10	100
Residue contents								
Bone (calcined)	indet. frags	-	(+)	-	-	-	(+)	-
Bone (unburnt)	indet. frags	-	-	-	-	-	(+)	-
Fired clay		-	(+)	-	(+)	(+)	(+)	(+)
Fire-cracked stones		-	-	-	-	(+)	-	-
Flint (number of fragments)		3	-	-	-	-	-	-
Hammerscale	(ball / flake)	-	-	-	-	-	-	(+)
Metal object (number of fragments)		1	-	-	-	-	-	-
Pot (number of fragments)		-	2	-	1	-	1	-
Flot matrix								
Beetle		-	-	-	-	-	-	+
Charcoal		+	+	-	(+)	+	+	+
Clinker / cinder	vesicular	-	+	+	(+)	-	+	+
Coal / coal shale		++	+	+	+	+	+	+
Earthworm egg case		-	-	-	+	-	-	-
Heather twigs (charred)		++	(+)	(+)	(+)	+	+	++
Monocot stems (charred)		+	-	-	(+)	+	(+)	-
Rhizome / tuber (charred)		++	+	(+)	+	+	+	++
Roots (modern)		+++	+++	++	+++	+++	(+)	+++
Uncharred seeds		(+)	-	(+)	(+)	-	-	(+)
Charred remains (total count)								
(a) *Bromus* sp (Bromes)	caryopsis	-	-	-	-	4	-	-
(c) Cerealia indeterminate	(twisted) awn frag.	-	-	-	-	-	1	-
(c) Cerealia indeterminate	grain	2	-	-	-	2	6	2
(c) *Hordeum* sp (Barley species)	grain	-	-	-	1	-	1	-
(c) *Triticum* cf. *spelta* (cf. Spelt Wheat)	grain	-	-	-	-	1	-	1
(c) *Triticum spelta* (Spelt Wheat)	glume base	1	-	-	-	7	7	1
(c) *Triticum spelta* (Spelt Wheat)	spikelet fork	-	-	-	-	1	-	1
(c) *Triticum* sp (Wheat species)	glume base	-	-	-	-	2	-	-
(c) *Triticum* sp (Wheat species)	grain	-	-	-	-	2	3	1
(g) *Arrhenatherum elatius* ssp *bulbosum* (False Oat-grass)	tuber	2	-	-	-	-	-	-
(h) *Danthonia decumbens* (Heath-grass)	caryopsis	-	-	-	2	1	9	10
(r) *Galium aparine* (Cleavers)	seed	-	1	-	-	-	-	-
(r) *Plantago lanceolata* (Ribwort Plantain)	seed	-	-	-	-	1	1	-
(r) *Stellaria media* (Common Chickweed)	seed	1	-	-	-	-	3	-
(w) *Carex* sp (Sedges)	trigonous nutlet	1	2	-	1	1	-	1
(w) *Montia fontana* (Blinks)	seed	-	-	-	-	-	1	-
(x) *Chenopodium* sp (Goosefoots)	seed	-	1	-	-	1	-	-
(x) Poaceae undiff. (Grass family)	>1mm caryopsis	2	-	-	-	-	-	-
(x) *Potentilla* sp (Cinquefoils)	achene	-	-	-	-	-	1	-
(x) *Ranunculus* subgenus *Ranunculus* (Buttercup)	achene	-	-	-	-	-	1	-
(x) *Rumex* sp (Docks)	nutlet	-	-	1	-	2	7	-
Identified charcoal (✓ presence)								
Alnus glutinosa (Alder) / *Corylus avellana* (Hazel)		-	-	-	-	-	✓	-
Corylus avellana (Hazel)		-	✓	-	-	✓	-	-
Quercus sp (Oaks)		✓	✓	-	-	✓	✓	✓

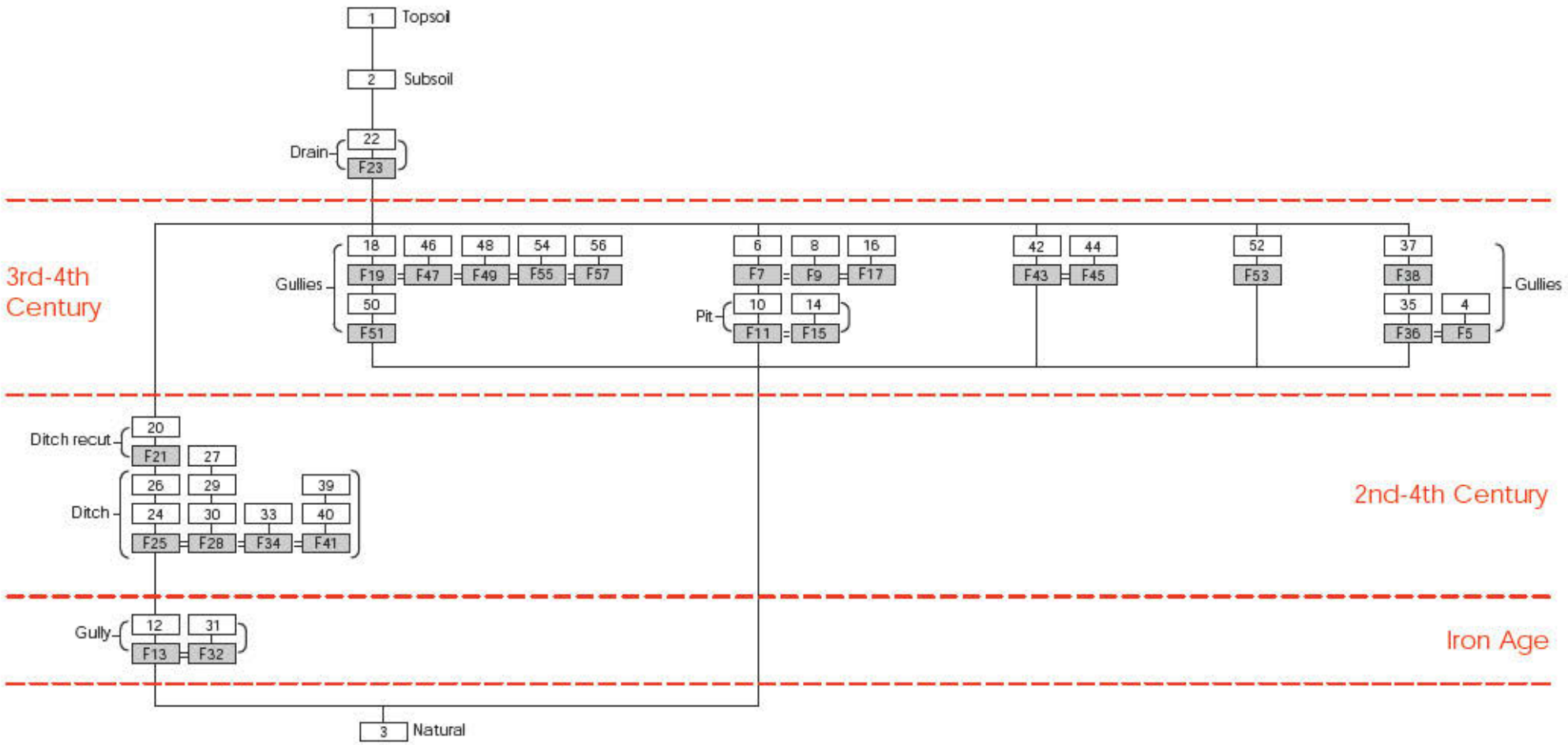
[a-arable; c-cultivated; g-grassland; h-heathland; r-ruderal; w-wet/damp ground; x-wide niche.
(+): trace; +: rare; ++: occasional; +++: common; ++++: abundant. (✓) may be unsuitable for dating due to size or species]

Table 1.9: Palaeoenvironmental data (evaluation)

Sample		1
Context		100
Feature number		101
Feature		Ditch
Material available for radiocarbon dating		(✓)
Volume processed (l)		15
Volume of flot (ml)		30
Residue contents		
Bone (calcined)	indet. frags	(+)
Fire-cracked stones		+
Glass (number of fragments)		1
Tooth (animal - enamel fragment)		10
Flot matrix		
Charcoal		(+)
Coal / coal shale		+
Heather twigs (charred)		+
Monocot stems (charred)		(+)
Rhizomes (charred)		+
Roots (modern)		++
Charred remains (total count)		
(a) *Bromus* sp (Bromes)	caryopsis	1
(c) Cerealia indeterminate	grain	1
(c) *Hordeum* sp (Barley species)	rachis fragment	2
(c) *Triticum* cf. *spelta* (cf. Spelt Wheat)	grain	2
(c) *Triticum spelta* (Spelt Wheat)	glume base	16
(c) *Triticum spelta* (Spelt Wheat)	spikelet fork	2
(h) *Danthonia decumbens* (Heath-grass)	caryopsis	1
Uncharred remains (abundance)		
(t) *Sambucus nigra* (Elder)	fruitstone	1
Identified charcoal (✓ presence)		
Quercus sp (Oaks)		✓

[a-arable; c-cultivated; h-heathland; t-tree/shrub.
(+): trace; +: rare; ++: occasional; +++: common; ++++: abundant
Uncharred remains are scored from 1-5 where 1: 1-2; 2: 3-10; 3: 11-40; 4: 41-200; 5: >200
(✓) may be unsuitable for dating due to size or species]

Appendix 2: Stratigraphic matrices



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Red Hall, Darlington

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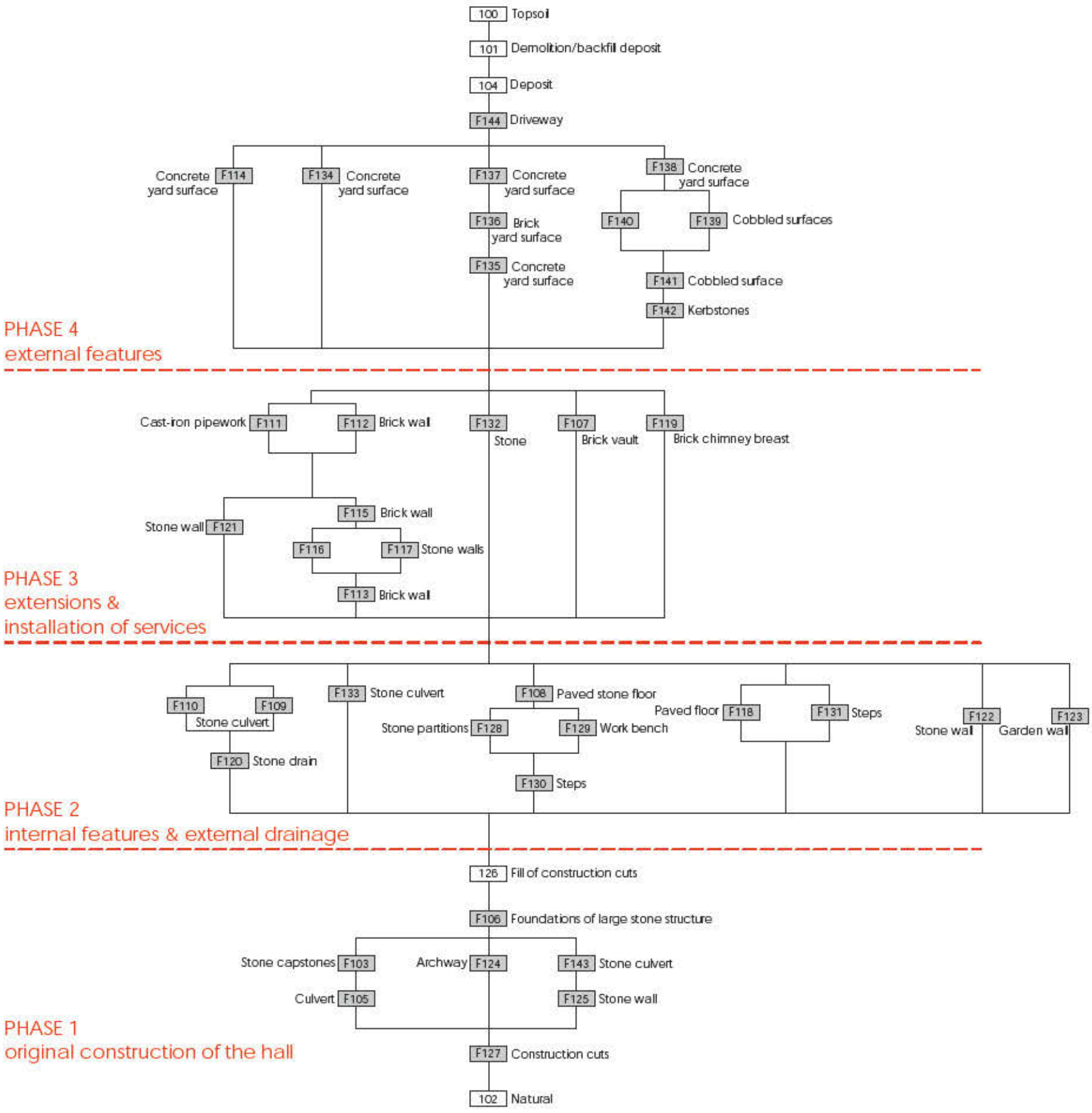
Appendix 2: Trench 1 stratigraphic matrix



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Appendix 2: Trench 2 stratigraphic matrix

Appendix 3: Radiocarbon certificates

Scottish Universities Environmental Research Centre
Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor F M Stuart Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE
03 May 2018

Laboratory Code	SUERC-79368 (GU47469)
Submitter	Carrie Armstrong Durham University Archaeological Services South Road Durham DH1 3LE
Site Reference	Darlington Red Hall
Context Reference	12
Sample Reference	4
Material	Charred cereal grain : Hordeum sp
$\delta^{13}C$ relative to VPDB	-24.4 ‰
Radiocarbon Age BP	2076 ± 32

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

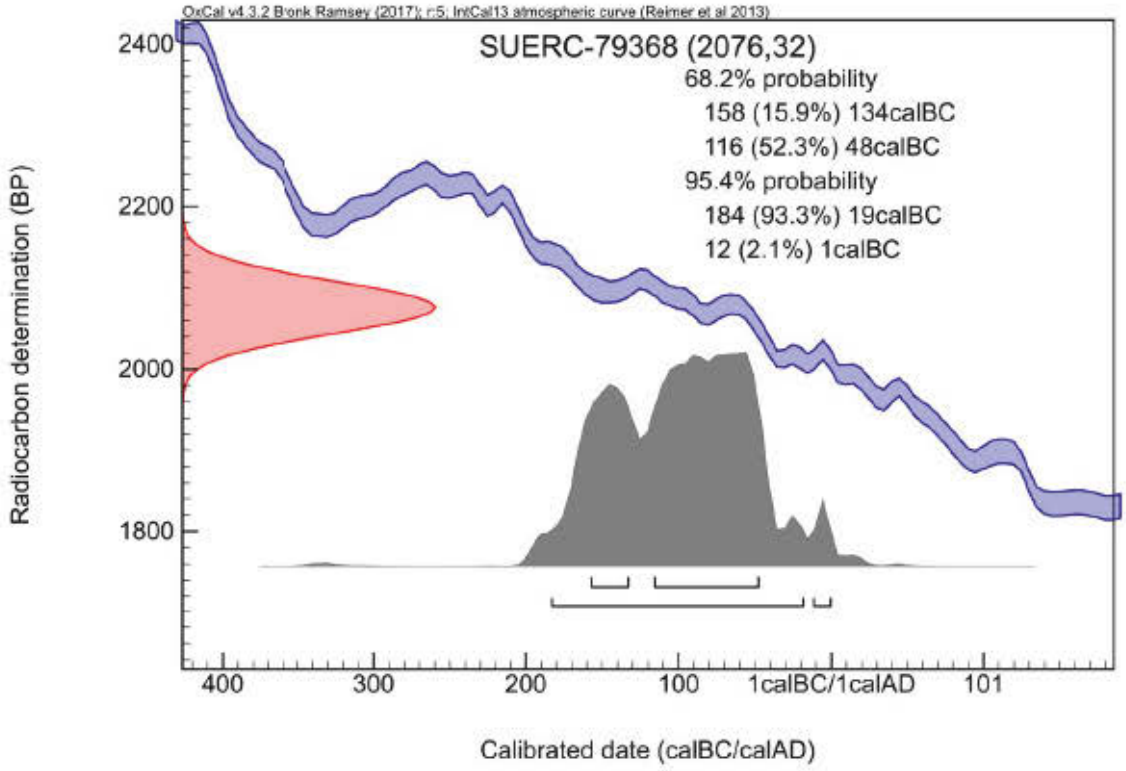
Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by : E. Dunbar

Checked and signed off by : P. Naysmith



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal13 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*
† Reimer et al. (2013) *Radiocarbon 55(4) pp.1869-87*

Scottish Universities Environmental Research Centre
Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor F M Stuart Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE
03 May 2018

Laboratory Code	SUERC-79369 (GU47470)
Submitter	Carrie Armstrong Durham University Archaeological Services South Road Durham DH1 3LE
Site Reference	Darlington Red Hall
Context Reference	18
Sample Reference	5
Material	Charred cereal grain : Triticum sp
$\delta^{13}C$ relative to VPDB	-22.3 ‰
Radiocarbon Age BP	1745 ± 32

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

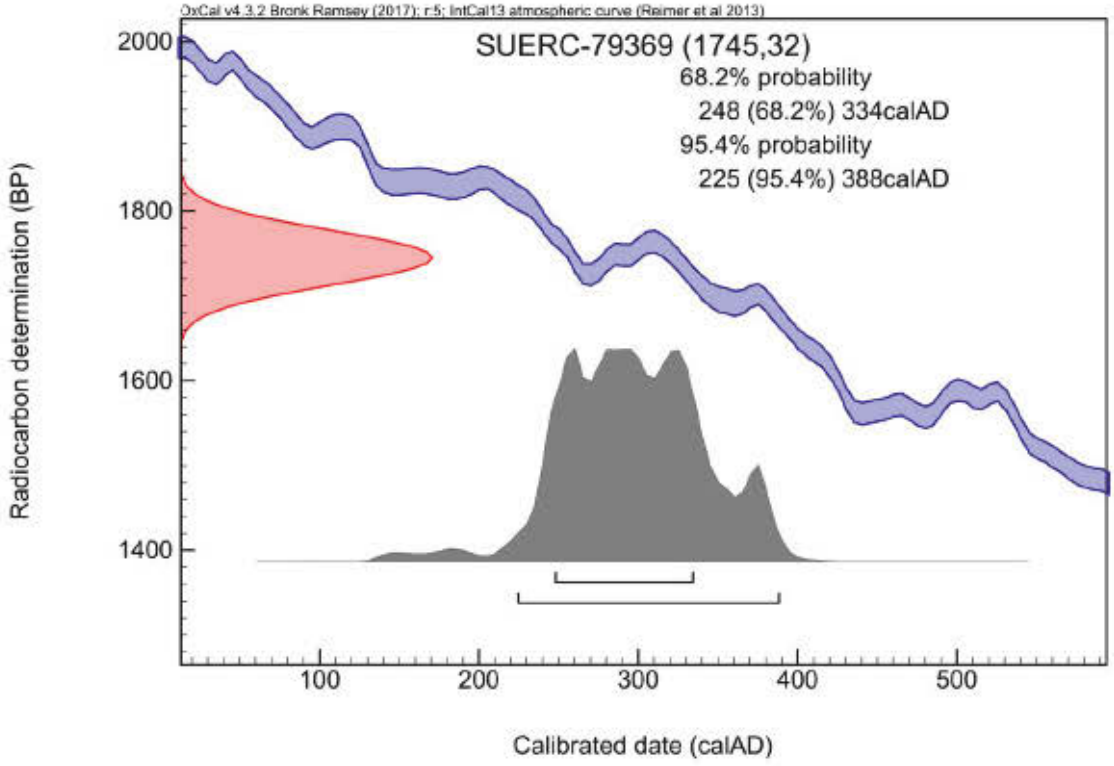
Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by : E Dunbar

Checked and signed off by : P. Nayont



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal13 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*
† Reimer et al. (2013) *Radiocarbon 55(4) pp.1869-87*

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Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor F M Stuart Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE
03 May 2018

Laboratory Code	SUERC-79370 (GU47471)
Submitter	Carrie Armstrong Durham University Archaeological Services South Road Durham DH1 3LE
Site Reference	Darlington Red Hall
Context Reference	24
Sample Reference	6
Material	Charred cereal grain : Hordeum sp
$\delta^{13}C$ relative to VPDB	-22.5 ‰
Radiocarbon Age BP	1814 ± 32

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

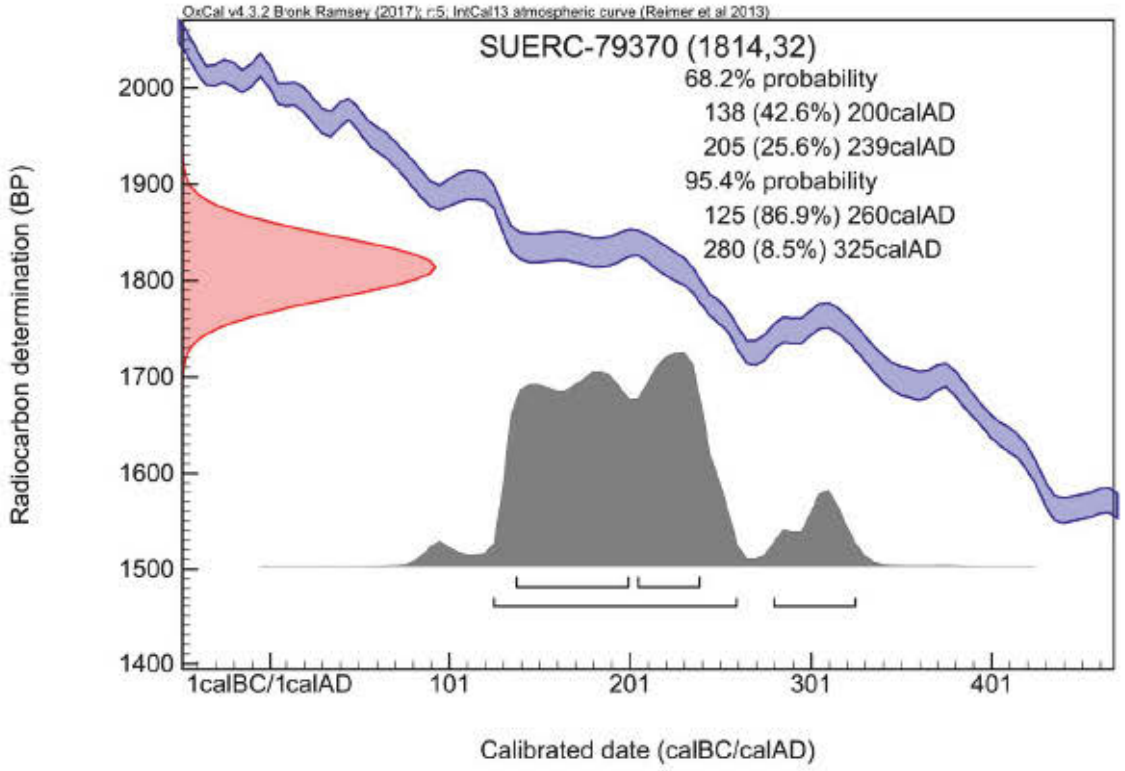
Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by : E. Dunbar

Checked and signed off by : P. Naysmith



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal13 atmospheric calibration curve†

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* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*
† Reimer et al. (2013) *Radiocarbon 55(4) pp.1869-87*

Photograph 1: Trench 1, gully [F5], looking east

Photograph 2: Trench 1, ditch [F25] and recut [F21], looking west

Photograph 3: Trench 2, culvert [F105] through wall foundations [F106], looking west

Photograph 4: Trench 2, culvert [F143] and wall [F125], room S, looking east

Photograph 5: Trench 2, archway [F124] in room R, looking south

Photograph 6: Trench 2, paving [F118] in rooms U, V and Y (possible larders), looking west

Photograph 7: Trench 2, room Q (possible scullery), looking north

Photograph 8: Trench 2, drain [F120] and culvert [F110] (left), south of room C, looking north

Photograph 9: Trench 2, room M, the conservatory, looking west

Photograph 10: Trench 2, rooms N, O and X, the vinery, looking west

Photograph 11: Trench 2, boiler room [F107] in room Z, looking west

Photograph 12: Trench 2, inscription in boiler room [F107] – "July '31 Martin Watson"

Photograph 13: SF1, copper alloy object, with arched top detail

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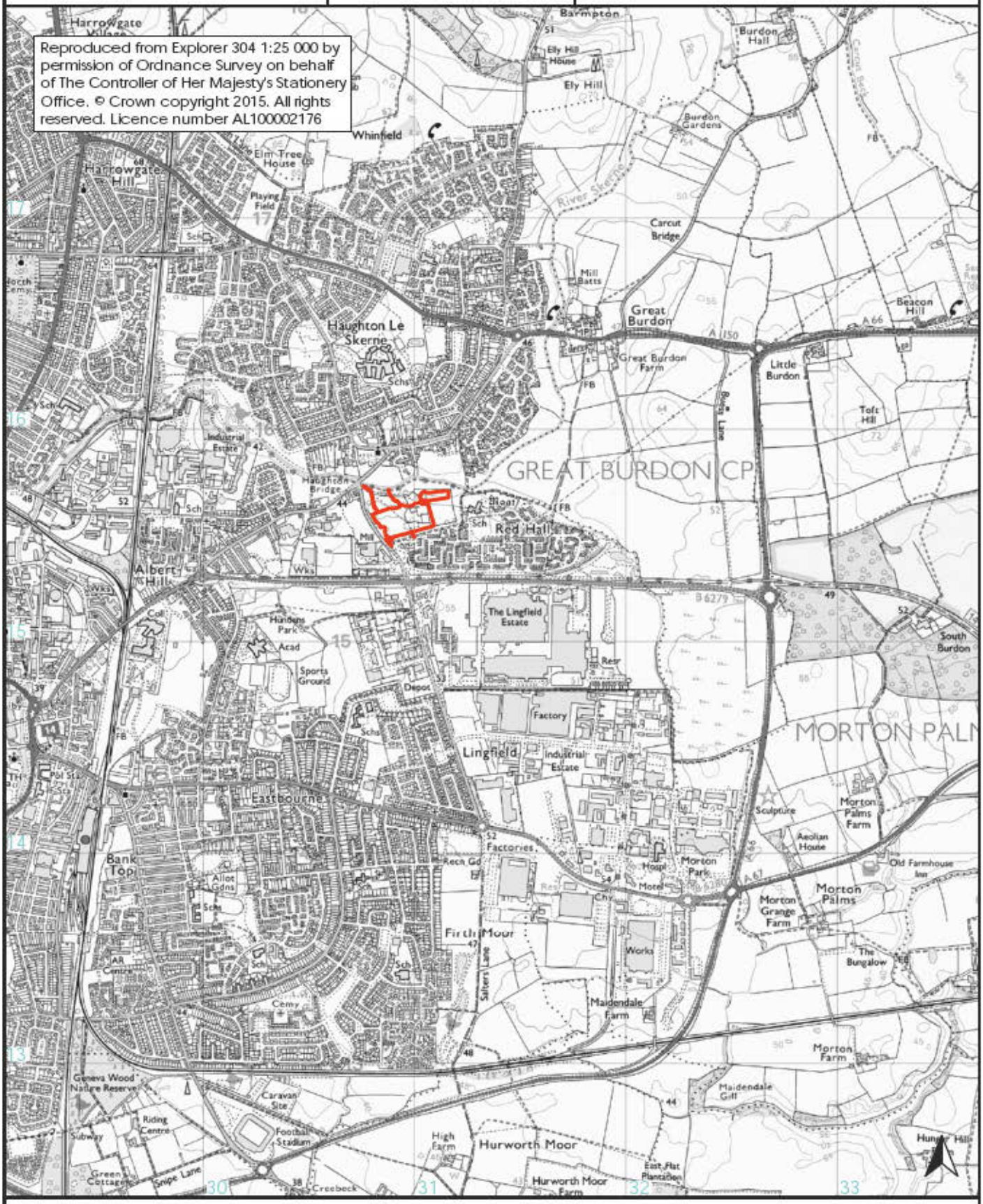
Figure 1: Site location



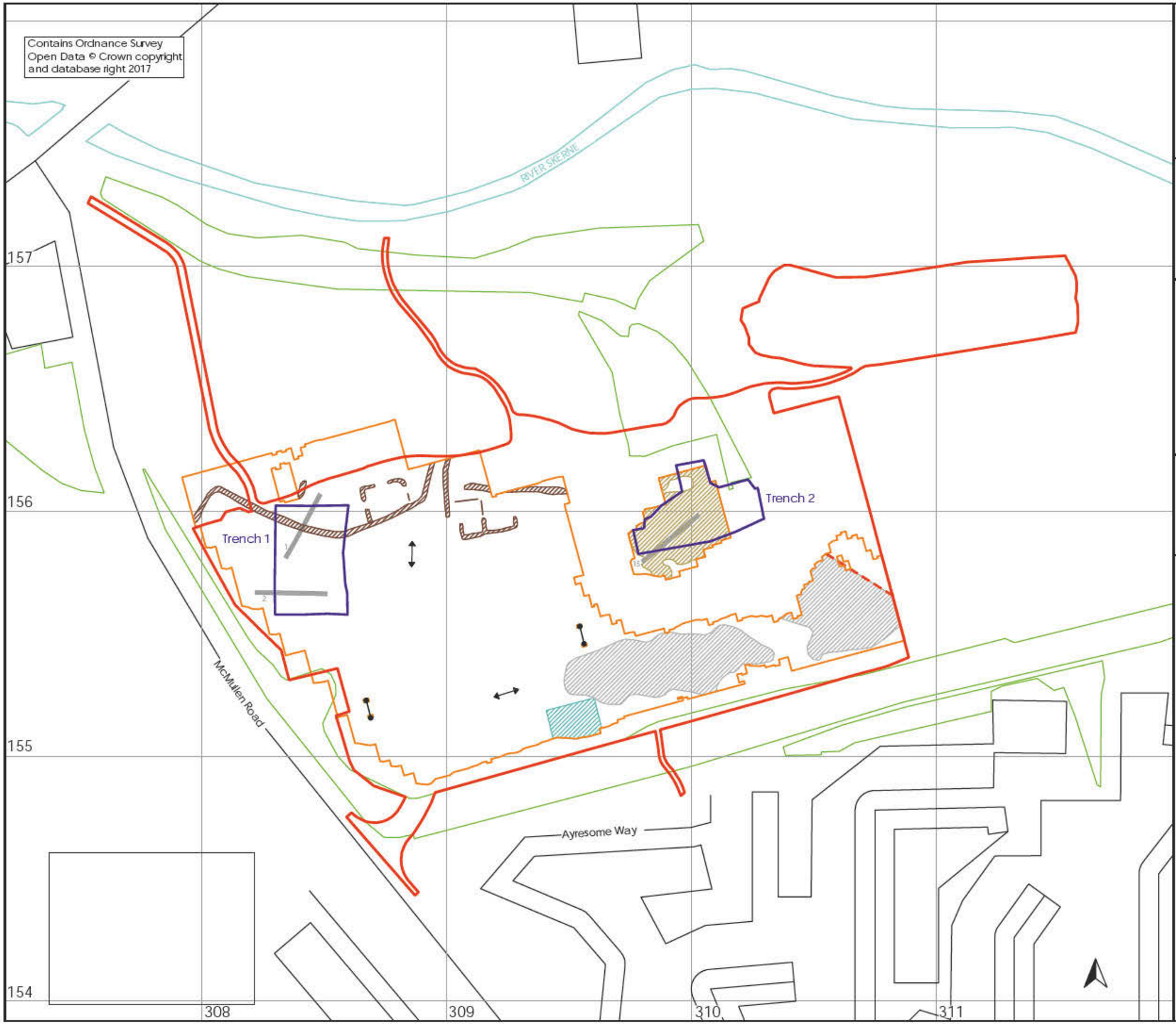


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Figure 2: Trench locations

0 75m
scale 1:1500 for A3 plot

- site boundary
- area of strip, map and record
- evaluation trench
- magnetic survey
- soil-filled feature
- ferrous/ fired materials
- disturbed area
- basketball court
- service
- ridge and furrow
- goal post

extent of excavation

section

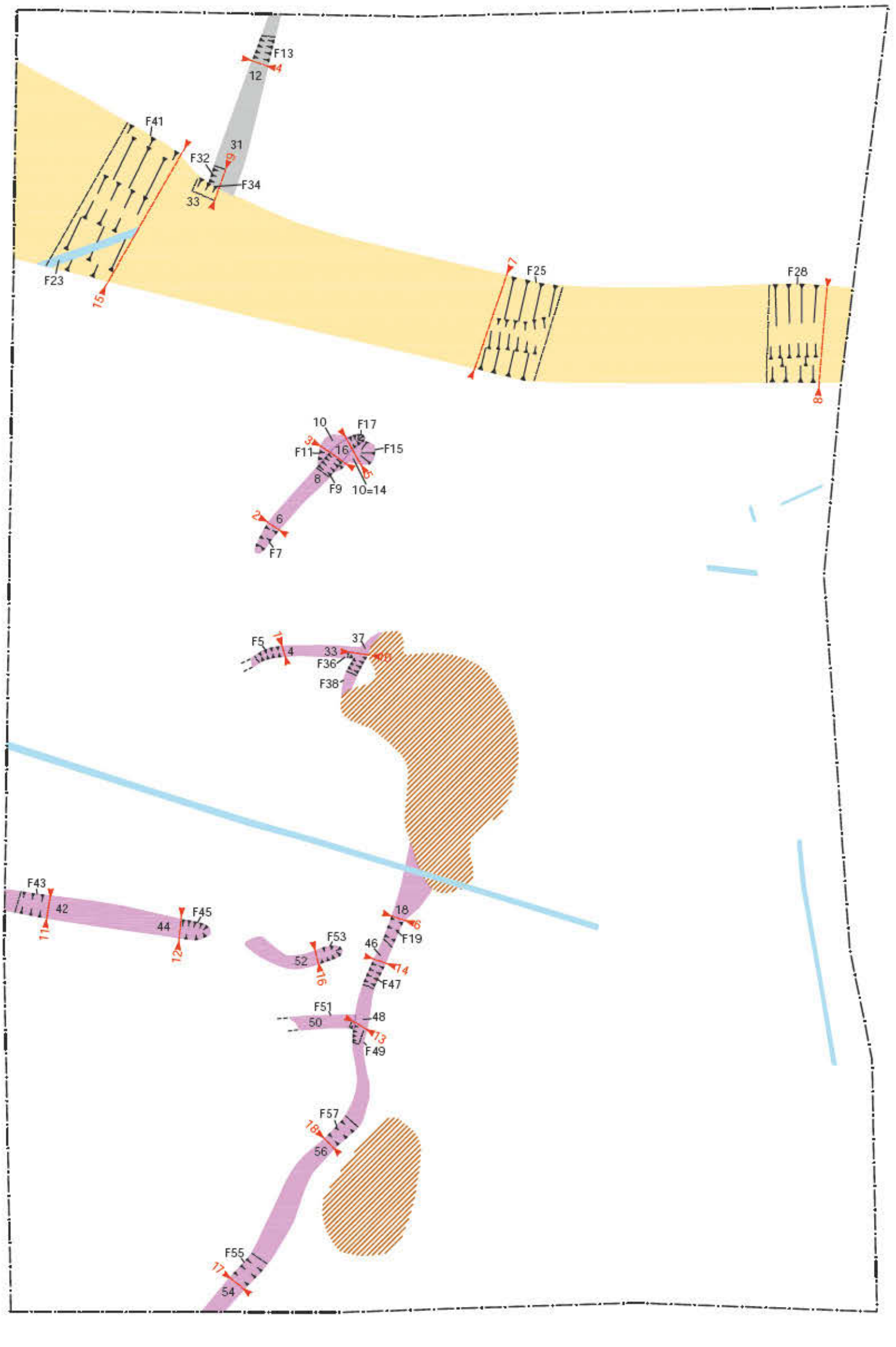
Iron Age

2nd-4th century Roman ditch

3rd-4th century gullies

field drain

tree bole



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0 7.5m
scale 1:150 for A3 plot

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Figure 3: Trench 1, plan

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extent of excavation

0 1.5m
scale 1:30 for A3 plot

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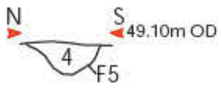
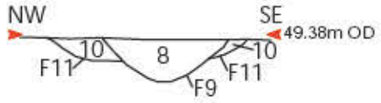
Figure 4: Trench 1, sections

Section 1



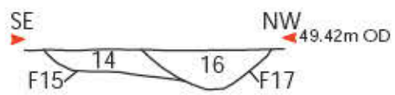
Section 2

Section 3



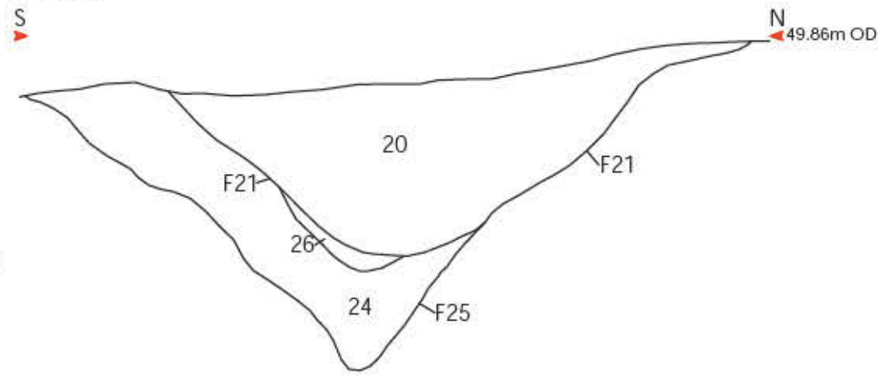
Section 4

Section 5



Section 6

Section 7



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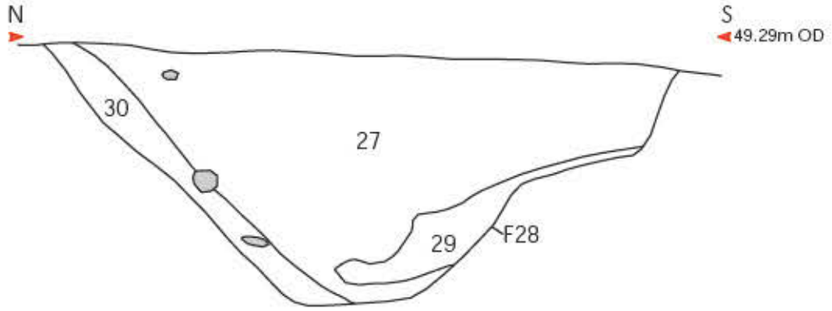

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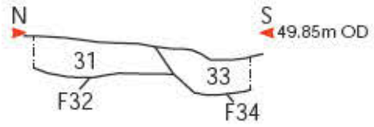

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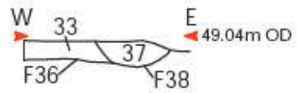

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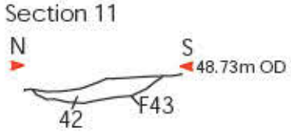
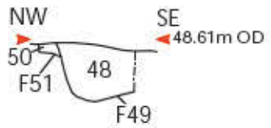
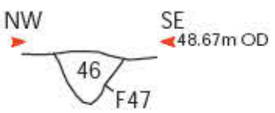


Section 12

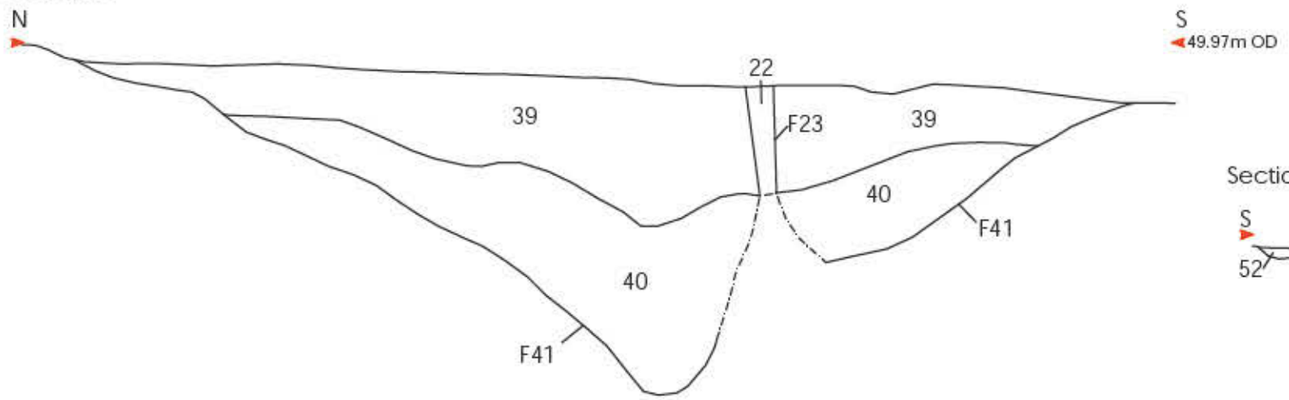
Section 13



Section 14



Section 15



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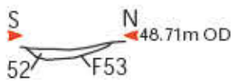

Section 17

Section 18

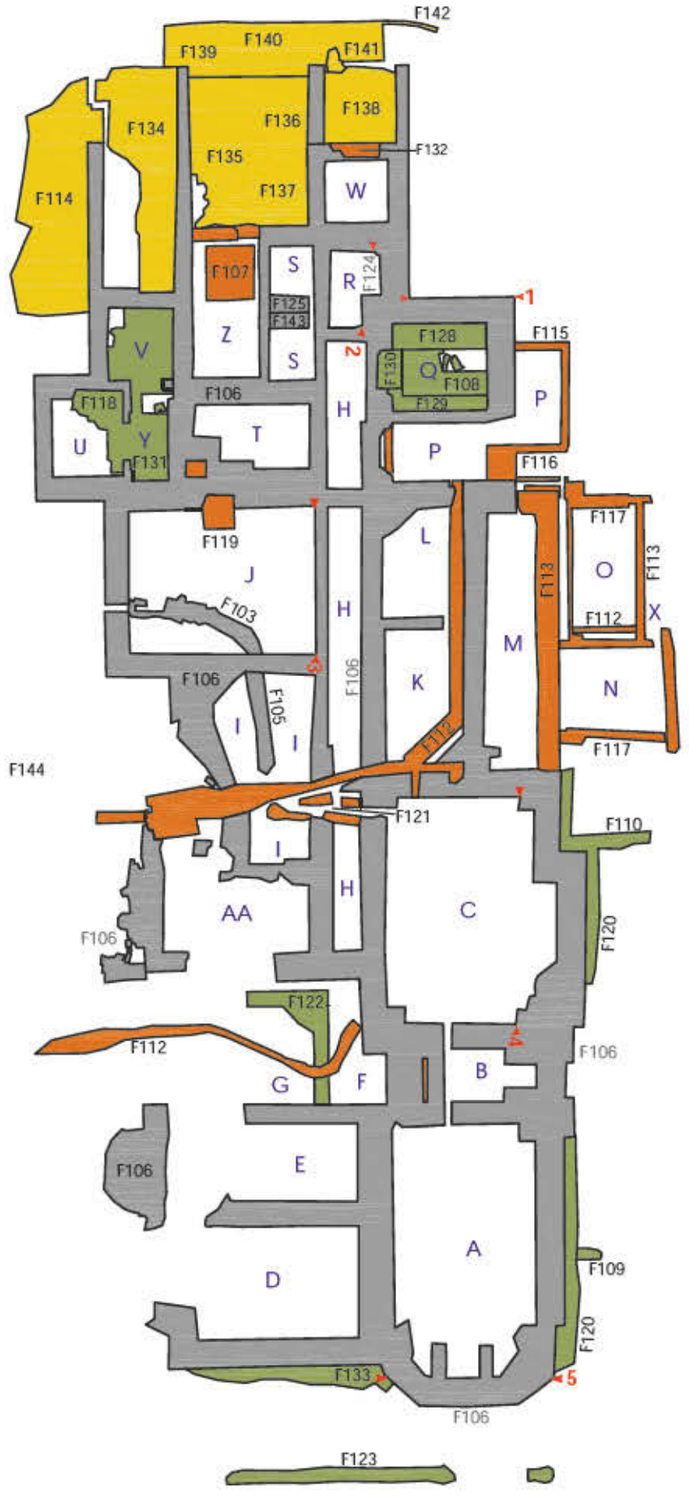

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Figure 5: Trench 2, phased plan, with room key

0 10m
scale 1:200 for A3 plot

M room reference
phase 1
phase 2
phase 3
phase 4
2 elevation (Figure 6)

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0 1m
scale 1:20 for A3 plot

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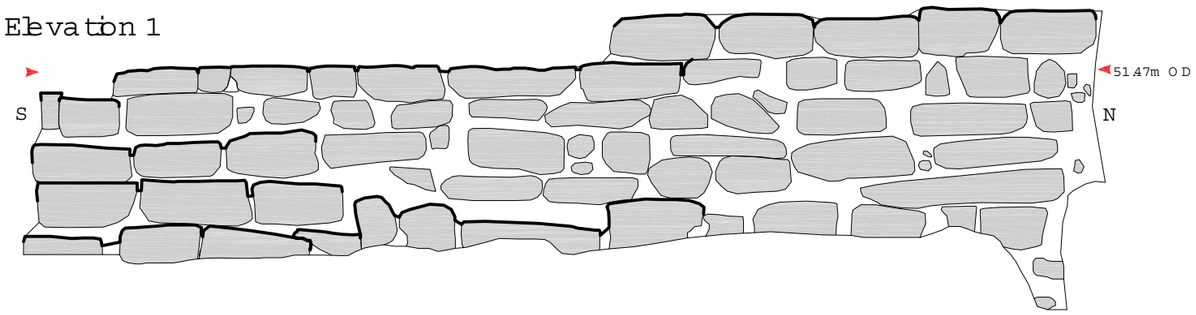
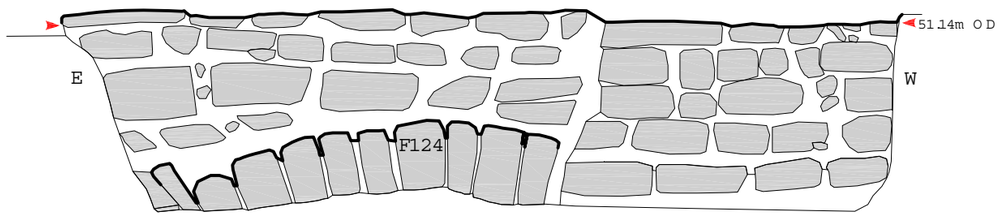
Figure 6: Trench 2, elevations

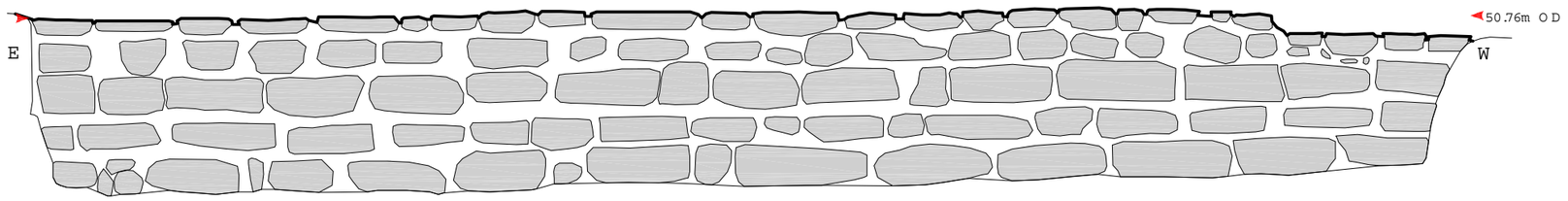
Elevation 1



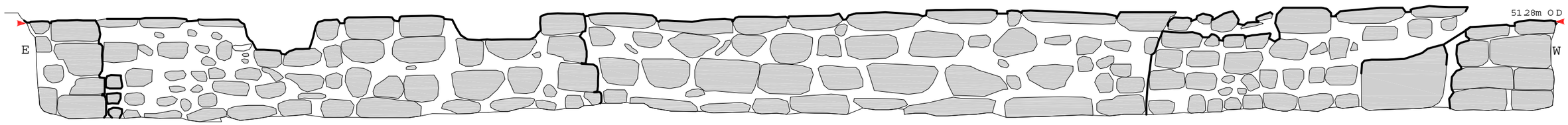
Elevation 2



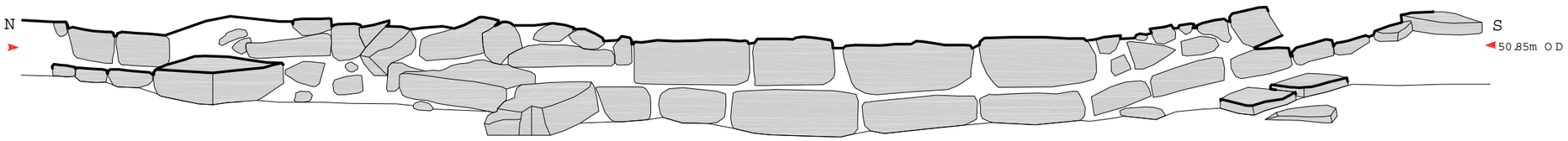
Elevation 3



Elevation 4



Elevation 5



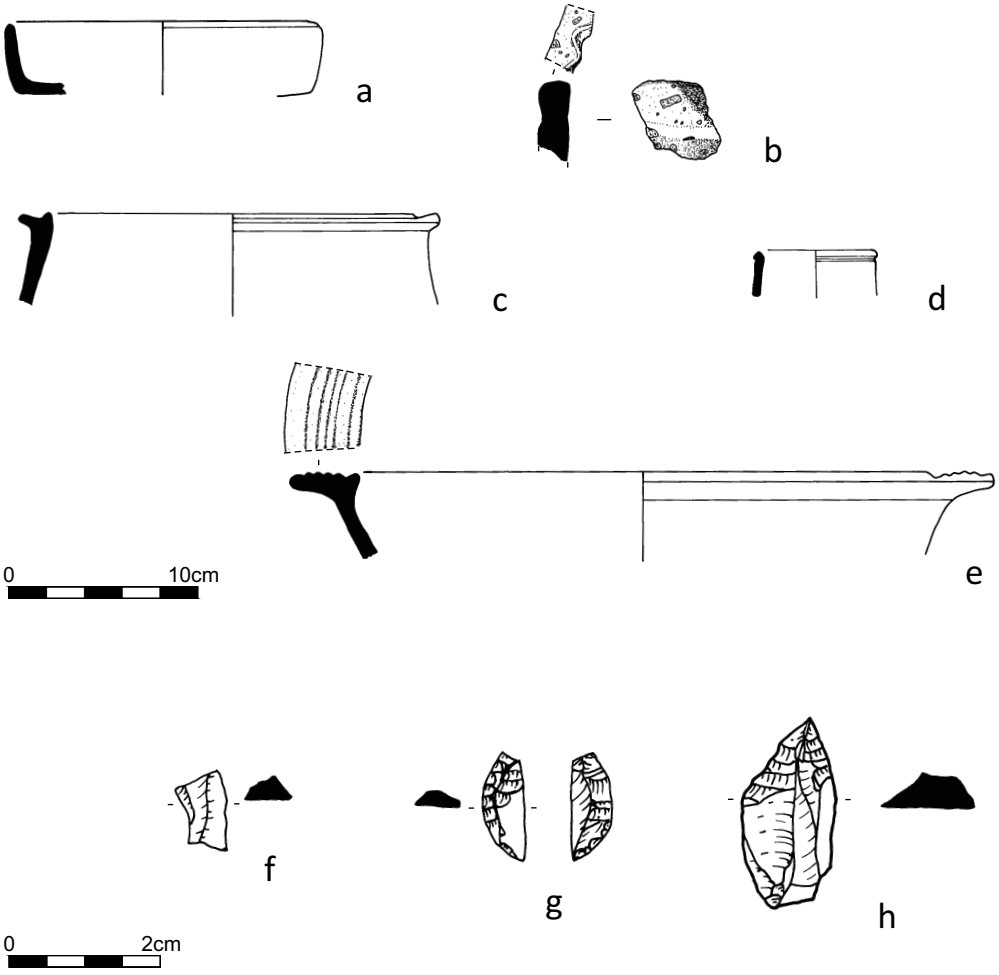


Figure 7:
Pottery - reduced ware with black core dish (a) cat. 3, Iron Age rim (b) cat. 1, bowl rim (c) cat 4, 2nd century beaker rim (d) cat. 2 and mortarium rim (e) cat. 5; Lithics - natural flint (f), microlith (g) and piercer (h)