

ARCHAEOLOGICAL
SERVICES
DURHAM UNIVERSITY

on behalf of
Barratt Homes

Land at Cadger Bank
Lanchester
County Durham

archaeological evaluation

report 3381
March 2014

Contents

1.	Summary	1
2.	Project background	2
3.	Landuse, topography and geology	2
4.	Historical and archaeological background	3
5.	The evaluation trenches	3
6.	The artefacts	8
7.	The palaeoenvironmental evidence	9
8.	The archaeological resource	11
9.	Impact assessment	11
10.	Recommendations	11
11.	Sources	11
Appendix 1: Data tables		13
Appendix 2: Stratigraphic matrices		17

Figures

Figure 1:	Site location
Figure 2:	Location of trenches and main features
Figure 3:	Trench plans and sections
Figure 4:	Trench plans and sections
Figure 5:	Trench 4, quarry pit F402 in the foreground, looking north-east
Figure 6:	Trench 6, Cut F602, sondage to solid sandstone natural, looking south-east
Figure 7:	Trench 6, Pit F607 with sandstone layer visible, looking north
Figure 8:	Trench 6, Pit F607, looking north-east
Figure 9:	Trench 8, geological feature F802, looking north-east
Figure 10:	Trench 8, section through F802, looking north-west
Figure 11:	Trench 8, F808, looking north
Figure 12:	Trench 9, F903, looking north-east
Figure 13:	Trench 9, F905 cutting F903, looking north-west
Figure 14:	Trench 13, F1302, looking north-east

1. Summary

The project

- 1.1 This report presents the results of an archaeological evaluation conducted in advance of a proposed development on land at Cadger Bank, Lanchester. The works comprised the excavation of 14 trial trenches.
- 1.2 The works were commissioned by Barratt Homes and conducted by Archaeological Services Durham University.

Results

- 1.3 Archaeological features comprising ditches and pits cut into the natural geology were identified in trenches 4-6, 8-10 and possibly 13. This includes a large area of probable quarrying activity identified in trenches 4 and 6 that may date to the Roman period. In addition, a large ditch identified in Trench 8 has been interpreted as the possible eastern boundary of the Roman *vicus*.
- 1.4 No archaeological deposits were recorded in trenches 1-3, 7, 11, 12 and 14.
- 1.5 Furrows, the remains of medieval or post-medieval ploughing, and a system of field drains were recorded in the majority of the trenches, cutting into the natural geology.
- 1.6 A small assemblage of pot sherds was recovered from some of the archaeological features, indicating that some of them are likely to date from the Roman period. The small palaeoenvironmental assemblages recovered are consistent with this.
- 1.7 Members of the *Friends of Longovicium* visited the works whilst they were in progress, and c.30 members of the public also attended an open day.

Recommendation

- 1.8 A programme of archaeological works is recommended in order to mitigate the impact of the development on the archaeological resource.

2. Project background

Location (Figure 1)

- 2.1 The proposed development area (PDA) is located to the north of Cadger Bank, Lanchester, County Durham (NGR centre: NZ 1604 4723). To the east and north are housing, to the south and west is the Scheduled Ancient Monument of *Longovicium* Roman fort and its associated *vicus*. Cadger Bank, the B6296, borders the PDA to the immediate south.

Development proposal

- 2.2 The proposed development is for housing and related facilities.

Objective

- 2.3 The objective of the scheme of works was to assess the nature, extent and potential significance of any archaeological resource within the proposed development area, so that an informed decision may be made regarding the nature and scope of any further scheme of archaeological works that may be required in relation to the development.

Specification

- 2.4 The works have been undertaken in accordance with a brief provided by PJO Archaeology and a Written Scheme of Investigation provided by Archaeological Services Durham University (reference DS14.10) and approved by the planning authority.

Dates

- 2.5 Fieldwork was undertaken between 10th and 24th February 2014. This report was prepared for March 2014.

Personnel

- 2.6 Fieldwork was conducted by Natalie Swann, Nathan Thomas (supervisor) and Rebekah Watson. This report was prepared by Nathan Thomas, with illustrations by David Graham. Specialist reporting was conducted by Jennifer Jones (artefacts) and Dr Carrie Drew (palaeoenvironmental). Sample processing was undertaken by Alan Rae. The Project Manager was Daniel Still.

Archive/OASIS

- 2.7 The site code is **CBL14**, for **Cadger Bank, Lanchester 2014**. The archive is currently held by Archaeological Services Durham University and will be transferred to the Bowes Museum in due course. Archaeological Services Durham University is registered with the **Online AccesS to the Index of archaeological investigationS project (OASIS)**. The OASIS ID number for this project is **archaeol3-174113**.

3. Landuse, topography and geology

- 3.1 At the time of this assessment, the PDA comprised two rough pasture fields partitioned by a boundary of mature trees.
- 3.2 The PDA slopes down to the north-east from around 160m OD in the south-west to 146m OD in the north-east.

- 3.3 The underlying solid geology of the area comprises Westphalian mudstone, siltstone and sandstone strata of the Pennine Middle Coal Measures Formation, which are overlain by Devensian till (BGS 2014 online)

4. Historical and archaeological background

- 4.1 A full desk-based assessment (DBA) of the PDA has been conducted by PJO Archaeology (2013). A summary of the findings of the DBA is presented below.
- 4.2 Little evidence for prehistoric activity and settlement has been recorded in the Lanchester area.
- 4.3 The Lanchester area was incorporated into the Roman Empire in the late first century AD. The line of one of the principal Roman roads to the north, now known as Dere Street, lies immediately west of the PDA.
- 4.4 The Roman fort of *Longovicium*, located c.120 m to the south-west of the PDA, was built at around AD150 and covers an area of 2.3 hectares. It was rebuilt a number of times during its occupation. The fort was a later addition to a chain of defensive forts along Dere Street.
- 4.5 Previous archaeological work has shown that the interior of the fort could have held up to 1000 soldiers and included barracks, granaries and a *praetorium* or commandant's house, and that there was an aqueduct and a cemetery to the south-west of the fort (for example, Casey *et al.* 1992; Turner 1990).
- 4.6 Outside the fort several phases of geophysical survey have shown that there was an extensive *vicus* to the north, south and east, along the line of Dere Street (Archaeological Services 2008a, 2008b, 2009; Cousins 1990; Noel 1991; Payne 1991).
- 4.7 In the medieval period, the PDA probably lay in the open fields of Lanchester. Enclosure cannot be dated exactly but may have taken place in the 16th or 17th centuries.
- 4.8 Map evidence and aerial photographs show the site was ploughed in the late 19th century. Some small scale coal mining may also have taken place at this time.
- 4.9 A geophysical survey of the PDA has also been conducted (Archaeological Services 2013). The survey identified probable soil-filled ditch and pit features relating to the Roman *vicus* at *Longovicium* in the west of the PDA. Former agricultural regimes were also detected crossing the PDA in addition to a large modern water main.

5. The evaluation trenches

Introduction (Figures 2-4)

- 5.1 Fourteen trenches were excavated within the PDA. The evaluation was conducted in two phases. Six trenches, located in areas identified by the geophysics as archaeologically sterile, were excavated first. A further six trenches were then excavated that targeted the identified geophysical anomalies. Subsequently, two additional trenches were excavated to determine the extent of a feature identified

within Trench 8. Trench 8 was also lengthened to the south-west to investigate a linear geophysical anomaly.

Trench 1

- 5.2 This trench was 20m long and 2m wide, oriented north-east / south-west, and was located at the north-west of the PDA. The natural geology, a mottled yellow-grey sandy clay [101], was identified at a depth of 0.25m below ground level (BGL) (146.26m OD). Immediately above the natural [101] was topsoil [100: 0.25m deep], a mid greyish-brown sandy clay. No archaeological features or deposits were identified.

Trench 2

- 5.3 This trench was 40m long and 2m wide, oriented north-east / south-west, and was located at the north-east of the PDA. The natural geology, a mottled yellow-grey sandy clay [201], was identified at a depth of 0.3m BGL (146.02m OD). Cutting the natural [201] was a furrow [F202: 0.25m wide and 40mm deep]. Furrow F202 was oriented north-south. Three modern land drains were also identified cutting the natural [201]. Two of the drains (both ceramic) were oriented north-south and the third was oriented east-west. The north-south orientation of the furrow and drains corresponds with the ploughing trends identified within the geophysical survey for this part of the PDA. Immediately above the natural [201] and covering the features was topsoil [200: 0.3m deep], a mid greyish-brown sandy clay. No archaeological features or deposits were identified.

Trench 3

- 5.4 This trench was 20m long and 2m wide, oriented north-west / south-east, and was located at the north-east of the PDA. The natural geology, a yellow-grey sandy clay [301], was identified at a depth of 0.25m BGL (147.55m OD). Cutting the natural [301] were two truncated furrows [F302: 0.4-0.6m wide and <0.1m deep]. Furrows F302 were oriented north-south. Three modern land drains were also identified cutting the natural [301]. Two of the drains (both ceramic) were oriented north-south and the third was oriented north-east / south-west. The north-south orientation of the furrows and drains again corresponds with the ploughing trends identified within the geophysical survey for this part of the PDA. Immediately above the natural [301] and covering the features was a topsoil [300: 0.3m deep], a mid greyish-brown sandy clay. No archaeological features or deposits were identified.

Trench 4 (Figure 3)

- 5.5 This trench was 60m long and 2m wide, oriented north-east / south-west, and was located over a number positive magnetic anomalies identified at the south-west end of the trench. The natural geology, a orange-brown sandy clay [401], was identified at a depth of 0.35m BGL (151.12m OD) for the north-east 50m of the trench.
- 5.6 Cutting the natural [401] at the south-west end of the trench was the cut of a substantial pit [F402: 8.45m long and 1.5m deep]. The base of the pit was recorded at a depth of 1.9m BGL (150.65m OD) and was observed to follow the course of a layer of solid sandstone (Figure 5). Pit F402 was filled with a loose layer of angular stone rubble [403: 1.25m deep]. Above deposit [403] was a layer of laminated yellow clay [404: up to 0.85m deep]. Above deposit [404] was a light brown sandy clay [405: 0.1m deep]. These deposits [403, 404 and 405] were interpreted as the

backfill/spoil from quarrying activity. No artefacts were recovered from these deposits. Pit F402 was interpreted as probable quarrying activity.

- 5.7 Five modern land drains were also identified cutting the natural [401]. All the drains were oriented north-south. The north-south orientation of the drains again corresponds with the ploughing trends identified within the geophysical survey for this part of the PDA. Immediately above the natural [401] and covering the features was a topsoil [400: 0.3m deep], a mid greyish-brown sandy clay.

Trench 5 (Figure 3)

- 5.8 This trench was 60m long and 2m wide, oriented north-east / south-west, and was located over a geophysical anomaly tentatively identified as a Roman road. The natural geology, a orange-brown sandy clay [501], was identified at a depth of 0.35m BGL (152.1m OD). Cutting the natural [501] at the south-west end of the trench was a shallow east-west oriented gully [F503: 0.75m wide and 80mm deep]. F503 was filled with deposit [502], a mid grey-brown sandy silt. No artefacts were recovered from the deposit. F503 was interpreted as a shallow gully of uncertain date and function. A truncated, north-south oriented, furrow [F504: 0.6m wide and <0.1m deep] in addition to two field drains were also recorded. The drains were both stone-filled and were oriented north-south and east-west respectively. Immediately above the natural [501] and covering the features was a topsoil [500: 0.35m deep], a mid greyish-brown sandy clay.

Trench 6 (Figure 3)

- 5.9 This trench was 60m long and 2m wide, oriented north-west / south-east, and was located over a number of positive magnetic anomalies identified at the north-west end of the trench. The natural geology, a orange-brown sandy clay [601], was identified at a depth of 0.35m BGL (153.09m OD) for the south-east 40m of the trench.
- 5.10 Cutting the natural at the north-west of the trench was a series of cuts indicating a continuation of the probable quarrying activity identified in Trench 4. The south-east limit of the quarrying appeared to be delimited by a steep sided cut that again was observed to terminate at a layer of solid sandstone [F602: 2m deep] (Figure 6). North-west of F602 was a second semi-circular cut [F610: 2m deep] again terminating on a solid sandstone base. Filling F602 and F610 were a series of loose laminated deposits of clay and stone [603, 604, 605, 609, 611-619] all indicative of spoil backfill. Deposit [604] yielded fragments of abraded Roman pottery. Cuts F602 and F610 were interpreted as probable quarrying activity, possibly of Roman date. No later material was recovered.
- 5.11 Cutting deposit [605] was the cut of a large pit feature F607 [2.5m wide and 1.15m deep]. Pit F607 contained two fills (Figures 7 and 8). The lower fill [606: 0.45m deep] was a light yellow-brown sandy clay that contained a single sherd of Roman pottery. Above deposit [606] was deposit [608: 0.7m deep], a mid grey-brown silty clay that yielded sherds of Roman pottery. Pit F607 coincided with the location of a large positive magnetic anomaly identified in the geophysical survey. Pit F610 was interpreted as either a pit of uncertain function dating to the Roman period, or a backfilled area of slumping within the loose quarry deposits identified. Deposit [608] was very similar to the topsoil [600].

- 5.12 In addition to the potential quarrying activity, a single north-south oriented furrow [F620: 0.6m wide] was identified close to the intersection with Trench 5. A single north-west /south-east oriented land drain was also identified running parallel to the edge of the trench at its south-east end. No other features were identified that explained the identified linear geophysical anomalies.

Trench 7

- 5.13 This trench was 40m long and 2m wide, oriented north-east / south-west, and was located at the east of the PDA. The natural geology, a mottled yellow-grey sandy clay [701], was identified at a depth of 0.3-0.5m BGL (151.37m OD). Immediately above the natural [701] was a topsoil [700: 0.3-0.5m deep], a mid greyish-brown sandy clay. No archaeological features or deposits were identified.

Trench 8 (Figure 4)

- 5.14 This trench was 64m long and 2m wide, oriented north-east / south-west, and was located over a number of linear magnetic anomalies. The natural geology, a yellow-brown sandy clay with black manganese patches [801], was identified at a depth of 0.25-0.4m BGL (157.60m-154.47m OD) for the majority of the trench.
- 5.15 At the north-east end of the trench, a natural stone outcrop was encountered. Abutting this outcrop was a deposit of substantial angular yellow stones [F802: 5.3m long and 0.7m deep]. Initial cleaning of the area led to the erroneous conclusion that the stones were of an anthropogenic origin (Figure 9). The subsequent machine excavation of F802 determined that a natural origin was more likely. This was evident in the excavated section that demonstrated that the natural clay was present both above and below the stones blocks (Figure 10). In addition, the stone blocks were set together with regular fault lines that continued into the solid geology at the north-west of the trench. F802 was interpreted as a natural geological feature.
- 5.16 Cutting the natural [801] at the south-west end of the trench was a v-shaped north-east / south-west oriented gully [F804: 0.7m wide and 0.35m deep]. F804 contained two fills. The primary fill [807: 0.1m deep] was a dark grey-brown clay silt. Above deposit [807] was deposit [803], a light grey-brown clay silt. No artefacts were recovered from either deposit. F804 was interpreted as a drainage gully of uncertain date and function that coincided with the location of a linear magnetic anomaly.
- 5.17 Cutting the natural [801] in the south-west trench extension was a large steep sided and flat-bottomed, north-west / south-east oriented ditch [F808: 2m wide and 1.23m deep]. F808 contained eight fills, deposits of clayey silt [809-816]. Roman pottery was recovered from the primary fill [809] and deposits [814] and [816]. A fragment of Roman glass was also recovered from deposit [811]. F808 was interpreted as the eastern boundary ditch of the Roman *vicus* (Figure 9). The ditch coincides with a linear magnetic anomaly crossing the southern part of the PDA in the geophysical survey.
- 5.18 Also cutting the natural [801] were five truncated furrows [F806: 0.65m wide and 0.15m deep]. Furrows F806 were oriented north-east / south-west. A single, north-east / south-west oriented, stone-filled drain was also identified cutting the natural [801]. The north-east / south-west orientation of the furrows and drain corresponds

with the ploughing trends identified within the geophysical survey for this part of the PDA.

Trench 9 (Figure 4)

- 5.19 This trench was 40m long and 2m wide, oriented north-west / south-east, and was located in the south-east of the PDA. The natural geology, a yellow-brown sandy clay with patches of grit and blue clay [901], was identified at a depth of 0.4-0.6m BGL (155.05m-153.50m OD).
- 5.20 Cutting the natural [901] was an irregular large pit [F903: 3.7m long, 0.9m wide and 0.32m deep]. Pit F903 was filled with deposit [902], a light grey silty sand. No artefacts were recovered from the deposit. F903 was interpreted as a possible pit of uncertain date and function (Figure 12). Cutting deposit [902] was a linear, north-east / south-west oriented cut [F905, 0.65m wide and 0.35m deep]. F905 was filled with deposit [904], a mid grey-brown loam. No artefacts were recovered from the deposit. F905 was interpreted as a shallow gully, probably the base of a plough furrow (Figure 13). F905 aligns with the furrows identified within Trench 8 [F806] and the geophysical survey data. A second probable furrow was also identified on the same alignment to the north-west of [F905]. A single, north-east / south-west oriented, stone filled drain was also identified cutting the natural [901]. Immediately above the natural [901] and covering the features was a topsoil [900: 0.4m deep], a mid greyish-brown silty clay.

Trench 10 (Figure 4)

- 5.21 This trench was 60m long and 2m wide, oriented north-east / south-west, and was located in the south-east of the PDA. The natural geology, a yellow-brown sandy clay with black manganese patches [1001], was identified at a depth of 0.4m BGL (155.21m OD). Cutting the natural [1001] in the centre of the trench was a shallow north-south oriented gully [F1002: 0.46m wide and 80mm deep]. F1002 was filled with deposit [1003], a mid grey-blue sandy clay. No artefacts were recovered from the deposit. F1002 was interpreted as a shallow gully of uncertain date and function. Two field drains were also recorded cutting the natural [1001]. One of the drains was stone filled and the other was ceramic; both were oriented north-south. Immediately above the natural [1001] and covering the features was a topsoil [1000, 0.4m deep], a mid greyish-brown silty clay.

Trench 11

- 5.22 This trench was 10m long and 2m wide, oriented north-east / south-west, and was located over a linear magnetic anomaly. The natural geology, a yellow-brown sandy clay [1101], was identified at a depth of 0.35m BGL (159.47m OD). Coincident with the location of the linear magnetic anomaly was a variation in the natural geology. This consisted of a shale deposit that was observed to undercut the natural clay. This shale deposit was interpreted as the cause of the magnetic anomaly. A single modern land drain was also identified cutting the natural [1101]. This was oriented east-west. Immediately above the natural [1101] was a topsoil [1100: 0.35m deep], a mid greyish-brown silty clay. No archaeological features or deposits were identified.

Trench 12

- 5.23 This trench was 10m long and 2m wide, oriented north-east / south-west, and was located at the south-west of the PDA. The natural geology, a mottled yellow-brown sandy clay [1201], was identified at a depth of 0.3m BGL (161.55m OD). Immediately

above the natural [1201] was a topsoil [1200: 0.3m deep], a mid greyish-brown silty clay. No archaeological features or deposits were identified.

Trench 13

- 5.24 This trench was 8m long and 2m wide, oriented north-east / south-west, and was located to determine the extent of F802. The natural geology, a mottled yellow clay [1301], was identified at a depth of 0.3m BGL (153.51m OD). Over the natural [1301] at the south-west end of the trench was a shallow north-west / south-east oriented spread of light grey-brown sandy clay [1303, F1302: 3m wide and 0.32m deep]. This soil contained a common occurrence of large angular stone slabs (Figure 14) which stood proud of the natural subsoil. No artefacts were recovered from the deposit. F1302 was interpreted as the remnant of a boundary feature or track, in a slight hollow in the natural. The feature was not a continuation of F802. Immediately above the natural [1301] and covering the F1302 was a topsoil [1300: 0.3m deep], a mid greyish-brown silty clay.

Trench 14

- 5.25 This trench was 7m long and 2m wide, oriented north-east / south-west, and was located to determine the extent of F802. The natural geology, a mottled yellow clay [1401], was identified at a depth of 0.3m BGL (154.38m OD). Immediately above the natural [1401] was topsoil [1400, 0.3m deep], a mid greyish-brown silty clay. No archaeological features or deposits were identified.

6. The artefacts

Pottery assessment

Summary

- 6.1 Twenty eight sherds (290g wt) of Roman pottery came from seven ditch and pit contexts (Table 1.2). The pottery is quite poorly preserved, with many of the sherds abraded and of no great size.
- 6.2 Two small pieces of highly abraded 1st-3rd century samian were identified from contexts [604] and [809]. Neither has decoration. A piece of abraded 2nd-3rd century colour-coated ware came from [816]. The remainder are sherds of 2nd-3rd century black burnished ware cooking vessels - including a beaded, lid-seated rim fragment from [809] and an everted rim fragment from [606] -, third century grey ware; and other oxidised fabrics, possibly locally produced.
- 6.3 No examples of later 3rd-4th century calcite gritted wares were identified among this small assemblage.
- 6.4 A further 8 minute fragments of fired clay, unidentifiable and undateable, came from samples from context [608] sample <3>, [807] <6>, [902] <2> and [1003] <1>.

Recommendation

- 6.5 No further work is recommended.

Animal bone assessment

Results

- 6.6 Two tiny flakes of unidentifiable bone came from sample <8> from context [1303].

Recommendation

- 6.7 No further work is recommended.

Glass assessment

Results

- 6.8 A fragment of translucent blue/green Roman glass (21 x 33 x 1-2mm thick) came from context [811]. It is strongly curved and possibly comes from the shoulder of a small jar or flagon. It is likely to be 2nd-3rd century.
- 6.9 Three minute fragments (<1g wt) of water-white glass came from sample <14> from ditch fill context [816]. Though extremely small, the colour of these makes them unlikely to be Roman.

Recommendation

- 6.10 No further work is recommended.

Iron objects assessment

Results

- 6.11 A very highly corroded nail head (9mm diam) with a fragment of shank (14mm total length) was recovered from sample <3> from context [608]. This appears to be hand wrought, but is too small for further identification.

Recommendation

- 6.12 No further work is recommended.

Industrial residues assessment

Results

- 6.13 Minute pieces of fuel ash slag (<2g wt) came from sample <1> from context [1003] and sample <3> from [608].

Recommendation

- 6.14 No further work is recommended.

7. The palaeoenvironmental evidence

Archive

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

Summary of results

- 7.2 The assessment provides little information about Roman activity at the site, due to the limited nature of the palaeoenvironmental evidence within the samples. The few charred plant remains comprised wheat and barley grains, a hazel nutshell fragment and a single charred sedge nutlet, reflecting general background waste associated with habitation.

Methods

- 7.3 A palaeoenvironmental assessment was carried out on 14 bulk samples, taken from a variety of ditch, pit and gully fills of probable Roman origin. The samples were

manually floated and sieved through a 500 μ m mesh. The residues were examined for shells, fruitstones, nutshells, charcoal, small bones, pottery, flint, glass and industrial residues, and were scanned using a magnet for ferrous fragments. The flots were examined at up to x60 magnification using a Leica MZ6 stereomicroscope for waterlogged and charred botanical remains. Identification of these was undertaken by comparison with modern reference material held in the Environmental Laboratory at Archaeological Services Durham University. Plant nomenclature follows Stace (1997). Habitat classifications follow Preston *et al.* (2002).

- 7.4 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 Environmental Laboratory at Archaeological Services Durham University.
- 7.5 The works were undertaken in accordance with the palaeoenvironmental research aims and objectives outlined in the regional archaeological research framework and resource agendas (Petts & Gerrard 2006; Hall & Huntley 2007; Huntley 2010).

Results

- 7.6 The samples comprised small fragments of charcoal, coal, coal shale and clinker/cinder. Tiny fragments of fired clay were noted in contexts [608], [805], [807], [903] and [1003]. A fragment of iron nail was recovered from pit fill [608] and tiny shards of glass were present in context [816]. Charred botanical remains included a wheat grain, a barley grain and an indeterminate cereal grain in ditch fill [813], a hazel nutshell fragment from gully fill [502] and a weed seed of the sedge family from ditch fill [816]. Small fragments of charcoal in limited quantities were also noted in many of the samples and a few charred heather twigs were present in contexts [608] and [814]. Identified charcoal predominantly comprised oak, although small fragments from hazel, alder, willow/poplar and Maloideae group (hawthorn, apple or whitebeams) were also noted. Material suitable for radiocarbon dating is present for many of the samples, although there may be insufficient weight of carbon in some instances. The results are presented in Table 1.3.
- 7.7 A few uncharred seeds were present in eight of the samples, but the non-waterlogged nature of the deposits and the presence of modern roots suggest that these are later intrusions.

Discussion

- 7.8 The presence of clinker/cinder, fired clay, limited quantities of charcoal and a few charred plant macrofossils suggests that the samples from gully F503 and ditch F808 comprise domestic waste. The cereal grains indicate the cultivation of wheat and barley, suggesting they formed part of the diet. Such crops were typical constituents of the Roman diet (Grieg 1991). The presence of a charred hazel nutshell fragment in context [502] may reflect that wild gathered foods also formed part of the diet alongside the cultivation of cereal crops. The poor condition of the charred remains and the absence of diagnostic chaff prevent species identification of the cereal crops.

- 7.9 The charred heather twigs in contexts [608] and [814] may reflect the use of heather for fodder, fuel, bedding or thatch, which are all traditional uses (Gale & Cutler 2000; Fenton 1978), or they may be intrusions as a product of heather burning in more recent times.

Recommendations

- 7.10 No further analysis is required for these samples, but the preservation of charred plant remains (albeit limited) indicates that other features on the site may have the potential to provide further information about diet and crop husbandry practices. If additional work is undertaken at the site, the results of this assessment should be added to any further palaeoenvironmental data produced.

8. The archaeological resource

- 8.1 Archaeological features comprising ditches and pits cut into the natural geology were identified in trenches 4-6, 8-10 and possibly 13. This includes a large area of probable quarrying activity identified in trenches 4 and 6 that may date to the Roman period. In addition, a large ditch identified in Trench 8 has been interpreted as the possible eastern boundary of the Roman *vicus*.
- 8.2 No archaeological deposits were recorded in trenches 1-3, 7, 11, 12 and 14.
- 8.3 Furrows, the remains of medieval or post-medieval ploughing, and a system of field drains were recorded in the majority of the trenches, cutting into the natural geology.
- 8.4 A small assemblage of pot sherds was recovered from some of the archaeological features, indicating that some of them are likely to date from the Roman period. The small palaeoenvironmental assemblages recovered are consistent with this.

9. Impact assessment

- 9.1 Groundworks associated with the development have the potential to impact on archaeological resource of Roman date.

10. Recommendation

- 10.1 A programme of archaeological works is recommended in order to mitigate the impact of the development on the archaeological resource.

11. Sources

Archaeological Services 2008a *North vicus at Longovicium, Lanchester, County Durham: geophysical survey*. Unpublished report **1908**, Archaeological Services Durham University

Archaeological Services 2008b *East vicus at Longovicium, Lanchester, County Durham: geophysical surveys*. Unpublished report **2102**, Archaeological Services Durham University

- Archaeological Services 2009 *Land at Longovicium, Lanchester, County Durham: geophysical surveys*. Unpublished report **2313**, Archaeological Services Durham University
- Archaeological Services 2013 *Land at Cadger Bank, Lanchester, County Durham: geophysical survey*. Unpublished report **3141**, Archaeological Services Durham University
- BGS 2014 (online) *Geology of Britain viewer*. Available from <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>
- Casey, PJ, Noel, M, & Wright, J, 1992 The Roman Fort at Lanchester, Co. Durham: a Geophysical Survey and Discussion of Garrisons. *Archaeological Journal*, **149** (1992), 69-81
- Cousins, SM, 1990 *A resistivity survey within the Roman vicus at Lanchester, County Durham*. Unpublished dissertation, Durham University
- Fenton, A S, 1978 *The Northern Isles – Orkney and Shetland*. Edinburgh
- Gale, R, & Cutler, D, 2000 *Plants in archaeology; identification manual of artefacts of plant origin from Europe and the Mediterranean*. Otley
- Greig, J R A, 1991 The British Isles, in W Van Zeist, K Wasylkova & K-E Behre (eds) *Progress in Old World Palaeoethnobotany*. Rotterdam
- Hall, A R, & Huntley, J P, 2007 *A review of the evidence for macrofossil plant remains from archaeological deposits in northern England*, Research Department Report Series no. **87**. London
- Hather, J G, 2000 *The identification of the Northern European Woods: a guide for archaeologists and conservators*. London
- Huntley, J P, 2010 *A review of wood and charcoal recovered from archaeological excavations in Northern England*. Research Department Report Series no. **68**. London
- Noel, MJ, 1991 *Geophysical and Topographic Surveys of Lanchester Roman Fort*. Unpublished report, GeoQuest Associates
- Payne, AW, 1991 *Report on geophysical survey at Lanchester, County Durham*. Ancient Monuments Laboratory Report **51/91**, English Heritage
- Petts, D, & Gerrard, C, 2006 *Shared Visions: The North-East Regional Research Framework for the Historic environment*. Durham
- Preston, C D, Pearman, D A, & Dines, T D, 2002 *New Atlas of the British and Irish Flora*. Oxford
- PJO Archaeology 2013 *Land at Cadger Bank, Lanchester desk-based assessment* Unpublished report, PJO Archaeology, York
- Schweingruber, F H, 1990 *Microscopic wood anatomy*. Birmensdorf
- Stace, C, 1997 *New Flora of the British Isles*. Cambridge
- Turner, RC, 1990 A Romano-British cemetery at Lanchester. *Archaeologia Aeliana*, 5th series, **18**, 63-77

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, F flint, I industrial residues, G glass

Context	Trench	Description	P	B	M	I	G
100	1	Topsoil					
101	1	Natural					
200	2	Topsoil					
201	2	Natural					
F202	2	Furrow					
300	3	Topsoil					
301	3	Natural					
F302	3	Furrow					
400	4	Topsoil					
401	4	Natural					
F402	4	Cut of quarry pit					
403	4	Fill of quarry pit					
404	4	Fill of quarry pit					
405	4	Fill of quarry pit					
500	5	Topsoil					
501	5	Natural					
502	5	Fill of F503					
F503	5	Cut of Gully					
F504	5	Furrow					
600	6	Topsoil					
601	6	Natural					
F602	6	Cut of quarry pit					
603	6	Fill of quarry pit F602					
604	6	Fill of quarry pit F602	•				
605	6	Fill of quarry pit F602					
606	6	Primary fill of F607	•				
F607	6	Cut of pit					
608	6	Secondary fill of F607	•		•	•	
609	6	Fill of quarry pit					
F610	6	Cut of quarry pit					
611	6	Fill of quarry pit F610					
612	6	Fill of quarry pit F610					
613	6	Fill of quarry pit F610					
614	6	Fill of quarry pit F610					
615	6	Fill of quarry pit F610					
616	6	Fill of quarry pit F610					
617	6	Fill of quarry pit F610					
618	6	Fill of quarry pit F610					
619	6	Fill of quarry pit F610					
620	6	Fill of quarry pit F610					
700	7	Topsoil					
701	7	Natural					
800	8	Topsoil					
801	8	Natural					
F802	8	Geological feature					
803	8	Fill of gully F804					
F804	8	Cut of gully					
805	8	Fill of gully F806	•				
F806	8	Cut of gully					
807	8	Primary fill of gully F804					
F808	8	Cut of ditch					
809	8	Primary fill of F808	•				
810	8	Fill of F808					
811	8	Fill of F808					•
812	8	Fill of F808					

Context	Trench	Description	P	B	M	I	G
813	8	Fill of F808					
814	8	Fill of F808	•				
815	8	Fill of F808					
816	8	Fill of F808	•				•
900	9	Topsoil					
901	9	Natural					
902	9	Fill of pit F903					
F903	9	Cut of pit					
904	9	Fill of gully F905					
F905	9	Cut of gully					
1000	10	Topsoil					
1001	10	Natural					
F1002	10	Cut of gully					
1003	10	Fill of gully F1002				•	
1100	11	Topsoil					
1101	11	Natural					
1200	12	Topsoil					
1201	12	Natural					
1300	13	Topsoil					
1301	13	Natural					
F1302	13	Cut of ditch					
1303	13	Fill of ditch F1302		•			
1400	14	Topsoil					
1401	14	Natural					

Table 1.2: Pottery

Context	Sherds
604	7
606	2
608	6
805<7>	1
809	2
814	3
816	7
Total	28

Table 1.3: Macrofossil results

Sample	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Context	1003	903	608	606	604	807	805	1303	502	809	811	813	814	816
Feature number	F1002	F902	F607	F602	F602	F804	F806	F1302	F503	F808	F808	F808	F808	F808
Feature	ditch	pit	pit	pit	pit	gully	gully	ditch	gully	ditch	ditch	ditch	ditch	ditch
Material available for radiocarbon dating	(✓)	✓	✓	-	(✓)	-	(✓)	(✓)	✓	✓	(✓)	(✓)	✓	✓
Volume processed (l)	10	8	10	7	10	10	10	8	8	10	7.5	11	8	10
Volume of flint (ml)	70	75	115	65	300	30	105	200	150	90	40	100	130	120
Residue contents														
Charcoal	+	+	-	(+)	-	-	-	(+)	-	-	-	+	++	+
Clinker / cinder	(+)	-	-	-	(+)	-	-	-	-	-	-	-	(+)	(+)
Coal	-	-	-	(+)	(+)	-	-	-	-	-	-	-	-	-
Coal shale	-	-	-	-	(+)	-	-	-	(+)	-	+	-	-	-
Fired clay	-	(+)	(+)	-	-	(+)	(+)	-	-	-	-	-	-	-
Glass (number of fragments)	-	-	-	-	-	-	-	-	-	-	-	-	-	4
Nail (number of fragments)	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Flint matrix														
Bone (unburnt)	-	-	-	-	-	-	-	(+)	-	-	-	-	-	-
Charcoal	++	-	++	-	-	-	-	(+)	-	-	-	-	-	-
Clinker / cinder	+	+	+	-	(+)	+	+	++	+	++	+	+	+	+
Coal / coal shale	+	++	+++	+++	+++	++	+	+	+	(+)	+	(+)	+	+
Earthworm egg case	-	-	-	-	-	(+)	-	(+)	-	(+)	-	-	(+)	-
Fired clay	(+)	-	-	-	-	-	-	-	-	-	-	-	-	-
Fuel ash	(+)	-	(+)	-	-	-	-	-	-	-	-	-	-	-
Heather twigs (charred)	-	-	(+)	-	-	-	-	-	-	-	-	-	+	-
Insect / beetle	-	-	(+)	-	-	-	(+)	-	(+)	-	-	(+)	-	+
Roots (modern)	++	+++	++	(+)	(+)	+	++	+++	+	(+)	(+)	(+)	+	++
Uncharred seeds	(+)	+	-	-	(+)	(+)	-	+	(+)	-	(+)	-	-	(+)
Charred remains (total count)														
(c) Cerealia indeterminate	-	-	-	-	-	-	-	-	-	-	-	2	-	-
(c) <i>Hordeum</i> sp (Barley species)	-	-	-	-	-	-	-	-	-	-	-	1	-	-
(c) <i>Triticum</i> sp (Wheat species)	-	-	-	-	-	-	-	-	-	-	-	1	-	-
(t) <i>Corylus avellana</i> (Hazel)	-	-	-	-	-	-	-	-	1	-	-	-	-	-
(w) <i>Carex</i> sp (Sedges)	-	-	-	-	-	-	-	-	-	-	-	-	-	1
trigonous nutlet	-	-	-	-	-	-	-	-	-	-	-	-	-	-

[a-arable; c-cultivated; h-headland; t-tree/shrub; x-wide niche. (+): trace; +: rare; ++: occasional;

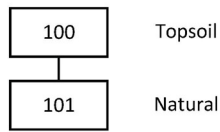
+++; common; ++++: abundant

Waterlogged remains are scored from 1-5 where 1: 1-2; 2: 3-10; 3: 11-40; 4: 41-200; 5: >200

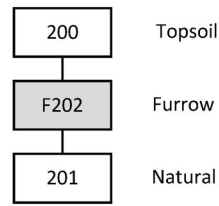
(✓) there may be insufficient weight of carbon available for radiocarbon dating]

Appendix 2: Stratigraphic matrices

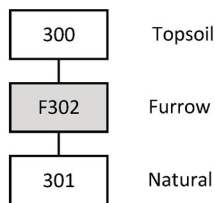
Trench 1



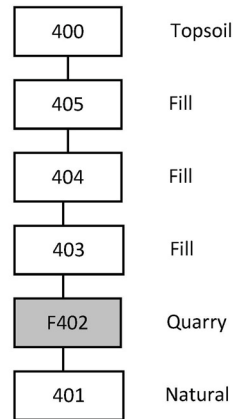
Trench 2



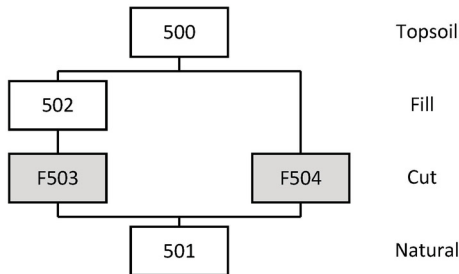
Trench 3



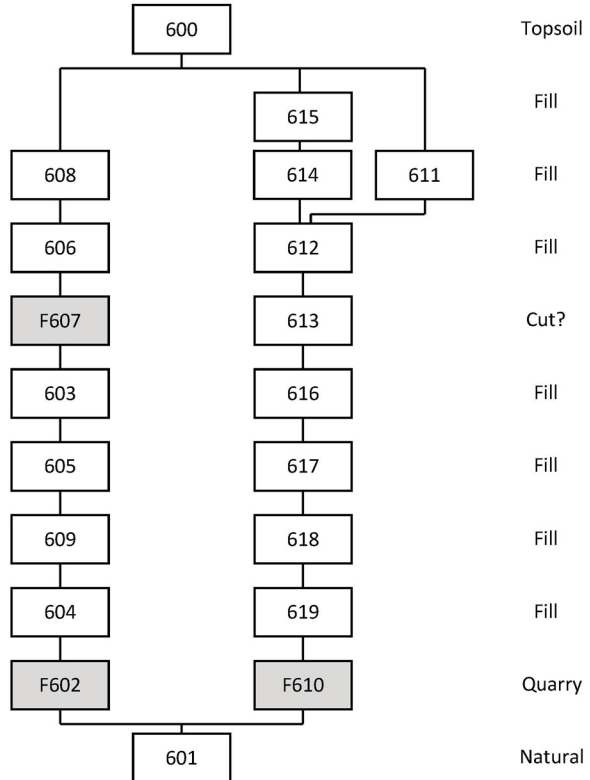
Trench 4



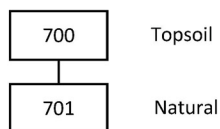
Trench 5



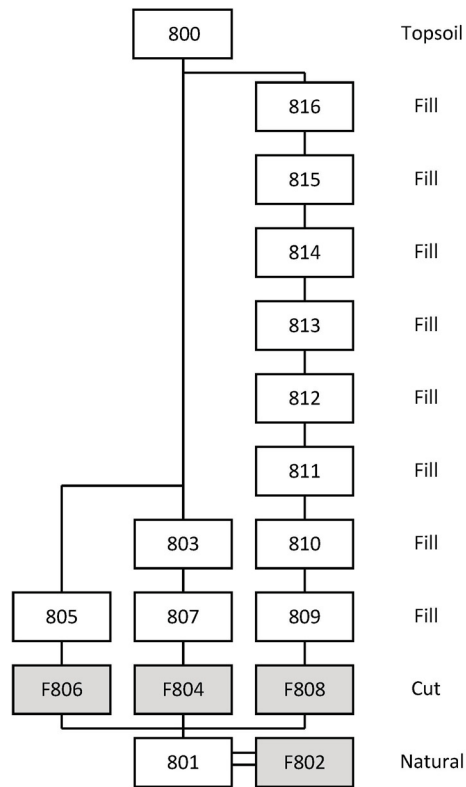
Trench 6



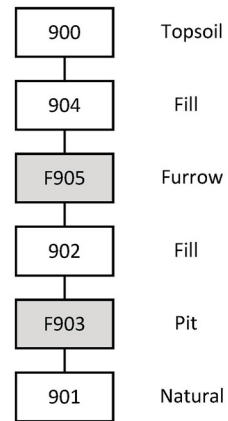
Trench 7



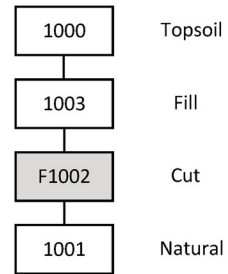
Trench 8



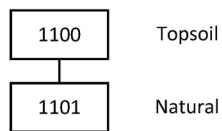
Trench 9



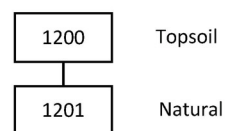
Trench 10



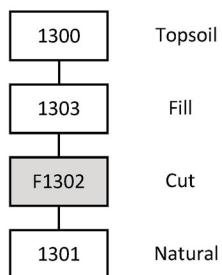
Trench 11



Trench 12



Trench 13



Trench 14

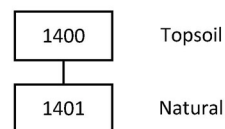


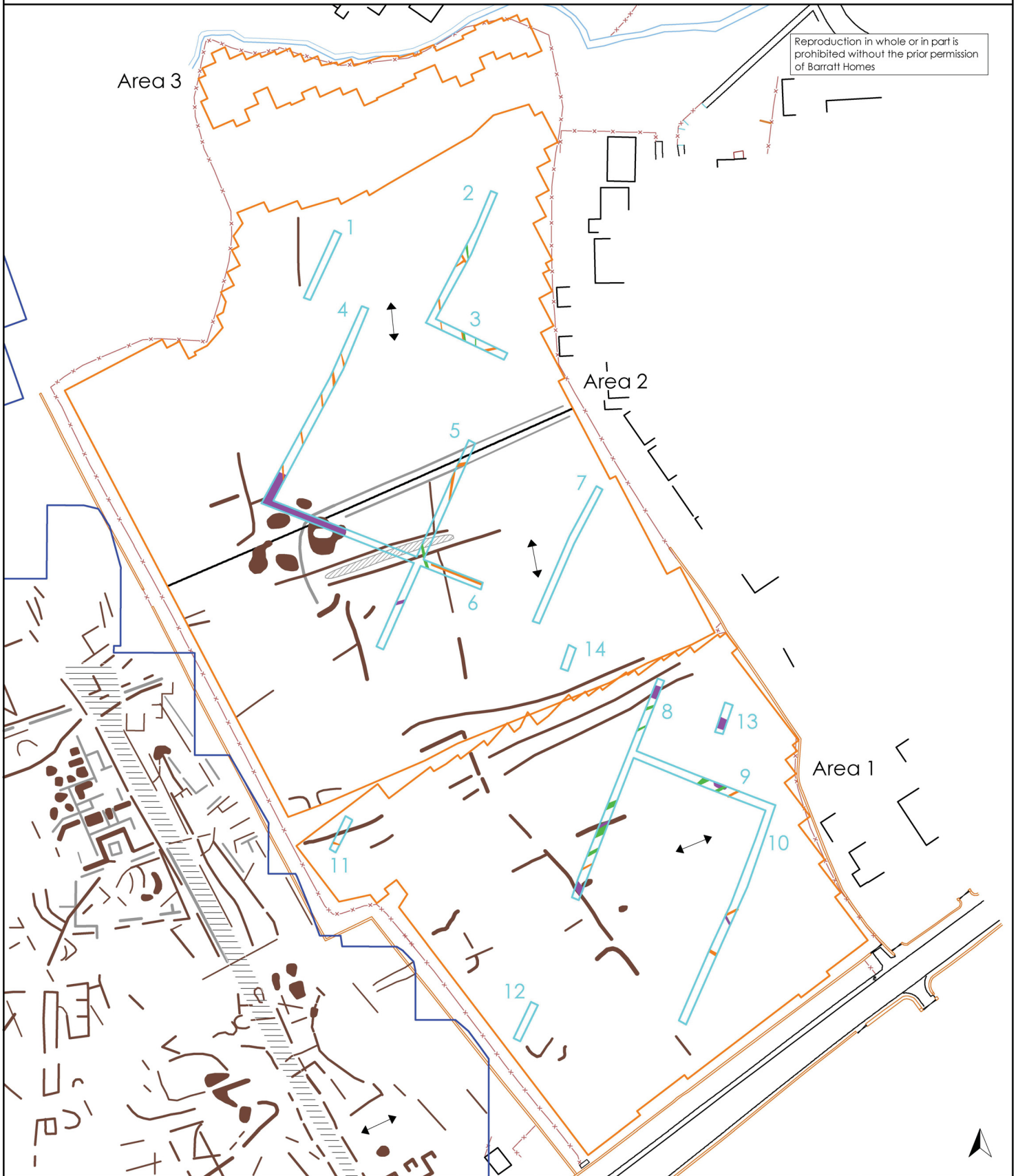
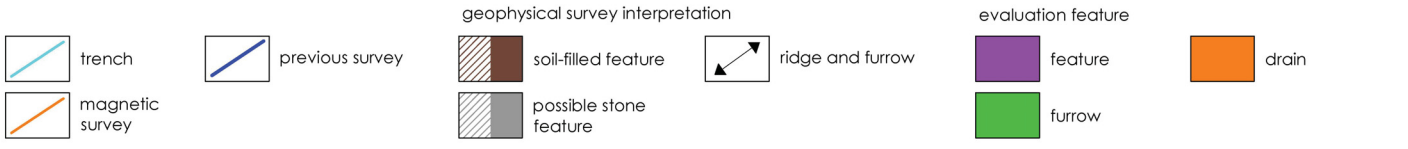
Figure 1: Site location

Reproduced from Explorer 307 1:25 000 by permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office. © Crown copyright 2005. All rights reserved. Licence number AL100002176



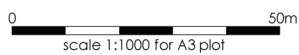
 site location

0 1km
scale 1:25 000 for A4 plot



ARCHAEOLOGICAL SERVICES
DURHAM UNIVERSITY

on behalf of
Barratt Homes



Land at Cadger Bank
Lanchester
County Durham
archaeological evaluation
report 3381

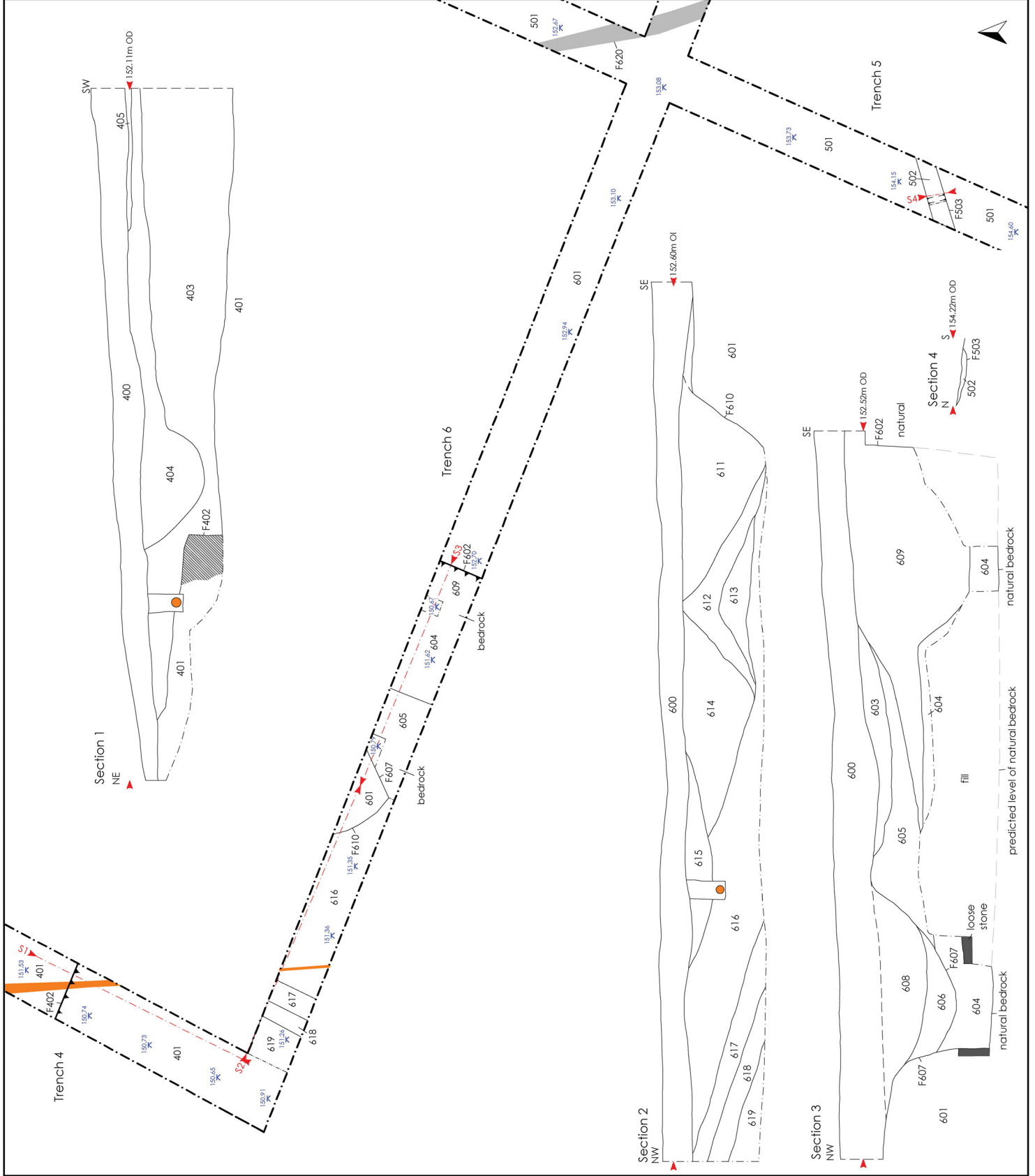
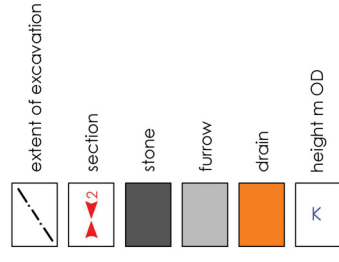
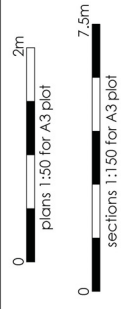
Figure 2: Location of trenches and main features

on behalf of
Barratt Homes

Land at Cadger Bank
Lanchester
County Durham

archaeological evaluation
report 3381

Figure 3: Trench plans and sections



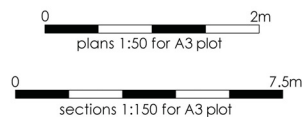
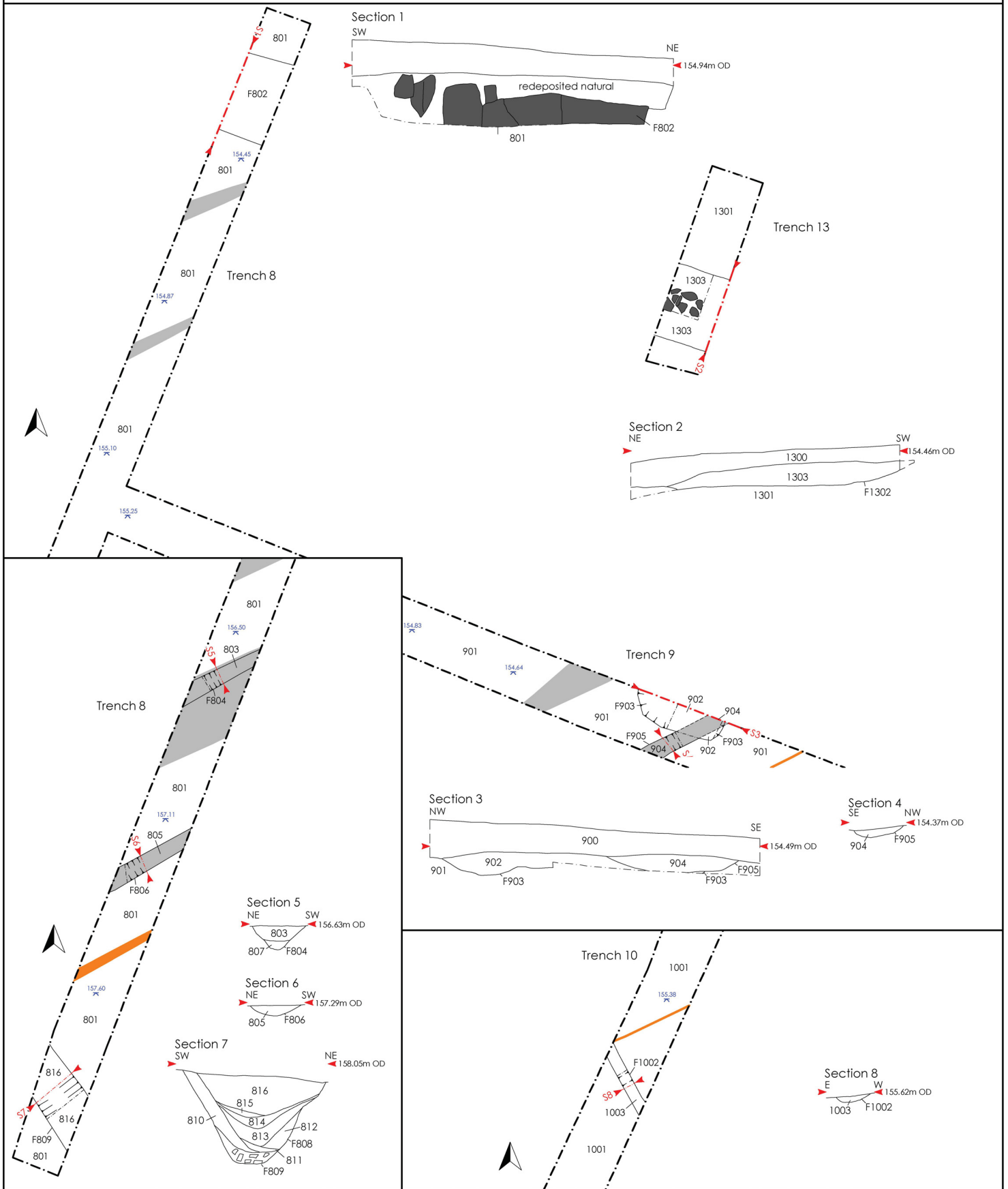
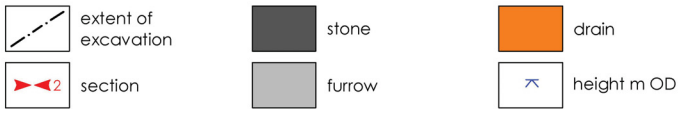




Figure 5: Trench 4, quarry pit F402 in the foreground, looking north-east

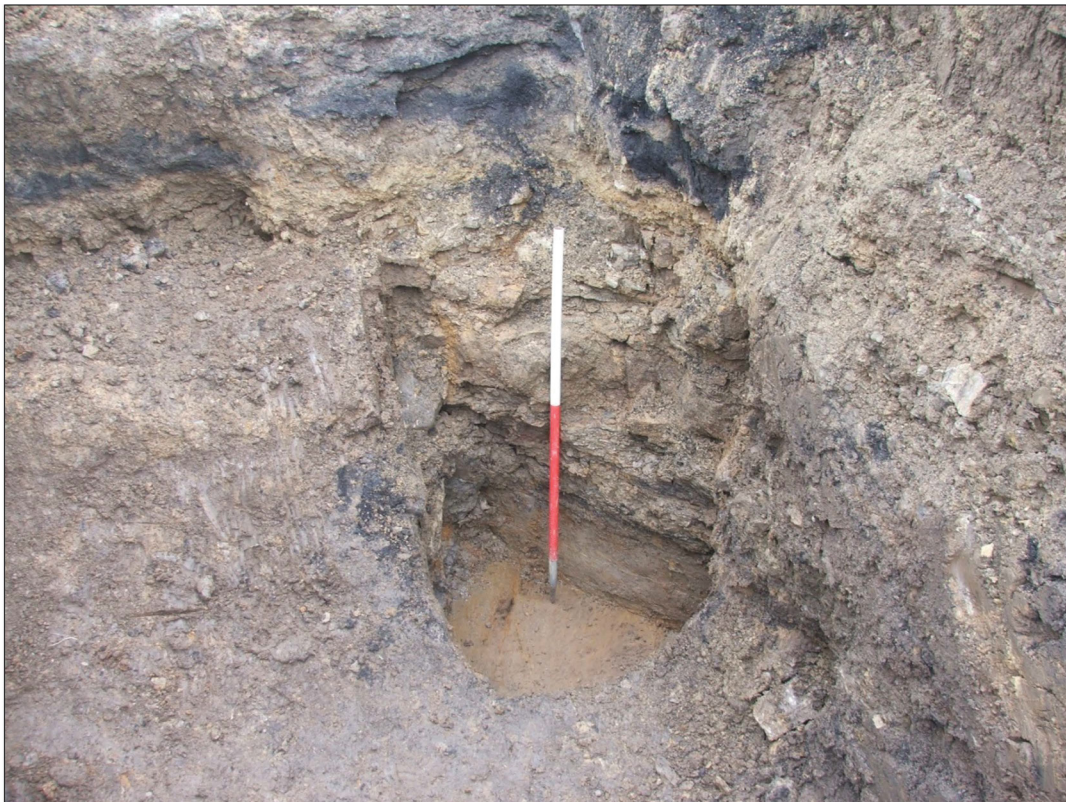


Figure 6: Trench 6, Cut F602, sondage to solid sandstone natural, looking south-east



Figure 7: Trench 6, Pit F607, with sandstone layer visible, looking north



Figure 8: Trench 6, Pit F607, looking north-east



Figure 9: Trench 8, geological feature F802, looking north-east



Figure 10: Trench 8, section through F802, looking north-west



Figure 11: Trench 8, F808, looking north



Figure 12: Trench 9, F903, looking north-east



Figure 13: Trench 9, F905 cutting F903, looking north-west



Figure 14: Trench 13, F1302, looking north-east