



Northamptonshire  
County Council

# Northamptonshire Archaeology

Archaeological Trial Trench Evaluation at the  
Waterdale Car Park and Borehole Monitoring in the Community  
College Quarter, Doncaster, South Yorkshire

November 2008



Jim Brown

December 2008

Report 08/201

## Northamptonshire Archaeology

2 Bolton House  
Wootton Hall Park

Northampton NN4 8BE

t. 01604 700493 f. 01604 702822

e. [sparry@northamptonshire.gov.uk](mailto:sparry@northamptonshire.gov.uk)

w. [www.northantsarchaeology.co.uk](http://www.northantsarchaeology.co.uk)



**STAFF**

Project Manager	Tony Walsh BA
Text	Jim Brown BSc PGDip AIfA
Fieldwork	Jim Brown, Yvonne Wolframm-Murray BSc PhD and Daniel Nagy BA
Illustration	Richard Watts and Pat Walsh BA
Roman pottery	Dr Jeremy Evans
Ceramic tile	Pat Chapman BA CMS AIfA
The other finds	Tora Hylton
Faunal and environmental remains	Karen Deighton MSc
Wood	Steve Allen (York Archaeological Trust)

**QUALITY CONTROL**

	Print name	Signed	Date
Checked by	Pat Chapman		
Verified by	Tony Walsh		
Approved by	Andy Chapman		

**OASIS REPORT FORM**

<b>PROJECT DETAILS</b>		
Project name	Archaeological Trial Trench Evaluation at the Waterdale Car Park and Borehole Monitoring in the Community College Quarter, Doncaster, South Yorkshire, November 2008	
Short description (250 words maximum)	Northamptonshire Archaeology conducted trial excavation in the Waterdale Car Park and monitored borehole sampling in the Community College Quarter during November 2008. A substantial ditch was excavated that produced sherds of Roman greyware pottery and a Mannings Type 11b iron nail. The ditch was at least 2.1m wide by 1.28m deep. A ditch of 19th-20th century date was excavated that preserved the remains of wooden shoring at its base. It had a relatively short life-span and may have been a military practice trench built during the Great War. Borehole sampling indicated substantial buried deposits, in particular to the rear of Chequer House where deposits relating to the documented rear gardens and ponds may still survive.	
Project type	Evaluation	
Site status	None	
Previous work	DBA (Bennett-Samuels 2007)	
Current Land use	Public Car Park	
Future work	Unknown	
Monument type/ period	Roman and early 20th century	
Significant finds	Pottery, tile, animal bone, metal finds and wood	
<b>PROJECT LOCATION</b>		
County	South Yorkshire	
Site address	Waterdale Car Park, Doncaster, DN1 3JE	
Study area (sq.m or ha)	c12.5 ha	
OS Easting and Northing	Centred on 457667 402944	
Height OD	c16.5m above Ordnance Datum	
<b>PROJECT CREATORS</b>		
Organisation	Northamptonshire Archaeology	
Project Brief originator	Andy Lines, South Yorkshire Archaeological Service	
Project Design originator	Roderick Dale, CgMs Consulting Ltd	
Director/Supervisor	Jim Brown, Northamptonshire Archaeology	
Project Manager	Tony Walsh, Northamptonshire Archaeology	
Sponsor or funding body	CgMs Consulting Ltd	
<b>PROJECT DATE</b>		
Start date	November 2008	
End date	November 2008	
<b>ARCHIVES</b>	<b>Accession no.</b>	<b>Contents</b>
Physical		Pottery, tile, animal bone, metal finds and wood
Paper		Site context record, plans, section drawings and photographic record
Digital		Mapinfo digital plans and client report PDF
<b>BIBLIOGRAPHY</b>	Journal/monograph, published or forthcoming, or unpublished client report (NA report)	
Title	Archaeological Trial Trench Evaluation at the Waterdale Car Park and Borehole Monitoring in the Community College Quarter, Doncaster, South Yorkshire, November 2008	
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**ARCHAEOLOGICAL TRIAL TRENCH EVALUATION AT THE  
WATERDALE CAR PARK AND BOREHOLE MONITORING IN  
THE COMMUNITY COLLEGE QUARTER  
DONCASTER, SOUTH YORKSHIRE**

**NOVEMBER 2008**

*Abstract*

*Northamptonshire Archaeology conducted trial excavation in the Waterdale Car Park and monitored borehole sampling in the Community College Quarter during November 2008.*

*A substantial ditch was excavated that produced sherds of Roman greyware pottery and a Mannings Type 11b iron nail. The full extent of the ditch lay outside the excavated area but was at least 2.1m wide by 1.28m deep.*

*A ditch of 19th-20th century date was excavated that preserved the remains of wooden shoring at its base. The ditch had a relatively short life-span and had collapsed at the time of its backfill. It may have been a military practice trench of the kind built by infantry battalions during the Great War prior to their deployment in France.*

*Borehole sampling indicated substantial buried deposits across the site, with considerable variations in depth suggesting that the area was landscaped considerably over the past couple of centuries. In particular a borehole located to the rear of Chequer House suggested that deposits relating to the documented rear gardens and ponds may still survive.*

## **1 INTRODUCTION**

Northamptonshire Archaeology (NA) was commissioned by CgMs Consulting Ltd, for Muse Developments, to conduct trial trench evaluation and borehole monitoring for the Waterdale Community College Quarter (CCQ) in Doncaster, South Yorkshire (Centred on NGR 457667 402944; Fig 1). Trial excavations were located within the Waterdale Car Park, boreholes were monitored in other parts of the CCQ area. This forms part of a wider strategy of pre-determination works for the proposed development for the purpose of informing planning decisions with regard to mitigation. Work proceeded following a Specification produced by CgMs Consulting Ltd following discussions with the Planning Archaeologist at South Yorkshire Archaeological Service (SYAS) (CgMs 2008). The works were approved and monitored by SYAS.

The archaeological works comprised two 5m by 5m trenches at either end of the Waterdale Car Park, excavated in such a way as to avoid live services or drains, and three boreholes located in other parts of the CCQ area.

The material archive will be prepared according to the *Guidelines for the preparation of excavation archives for long term storage* (Walker 1990), *Standards in the care of archaeological collections* (MGC 1994) and the standards of the Institute of Archaeologists (IfA) for field evaluations (IfA 1994). The archive will be deposited with Sheffield Museum at the end of the project.

## 2 BACKGROUND

### 2.1 Topography and geology

The car park is located on the south-east side of Waterdale, south-east of the historic core of Doncaster. It is situated on level ground at c16.5m above Ordnance Datum and forms only a small portion of the wider area of the proposed development. The larger part of the CCQ development covers the area of the college buildings, council offices, police headquarters and law courts, and their associated car parks nearby, including smaller areas of land to the north of Chequer Road and north-west of Waterdale (Fig 1). The ground level across this area is more varied and slopes between c14-18m above Ordnance Datum

Doncaster's central business district is located to the north-west of the CCQ development site and occupies the historic core of the town. The CCQ development site is largely bounded on the north-west side by Waterdale, with a smaller area of land extending as far as Cleveland Street. The south-west is bounded by Trafford Way and residential terraced housing occupies the land to the south-east. The north-east side is largely bounded by Chequer Road with two smaller areas of land extending beyond this to occupy the area between Chequer Road and South Parade.

The British Geological Survey records the drift geology of Doncaster as extremely varied glacial sand and gravel (<http://www.bgs.ac.uk/geoindex/>). This was corroborated by the trial excavation.

### 2.2 Historical and archaeological background

There is no prehistoric settlement recorded in the town prior to its establishment by the Roman military. Doncaster was an important Roman garrison fort, which subsequently developed a civil settlement (*Danum*). It provided strategic military control of the crossing point of the river and is thought to have been constructed during the campaign against the Brigantes in the late 1st-century AD (Buckland and Magilton 1986, 11-12). Like many of the provincial towns in the later Roman period it flourished up until the late 3rd century, by which time much of Roman Britain was exhibiting the symptoms of decline also evident in Doncaster.

In the early 7th century the town is thought to have been part of the British Kingdom of Elmet, subsumed under Mercian control by the mid-7th century.

In the 9th-10th centuries extensive Scandinavian settlement established several burhs along the Don and Dearne Valleys, which included Doncaster. They continued under Scandinavian rule until the defeat of Eric Bloodaxe in 955AD.

Domesday Book records that in 1066 the three landholdings of the town were held by Ulsi and Rainald, Norman, and Eorl Tostig, King Harold's estranged brother. By 1086 these lands were held by Robert, Count of Mortain. Thereafter it appears to have flourished as a market town with weekly markets, two annual fairs, and an estimated population of nearly 400 households by 1379 (Buckland *et al* 1989; Hey 1986, 137).

An archaeological Desk-Based Assessment was conducted by CgMs Consulting Ltd that highlighted the following information (Bennett-Samuels 2007, figs 1-10):

- There are four records for archaeological remains within the development area; a bronze axe and chisel of the middle Bronze Age within the south of the site (SMR 669); 55 bronze Roman coins that are thought to have been part of a hoard (SMR 3291); and two individual Roman coin findspots (SMR 3314, 3323).

- A 2nd to 3rd-century Roman cemetery was discovered during recent excavations to the rear of Hall Gate, c175m north-west of Waterdale Car Park (SMR 4562; Atkinson 1995).
- The CCQ development area as a whole lies outside of the medieval town ditch and there was no evidence to suggest that settlement extended further back than the Hall Gate frontage. Pottery kilns are recorded in the north and south of Hall Gate, in areas thought to have been largely open ground during that period (SMR 426, 4562).
- During the mid-17th century the CCQ development area was mapped as being open, agricultural land. Some stabling may have existed in the north-east of the site from the mid-18th century.
- Beechfield House and its gardens were built in 1812 extending across the north-eastern side of the CCQ development area. The car park and the larger part of the south-west portion of the site were occupied by Glasgow Paddocks, stables and their associated open ground.
- From the mid-19th century terraced housing was built along Bentinck Street and part of Waterdale, later encroaching into the south of the site with the addition of Catherine Street.

During the excavations we learned that the site of Waterdale Car Park was formerly occupied by the central bus station and depot, shown on the Ordnance Survey map of 1948 (Bennett-Samuels 2007, fig 10).

### **3 OBJECTIVES AND METHODOLOGY**

#### **3.1 Objectives**

The objectives were laid out in the Specification and summarised the aims of the project in order to inform the need for and the scope of further archaeological work within the wider CCQ development area (CgMs 2008). This included assessing the nature, extent and survival of sub-surface remains through trial excavation, the results to be placed in their local, regional and national contexts, establishing the potential of the archive to contribute to our understanding of human habitation and the development of the area.

#### **3.2 Methodology**

Two trenches were opened in the existing car park area of the site, each 5m long by 5m wide at the south-west and north-east ends of the car park respectively (Fig 1). The locations and length of the trenches were subject to the positions of services crossing the area. Each trench was set out with hand tapes and measured in using the existing boundaries in relation to the Ordnance Survey.

For the three cable-percussive boreholes located in the wider CCQ area, the positions were marked out and the work undertaken by Geomechanics (Fig 1). An archaeologist was present monitoring the up-cast of the boreholes as they were excavated, recording the deposits and approximate depths as they were encountered.

All work was undertaken in accordance with the Health and Safety at Work etc Act 1974 and the welfare policies of Northamptonshire County Council. A full search of buried services was conducted for the areas of intervention prior to commencement of the works and a CAT scan



used during machine excavation. These areas were made secure during the works through the erection of appropriate fencing, hazard signs and daily inspections.

Following initial removal of the tarmac surface with a breaker, excavation of the trial trenches was conducted using a 360° excavator fitted with a toothless ditching bucket. Modern levelling layers and underlying non-structural post-medieval layers were removed by machine, under archaeological supervision. The area was monitored to identify archaeological deposits and undisturbed natural horizons as they were exposed. Mechanical excavation stopped at the surface of significant features where they were encountered and a process of hand excavation was employed for sampling and recording purposes. A final removal of deposits to the surface of the geological substrate and the base of major features was conducted prior to reinstatement.

Potential archaeological features were hand-cleaned, partially excavated and a site record was maintained. Recording followed standard NA guidelines. The area was cleaned, planned and features or layered deposits sampled sufficiently to determine their character and date, and to reveal the underlying stratum. All archaeological features and deposits were given separate context numbers. Deposits were described on *pro-forma* trench and context sheets to include details of the deposit or feature, its relationships, an interpretation and a check-list of associated finds. This field data was compiled into a site archive with appropriate cross-referencing.

A photographic record was maintained, comprising 35mm black and white negatives, related contact prints and colour slides. In addition to basic section shots and features, overall site photographs, feature groups and working shots were also taken. A digital record was maintained as a supplement to the main archive for reporting purposes.

Significant archaeological features and layers were planned at 1:20 scale. Sections and profiles of features were drawn at scales of 1:10 or 1:20 as appropriate. The excavated area was surveyed and related to the Ordnance Survey Grid with spot heights for plans and sections recorded in relation to the height above Ordnance Datum.

Finds were collected from the individual deposits and stored by context. All identifiable artefacts recovered from secure contexts were retained. Finds with particular importance for dating or of an intrinsic interest were given a small find reference number, recorded by grid reference and height, and related to Ordnance Datum within the context. All artefacts were recovered and processed in accordance with the standards and guidance of the Institute of Field Archaeologists and the United Kingdom Institute for Conservation (IfA 2001; Walker 1990).

Samples were retrieved in 40 litre quantities, or 100% of the deposit where this was less than 40 litres. Samples were chosen from significant excavated deposits at depth and processed for environmental and industrial residues. In addition, one sample of waterlogged wood was recovered, selecting the best quality example amongst the timber remains encountered.

At all stages of the programme the monitoring authority from SYAS was kept apprised of developments in the field allowing for strategic discussion as work proceeded, including a site monitoring visit in conjunction with a representative from CgMs Consulting Ltd. NA maintained full compliance with the government regulations under the 1997 Treasure Act and the 1981 Disused Burial Ground (Amendment) Act. An orderly and fully indexed archive of the work has been prepared in accordance with the Specification (Walker 1990; MGC 1994; IfA 2001; EH 1991; CgMs 2008).

## 4 THE EXCAVATED EVIDENCE

### 4.1 Trench 1

The trench encountered the corner of a building of 19th-20th-century origin (Plate 1). The brick walls, limestone floor surface and abutting brick-lined pit were cleaned and recorded prior to removal (Fig 2). It was buried by a series of modern levelling layers that included several episodes of tarmac surfacing and there were no features beneath.

Natural sand and gravel was encountered at the base of the trench at 14.82m above Ordnance Datum (Plate 2). Overlying this was weathered subsoil comprising light orange-brown sandy clay silt (119), containing frequent rounded gravel up to 30mm in size, 140mm thick. It merged with the compact mid- orange-brown clay silt (118) above, 180mm thick. This was overlain by buried soil (117), comprising compact dark greyish brown clay silt that constitutes probable former topsoil, 200mm thick (Fig 3, Section 1). The buried soil produced a single clay tobacco-pipe stem fragment of likely 19th-20th-century date.

Cut through these layers to the top of the subsoil was a wall foundation [122]. The foundation cut was vertical and measured 3.16m long by 0.36m wide by 0.58m deep. The wall (121/125) was constructed from brick and blocks of light yellow sandstone. Each sandstone block was shaped and finished into a well formed regular block measuring 680mm long by 280mm wide by 220mm thick. Three of these were laid end to end, forming a threshold. The bricks were laid cross-ways, such that the length of the brick was equal to the width of the wall. Each brick measured 240mm long by 110mm wide by 80mm thick. Both the sandstone blocks and bricks were bonded with coarse creamy-yellow sandy mortar.

Bounded by wall (121/125) was a greyish-blue limestone floor surface (Fig 2). Large regular cut blocks or shaped and finished limestone arranged in a stretcher pattern. Each block measured 420mm long by 220mm wide by 220mm thick. The floor blocks were unbonded and lay directly upon the subsoil (119). The size of the blocks indicates that the floor was designed to take a substantial weight or that it was an expensive, high quality, construction. It seems improbable that the structure would have been of domestic origin. Potential industrial residues associated with the structure were scarce, so there is little to elucidate upon the function of the building as a workspace. The desk-based assessment has indicated the site was formerly occupied by Glasgow Paddocks stables which would have been of high quality construction, swept and kept clean (Bennett-Samuels 2007).

Abutting the north end of the structure on the outside of wall (125) was a small rectangular brick-lined pit [129]. The pit measured 1.0m wide by 0.65m deep. The bricks were arranged in the same fashion as for wall (125) and were of the same general type and dimensions. The fill comprised dark greyish-brown silty clay (130) with frequent charcoal smears, ash bands and occasional small rounded pebbles up to 25mm in size. It is likely to be an old latrine pit.

Abutting the outside of wall (121) was compact orange-brown sandy clay (116) containing occasional grit, mortar flecks, infrequent crushed brick, chalk and gravel inclusions less than 10mm in size (Fig 3). It is plausible that this could represent a paddock surface, contemporary with the building, and lay 220mm below the step of the threshold stones. Its extent was limited to the west side of the structure and did not continue on its northern side.

A series of deposits sealed the top of the structure and overlay the surface of (116), they appeared to have been spread about the area in an uneven fashion and may include deposits moved from elsewhere on the site, not directly relating to the structure. Loose dark black coarse "cokey" grit (115) containing frequent burnt or heat shattered brick was mixed with fragments of tile and stone up to 50mm in size was spread in a layer 100mm thick. It was overlain by mixed dump of loose mottled blackish-purple and light greyish-brown sandy clay (114) with

moderate chunks of crushed brick up to 60mm in size, frequent mortar flecks and occasional chunks of chalk compacted from (112), 80mm thick. Overlying this was a thin band of loose black gritty “cokey” material (113), 40mm thick. It was disturbed by compaction from (112) above.

Cutting through these layers and the remains of the building floor was a service trench [124] for a now disused electrical cable and water pipe. The service trench measured 1.2m wide by 0.74m deep and was filled with the upcast of its own excavation.

Compact white crushed chalk (112) formed a layer that was 120mm thick. Above this was a layer of compacted mid- greyish brown sandy clay (111) containing frequent small stones, chalk flecks, red brick flecks and crushed blue slate, 70mm thick. It was overlain by further compact white crushed chalk (110) in an uneven layer between 30-100mm thick. Above this lay light grey-blue coarse aggregate (109), bonded in places with tarmac, that was 120mm thick. This was covered by mixed mid- brownish-grey sandy clay (108) containing frequent coarse grey stone aggregate up to 30mm in size, 80mm thick. Above this was a layer of mixed loose greyish-brown gritty sand and silty clay (107), 30mm thick. A band of greyish-brown and dark blackish silty clay (106) overlay it and contained the degraded remnants of former tarmac surfacing, 25mm thick. It was sealed by a spread of compact white crushed chalk (105) that was 30mm thick.

The four uppermost horizons of the trench deposits that overlay chalk layer (105) comprised similar episodes of tarmac resurfacing (104-101) and were generally laid in 30-50mm thicknesses. They form the surface of the present Waterdale Car Park.

#### 4.2 Trench 2

Two substantial ditches were excavated within Trench 2 (Fig 2). One of these contained three sherds of Roman greyware and a single nail that appear to date the feature (Plate 3). The other ditch was of more recent origin and had been constructed with wooden shoring to brace the loose sand and gravel sides (Plate 4).

Natural sand and gravel was encountered at the base of the trench at 16.4m above Ordnance Datum. Cut into this was a substantial ditch [217], which lay partially within the trench area. The whole of the feature was excavated where it was exposed and measured over 2.1m wide with a base at 1.28m deep (Fig 3; Fig 4, Section 2). The profile showed a sharp 45° sloping side, curving gradually towards a flattish base. The primary fill was loose mid- orangey-brown sandy silt (223) with moderate small gravels up to 8mm in size and coarse grit. It contained no finds and appeared to be natural silting of the ditch, distributed at the sides and base up to 440mm thick. The secondary fill was between 450-600mm thick. It comprised loose mid- orangey brown clayey sand (216) with frequent small rounded stones up to 100mm in size. Three sherds of Roman greyware and a single nail came from this deposit, and it is likely to have been the result of deliberate backfill as the distribution of stones indicated possible tipping lines that merged gradually in colour towards the darker fill at the top. The uppermost fill comprised darker orange-brown sandy clay (224) disturbed by root intrusions and worm casts leaving dark streaks, 600mm thick. The relatively clean light colouration in comparison with later dirty grey deposits tends to suggest that it lay outside of a concentrated area of settlement.

Ditch [211] had steep, near vertical sides at 80-85° and a broad flat base that measured c3m wide at the top by 1.94m deep. Driven into the base of the ditch at the sides were the remains of three timber upright supports (210/218/219). They were not cut to uniform sizes and were relatively slender with measurements up to 80mm by 100mm in cross-section and protruded up to 260mm from the base of the trench. Nailed to these were wooden planks (207/220) that were boarded up one above the other cross-ways to form a revetment against the loose sand and gravel sides. Little remained of the original planks, as they had decayed badly, the surviving

remnants indicated that the planks were probably 20-30mm thick. The length of the planks could not be determined, although it would be logical that they were at least 1.5-1.6m long in order to reach the distance between the upright supports. Their arrangement was not discernable either, the presence of small nail ties amongst the middle boards as well as the larger nails used to attach them to the supports, suggests that the planks would have been arranged to fit rather than built in a regular fashion. This may mean that planks were of varying length. At the base of the ditch, spaced at 0.5m intervals, were timber cross-braces (208/209), designed to prevent the timber shoring from being pushed inwards. These timbers measured the full 2m width of the base of the ditch and were 60mm by 90mm in cross-section. One example (208) braced the upright supports (210/219), another lay between supports and braced the lower cross-planks of the shored sides (209). This latter example was in fairly good condition and a portion was recovered for closer assessment. The surviving timbers produced a collection of eleven wire strung nails.

The overall impression of the timbers and construction was of a temporary, makeshift structure, rather than one designed to endure a lengthy period of use. There were no silting deposits at the base of the ditch, making its interpretation as a water sluice improbable. Although the site was formerly occupied by a bus station, the nature of the timber construction and the lack of oily deposits tend to suggest that it was not an inspection pit or other associated feature. It has been suggested that its likely period, the nature of the construction and its relatively short life-span may be expected of a military practice trench of the kind built by infantry battalions during the Great War prior to their deployment in France. Its construction may be the product of a unit based at the Scarborough Barracks Drill Hall, located to the north of Chequer Road. At present there is a lack of documentary evidence to corroborate this theory.

Adhering to the side of the decayed wooden planks (207), and holding the decayed remains together, was dark blackish brown clay silt containing some charcoal smears. It was not plentiful and only 10 litres was available for sampling. The ditch had been deliberately backfilled soon after construction. The timber cross-braces between the shored sides were buried by loose mid- greyish brown sandy clay (206) containing frequent mixed gravels up to 10mm in size forming faint tip lines. During this process, after having been filled with 0.45-0.5m material, the wooden shoring gave way on the north-east side causing a cascade of natural sand and gravel to be redeposited into the ditch, partially overlying the initial fill and pushing the boarding inwards. The episode of collapse suggests that the wooden shored ditch was open at the top and that no roof had originally been attached. It also suggests that the majority of upper timbers may have been salvaged prior to backfill, allowing the collapse to take place since no timber remains were evident above this material. The collapse of the sides widened the top of the ditch from its original 2m to c3m creating a false profile at the upper edge. More material, similar to that used for the initial fill was tipped in to complete its backfill. This comprised c1.4m thickness of loose mid- greyish brown sandy clay (205) containing frequent mixed gravels up to 20mm in size and formed faint tip lines 10-50mm thick with varying tones of light to dark colouration creating bands amongst the gravel. The fill contained a fragment of late 19th to early 20th-century roof tile, a brass tack, and two fragments of clay tobacco-pipe stem, three glass fragments and a speck of blue pattern-printed pottery.

The whole trench area was covered by a layer of dark brown silty sand (204) with frequent small gravels, coarse grit and occasional fragments of brick, 70mm thick. Embedded into the top of this was a red brick surface (203). The bricks were arranged end-on at a slight angle from the vertical position, to form a cobbled effect at their surface. Each brick measured 210mm long by 110mm wide by 80 mm thick. Not all of the bricks were identical, some were frogged on the upper side, occasionally stamped with LBC and PHORPRES on the sides of the frogged area, others were unmarked and unfrogged. The bricks were all stained black on the sides, they contained moderate small white inclusions less than 2mm in size, frequent voids less than 5mm in size and were coated by patches of cream sandy coarse grained mortar. Since the red-brick surface was unbonded, it is likely that this mixture of brick types, some with mortar still

adhering to them, had been reused. The surface probably relates to the former bus depot. Overlying the bricks were two episodes of tarmac surfacing (202/201), 120mm thick, which forms the present Waterdale Car Park surface.

### 4.3 Boreholes

Three cable-percussive boreholes were monitored within the wider area of the CCQ development (Fig 1). Since the measurement of deposits from borehole monitoring cannot provide a detailed section in the same manner as a test trench, the following tables provide a description of the material emptied from the cable-percussive cylinder at the approximate depth it was encountered, based upon the depth of the cylinder below ground level. Thin archaeological layers and complex archaeological sequences cannot be identified through borehole sampling and thicknesses of deposits can only be estimated using the changes of context visible.

*Table 1: Deposits within Borehole 1*

Context	Description	Approximate depth (m)
301	Blue-grey aggregate with a tarmac surface	Surface
302	Light yellowish-brown and pinkish-yellow sandy clay with chunks of yellow sandstone	0.14
303	A tiled floor surface, small red tiles adhered to a hard pinkish-red mortar base	0.3
304	Soft mid- brown silty clay containing frequent charcoal granules and grit	0.35
305	Blocks of irregular shaped rounded yellow sandstone 140-180mm in size	0.55
306	Soft dark orange brown clay silt with occasional charcoal and gravel	0.57
307	Light orange brown sandy clay with moderate small grit and ironstone fragments	1.5
308	Friable dark brown silty clay loam containing moderate small stones and thin charcoal bands	1.8
309	Dark orange brown clay with light orange sandy patches and occasional charcoal flecks	2.4
310	Dark blackish brown silty clay loam with occasional small stones	2.5
311	Dark orange brown clay with occasional chunks of sandstone	2.7
312	Orange clay with patches of reddish clay sand and moderate gravel	2.9
313	Clean natural pinkish-red clay sand	3

A sample of the floor tiles from layer (303) was retained. These may relate to the former terraced houses along Catherine Street, demolished after 1948 (Bennett-Samuels 2007, figs 9-10).

*Table 2: Deposits within Borehole 2*

Context	Description	Approximate depth (m)
401	Coarse blueish-grey aggregate with a tarmac surface	Surface
402	Dark brown silty clay loam containing moderate small stones	0.1
403	Mid- to dark brown clay silt containing frequent large rounded gravel and fragmented brick or tile	0.5
404	Dark blackish brown silty clay loam containing moderate small stones and fragments of brick or tile	0.8
405	Dark orange brown sandy clay containing angular gravels, coarse grit and shattered sandstone	1
406	Dark orange brown sandy clay containing occasional large coarse stones with patches of lighter orange brown sandy loam	2
407	Dark orangey brown sandy clay	2.3
408	Mid- orangey brown coarse sandy clay with moderate rounded stones and	2.8

	dark organic material	
409	Mid-orangey brown clay sand	3.5
410	Dark brown sandy clay with moderate small rounded stones	4
411	Dark brown sandy silt with frequent charcoal granules and occasional large mixed stones	4.5
412	Mid- to dark orange brown clay sand with occasional large coarse gravel and patches of sand	4.6
413	Natural light orangey brown sand and gravel	4.8

The thickness of deposits may be indicative of buried garden soils, ponds and other features relating to the rear gardens of Chequer House, next door to Beechfield House that both fronted Waterdale in 1893 (Bennett-Samuels 2007, fig 7). Ornamental ponds and water features are mapped in this location. It would appear likely that a good deal of garden archaeology remains preserved *in situ*.

Table 3: Deposits within Borehole 3

Context	Description	Approximate depth (m)
501	Coarse blueish-grey aggregate with a tarmac surface	Surface
502	Bands of white chalk, gravel and mid-brown sandy clay	0.1
503	Pinkish-white sandy mortar containing brick fragments	0.3
504	Grey aggregate with pieces of tarmac	0.4
505	Crushed chalk and sand	0.6
506	Light greyish white sandy chalk	1.5
507	Mid- orangey brown clay sand and grit with gravel	1.7
508	Dark orangey brown sandy clay and gravel	2.5
509	Dark orangey brown sandy clay with frequent small stone and frequent charcoal granules	2.8
510	Mid- brownish orange clay sand with frequent angular gravel	3
511	Natural mid- brownish orange sand and gravel	3.3

Most of the layers in Borehole 3 appeared to have the character of modern levelling deposits. This is likely to be the result of landscaping following the demolition and redevelopment of Scarborough Barracks drill hall and the block of terraced houses fronting Chequer Road after 1948 (Bennett-Samuels 2007, figs 9-10).

## 5 THE FINDS

### 5.1 Roman pottery by Dr Jeremy Evans

Three sherds of greyware were presented for examination from context (216).

1 sherd (weighing 9g) of South Yorkshire greyware. A closed form or jar lower wall body sherd, externally burnished. Roman.

2 sherds (26g) of a greyware, which has a mid grey core and margins, with occasional fairly fine sad temper at *c* 0.2mm. Probably not South Yorkshire greyware. They are from a jar shoulder with cordon on base of neck. The surface is burnished and probably grey slipped. Roman.

### 5.2 Building materials by Pat Chapman

There are two complete bricks from wall (125). The brick from the foundation measures 226mm by 110mm by 70mm (8,7/8 x 4¼ x 2¾ inches). It has white mortar on all surfaces except for one header and it is plain with no frog. The brick from the upper wall measures 230mm by 110mm by 75mm (9 x 4¼ x 3 inches). There is pinkish mortar on the base, top surface and headers, but one stretcher has been painted white. The top has a broad shallow frog, 70mm by 185mm and 10mm deep with shallow sloping sides. At each end of the frog are two discs 20mm in diameter slightly raised with a raised line across the centre and one at one end of the base. These were presumably made by the mould. Both bricks are made from hard coarse sand with minor small grit inclusions, hand-moulded and fired to pale orange red. The hand-moulding, the dimensions of the frog and the size of the bricks indicates an early 19th-century date.

The remains of two paviors come from Borehole 1. The tops have been divided into squares measuring 50mm with broad 3mm deep grooves between them. One has the remains of four squares and the other one has two. They were at least three squares long and two squares wide which measured 117mm by 174mm (4,5/8 by 6,7/8 inches), one fragment is 50mm thick, the other 45mm thick. These are 20th century in date.

A fragment of modern machine-made tile disturbed from fill (205) is 14mm thick with a pinkish brown fabric. It is not an ordinary roof tile as it is not flat with one nib or raised edge, but seems to have projections each side and to continue beyond the 'top'. This could be from a ridge tile, chimney or a decorative wall tile.

### 5.3 Metal finds by Tora Hylton

Twelve iron nails and a copper alloy tack were recovered from two ditches in Trench 2. Two types of nail are represented, hand forged and mass produced.

A single hand-forged nail was recovered from Ditch [217], together with three sherds of Roman pottery. The nail is complete, measures 63mm in length and resembles Mannings Type 11b (1985, fig 32), with a flat, sub-circular head and square-sectioned shank that tapers to a point.

Eleven mass produced nails and a copper alloy tack were recovered from Ditch [211]. They were associated with wooden shoring used to support the sides of a trench constructed in the 19th-20th centuries. Although some of the nails are incomplete and most are encrusted to varying degrees in corrosion products, sand and small stones, it is possible to determine that they are all examples of wire nails which have flat circular heads and circular-sectioned shanks. Complete examples range in length from 34-80mm. Three of the nails retain vestiges of wood

from the original shoring, attached either to the shaft of the nail or adhered to the corrosion deposits.

**5.4 Clay tobacco-pipe stems** by Jim Brown

There are three clay tobacco-pipe stem fragments recovered from the evaluation trenches. One stem fragment measures 43mm long and is from buried soil (117) in Trench 1, the second fragment is 24mm long and is from the uppermost fill of the wood shored ditch [211] in Trench 2, and the third is 12mm long from the basal fill of ditch [211]. In each case the diameter of the borehole is 4/64's of an inch which indicates that the pieces are relatively late and would probably date to the 19th-20th centuries.

**5.5 Other finds** by Jim Brown

Three small fragments of transparent colourless glass were recovered from the soil samples from the fill of ditch [211]. None of the fragments are larger than 12mm long by 6mm wide and they are all 1mm thick. It is likely they are small fragments of 19th-20th century vessel glass.

A speck of blue pattern printed pottery was recovered from Sample 2 at the base of ditch [211]. It measures 5mm in width and is 4mm thick. Both surfaces have been glazed, one of which shows vibrant blue coloration. Such pottery is common in 19th-20th-century deposits.



## 6 FAUNAL AND ENVIRONMENTAL EVIDENCE

### 6.1 Animal bone by Karen Deighton

A single piece of bone was recovered from context 205 during the course of trial trenching. Examination showed this to be the fused distal epiphysis and partial diaphysis of an ovicaprid (sheep/goat) tibia. The shaft had been chopped and broken diagonally and a series of chop marks were observed along one side of the bone. The bone surface was severely abraded and flaking away. No evidence of canid gnawing (possibly due to the surface condition) or of burning was observed.

### 6.2 Wood by Steve Allen

A single timber was cleaned and examined, assessed by York Archaeological Trust. The object was wet packed, in cling film within an opaque black plastic sack sealed with adhesive tape, further wrapped in bubble pack and Jiffy foam within a stout cardboard box for transportation to York. No damage had occurred in transit. The artefact was removed from its packaging, washed under cold running water to remove any remaining adhering burial deposits and returned to its packaging after recording and species identification.

#### ***Description***

Species identification followed the principals of Schweingruber (1982).

Sample 4. Box quartered length of timber. Sub rectangular cross section. Several large knots along the length of the timber are sawn through. Modern saw cut midway along length. Both ends recently sawn through, some recent surface damage. Moderately fast grown Scots Pine (*Pinus sylvestris* L). Dimensions: 678mm long, 97mm wide, 72mm thick. Context (209).

#### ***Condition***

The wood has been preserved through burial in a waterlogged anoxic environment and it appears that these conditions were maintained in the burial contexts up to the time of excavation. The wood is in a generally good condition. Some softness in the surface is the result of cellular collapse within the wood structure which indicates that degradation has set in and that similar material left *in situ* may be lost within a few years time.

#### ***Discussion***

The timber is a cross brace from the base of a plank-lined ditch believed to have had a fairly short span of use. Much of the timbering had been lost through decay. The abraded nature of the surface has removed any tool marks but the neatly cut knots indicate that this timber is of sawn conversion. The very regular cross section might be produced by careful hand sawing but is more probably the product from a sawmill. This suggests a post-medieval date. Scots Pine, though a native species, is not known to have been used as a significant source of timber much before the 18th century. The report of nailed construction also argues for a late date. No joints, fixings or fittings are present, nor are there any signs that this timber was fastened to any other.

It is suggested by the excavators that the timber may be from a practice trench built by troops preparing to be transferred to France during the 1914-1918 war. Practice trenches of this era are known in the region and survive as earthworks in the hills south-west of Sheffield. There is nothing about this piece of timber which would support the suggestion but equally, there is nothing which would refute this interpretation. Radiocarbon dating is possible for this timber though the steepness of the C14 curve for the late 19th to early 20th centuries is not likely to give a reliable date. Pine can be dated by dendrochronology but this piece has too few rings and has no sapwood which would allow an estimated felling date. In this case, documentary

evidence whether written or photographic, is likely to be the only method of dating this feature and its timber components accurately.

No timbers from a feature of this type have yet been published and a report on the construction of the trench would be very valuable. It may be worth comparing the feature with examples published in contemporary documents. The War Office produced a series of manuals explaining how to construct field fortifications and if these are indeed the result of a training session, they are more likely to conform to the regulation methods and dimensions than those fieldworks constructed and modified on the battlefield.

In itself, there is little further to be gained from a study of this timber. It has been fully recorded. There is little hope of dating the timber from its remains alone. Ordinarily, a timber of this nature would be discarded. If the timber is to be retained as part of the site archive or for possible display, it will need stabilisation treatment.

**6.3 Bulk soil samples** by Karen Deighton

***Introduction***

Four samples were collected from a range of features during the course of trial trenching. Two samples were selected by the excavator for analysis, to determine the presence, preservation and nature of any ecofacts.

***Method***

Two samples were processed using a siraf tank fitted with a 500micron mesh and 250 micron flot sieve. The resulting flots were dried and examined under a microscope (10x magnification). Molluscs were identified with the aid of Cameron and Kerney (1994). Cereal grains and seeds were identified with the aid of the author’s reference collection and Schoch *et al* (1988).

***Results***

**Preservation**

Preservation was by both charring and waterlogging. Charcoal and bone were heavily fragmented, as was waterlogged wood. Charred seeds were fragmented and abraded.

**Taxa present**

*Table 4: Ecofacts by sample and context*

<b>Sample</b>	<b>1</b>	<b>2</b>
<b>Cut/fill</b>	/205	/207
<b>Feature</b>		
<b>Volume</b>	20	20
<b>Cereal</b>	3	
<b>Pulse</b>	1	
<b>Charcoal</b>	+	
<b>Waterlogged wood*</b>	9	9
<b>Bone</b>	3	2
<b>Mollusc</b>	1	

Key for waterlogged wood +=present,1=2-10,2=10-20,3=20-30,4=30-50,5=50-100,6=100-200,7=200-300, 8=300-500,9=500-1000,10=1000+

Cereal grains and the pulse were too abraded to attempt further identification and charcoal was too fragmented for identification to taxa. Waterlogged wood consisted of small to medium fragments of indeterminate taxa. A fragment from sample two had evidence for human

modification (possibly part of a plank or floorboard). The mollusc present was an indeterminate discoidal snail species. Bone was too poorly preserved to permit further identification.

***Discussion***

Little can be said of the environment or economy of the site due to the poor preservation and paucity of ecofacts.

***Potential***

Although the frequency of ecofacts was low and their preservation was poor, assessment has indicated their presence. This suggests that should further excavation take place, sampling of suitable phased/dateable features should take place in an attempt to increase environmental and economic information about the site.

***Conclusion***

A small poorly preserved assemblage which, never the less, indicates environmental evidence is present at the site.

## 7 CONCLUSIONS

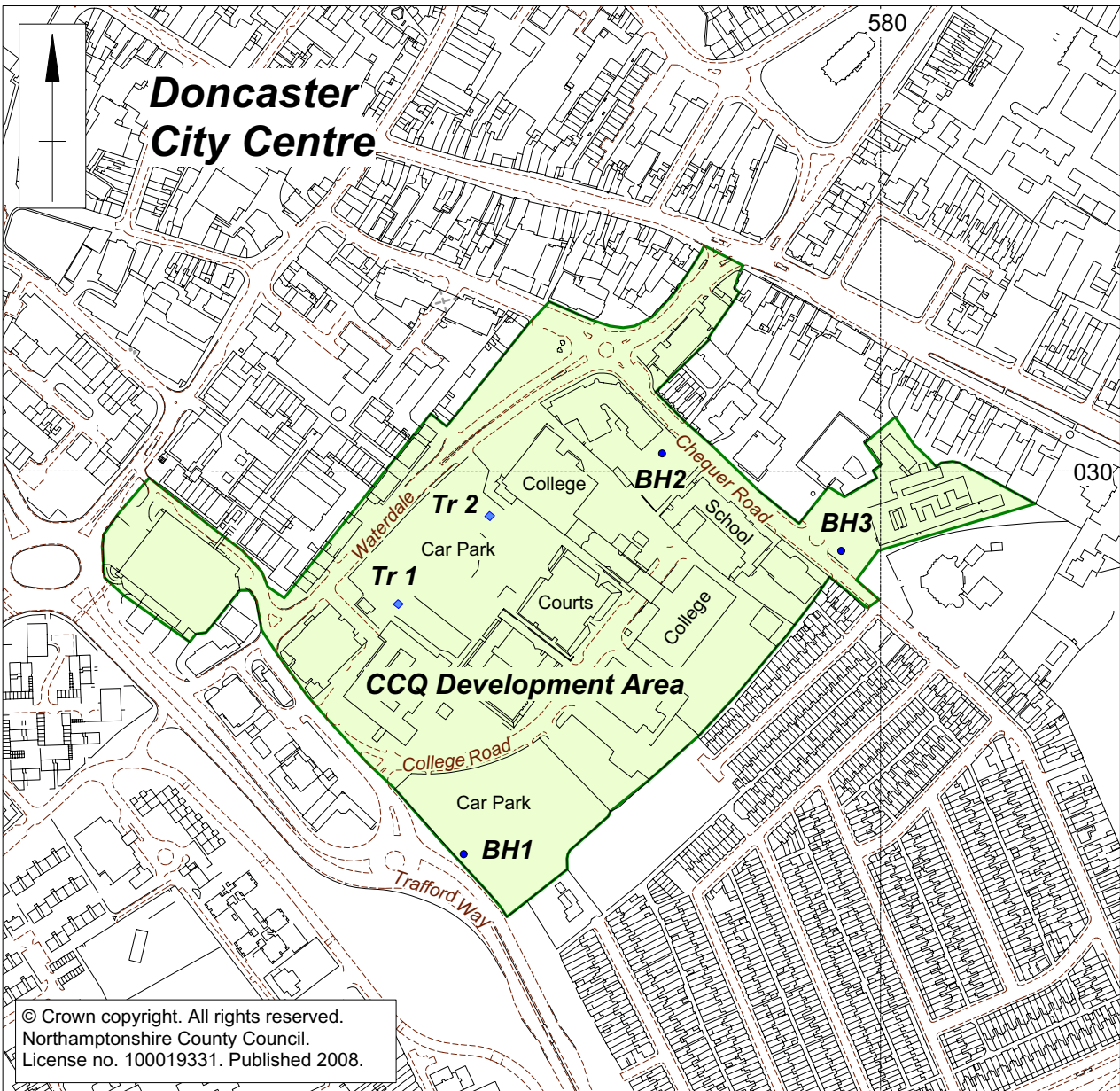
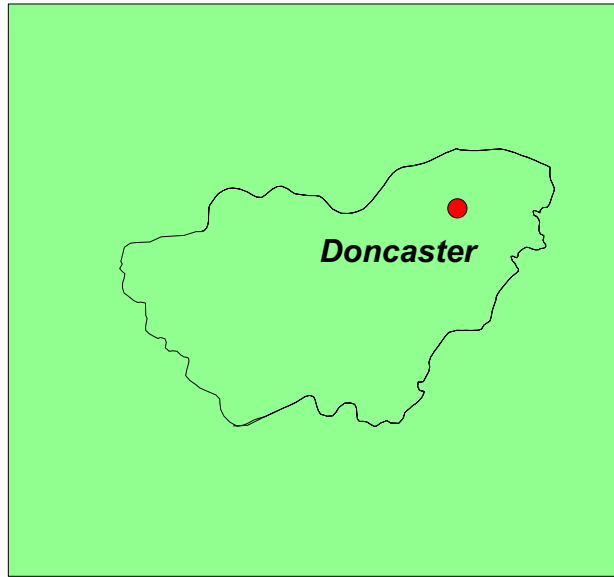
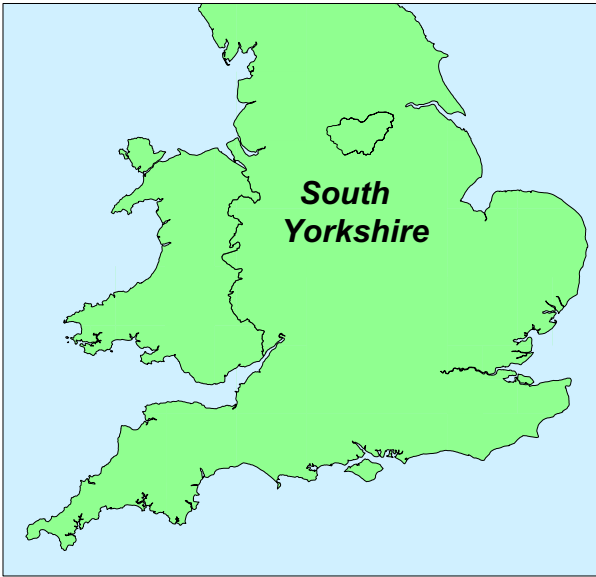
The depth of deposits on the site appears to be fairly variable and this indicates that the present ground level across the whole CCQ development area has been subject to considerable landscape modification in the last couple of centuries. Trenches 1 and 2 demonstrated that the natural substrate sloped considerably from the north-east to the south-west beneath the Waterdale Car Park at between 16.4-14.82m above Ordnance Datum. The result was that substantial archaeological features cutting the natural were encountered at 0.27m below the ground surface in Trench 2 with very little modern material above. The features appear not to have been too badly truncated horizontally, although their vertical truncation in parts of the site is likely to be more severe. By comparison there was a build up of *c*1.5m of deposits in Trench 1 above the natural, which included structural elements of 19th-20th-century building that lay in the lower 0.9m.

The presence of thick deposits likely to indicate good archaeological potential were noted in Boreholes 1 and 2 where variations in the sequence of material brought up by the cable-percussive drilling rig were distinct. In particular Borehole 1 broke through the floor of a 20th-century building, probably a terraced house on Catherine Street that may have had a cellar below. The borehole indicated that there are likely to be at least another 2m of buried soils beneath the potential cellar. In the case of Borehole 2 a total 4.8m of stratified deposits containing various bands of gravel, clay sand, silty clay and loam with organic staining and charcoal tends to suggest that elements of the former gardens at Chequer House are still preserved beneath a raised modern ground level. The depth of deposits is unsurprising, considering the location of Borehole 2 was directly above the rear garden ponds present *c*1893-1903. Deposits in Borehole 3 were less explicable, whilst still deep at *c*3.3m, much of the upper stratigraphy contained modern material with little to indicate the origin of the layers. They are likely to be the result of landscaping following the demolition and redevelopment of Scarborough Barracks drill hall and the block of terraced houses fronting Chequer Road after 1948.

The quality of finds was fairly good, the wooden shoring of the ditch [211] in Trench 2 was preserved by partial waterlogging, although it is probable that older timbers would not survive the acid gravel conditions and the timber planks and ferrous nails were already in an advanced state of decay. Buried soils, such as the garden soils from Borehole 2, might also contain preserved organic remains. The few sherds of Roman pottery were slightly abraded, but not severely, the sherds were fairly large and it is likely that relatively undisturbed deposits could produce good assemblages where they are to be found. The quantity was, however, not indicative of anything in particular as the size of the excavated areas gives no accurate indication of feature density or composition. It is pure chance that features were encountered in the locations selected.

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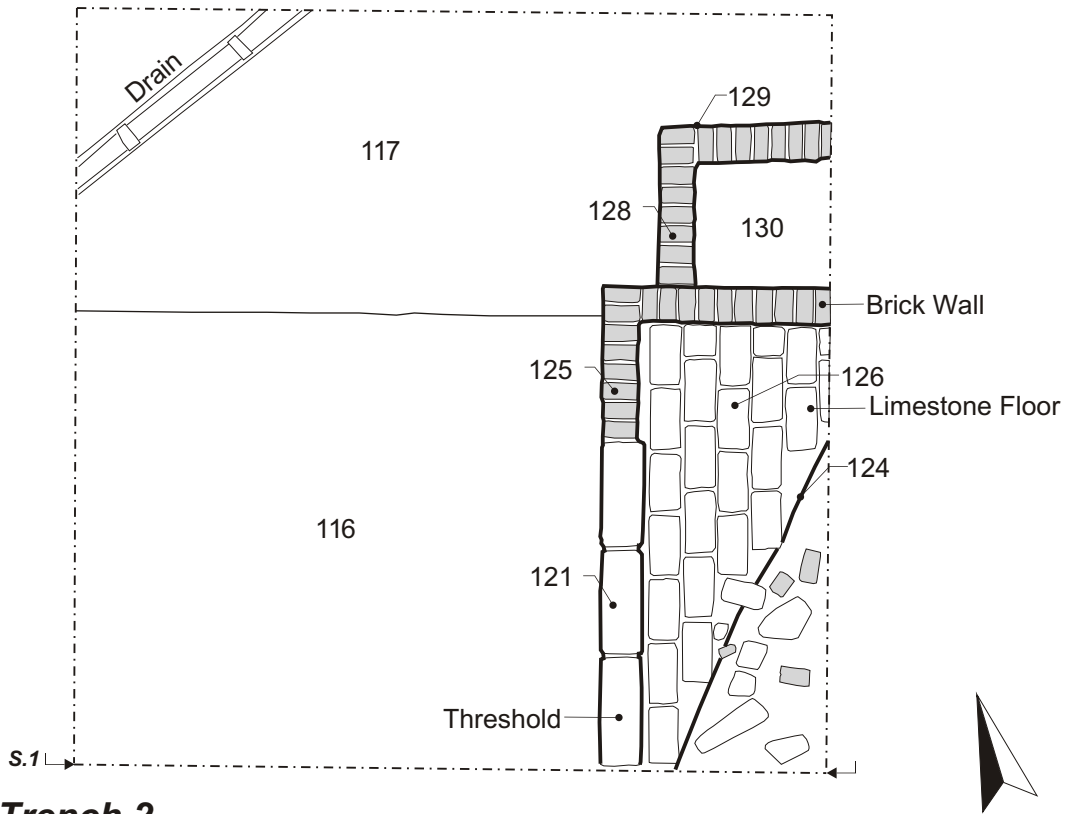
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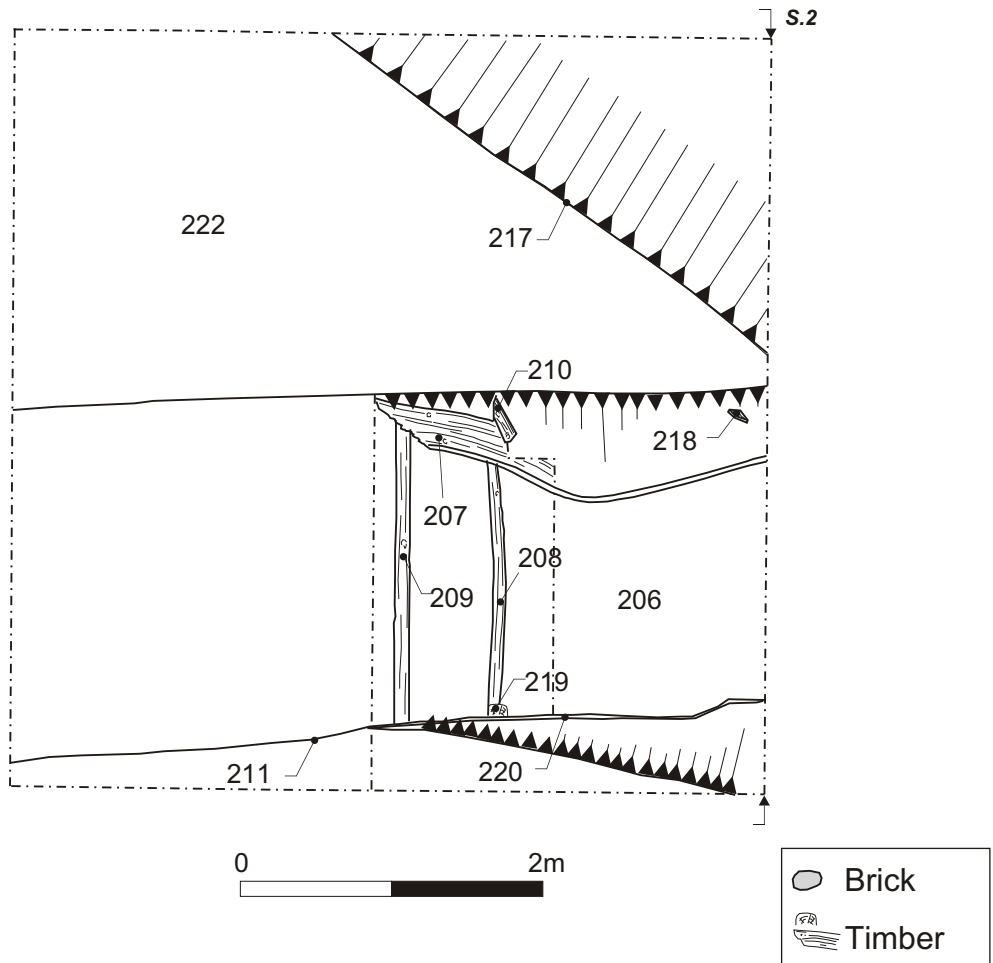
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Site and trench location plan Fig 1

### Trench 1

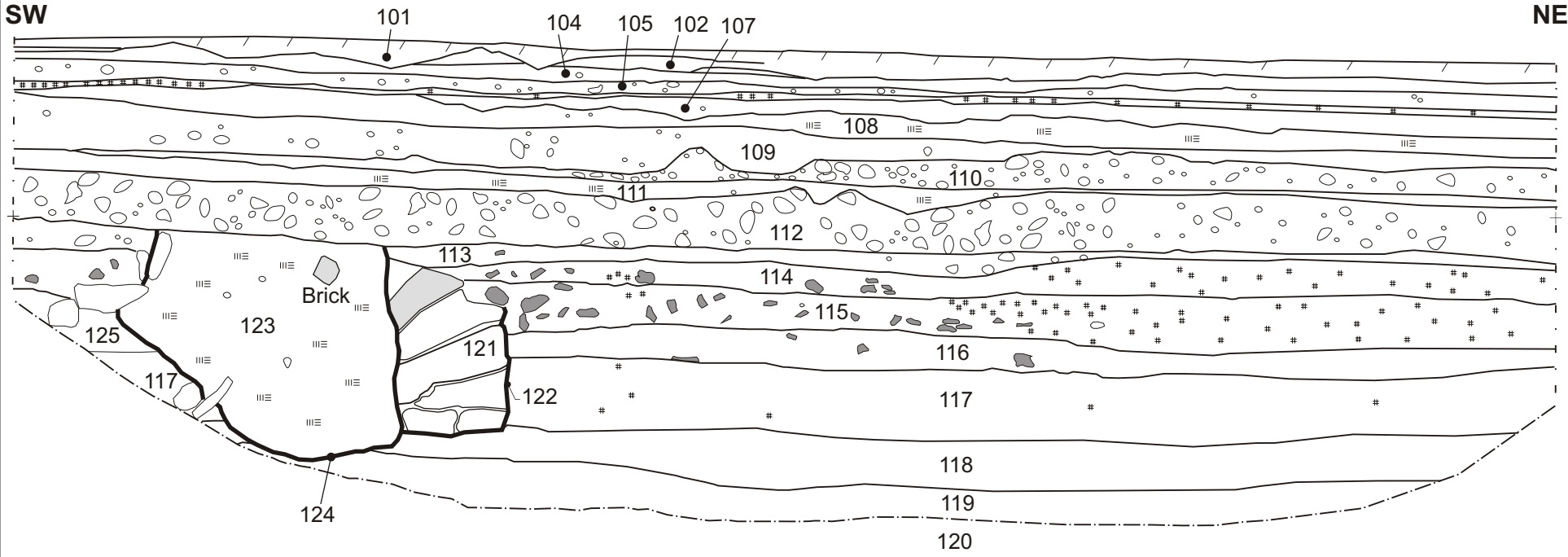


### Trench 2

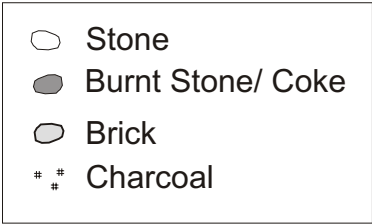


Plans of Trenches 1 & 2 Fig 2

**Section 1**



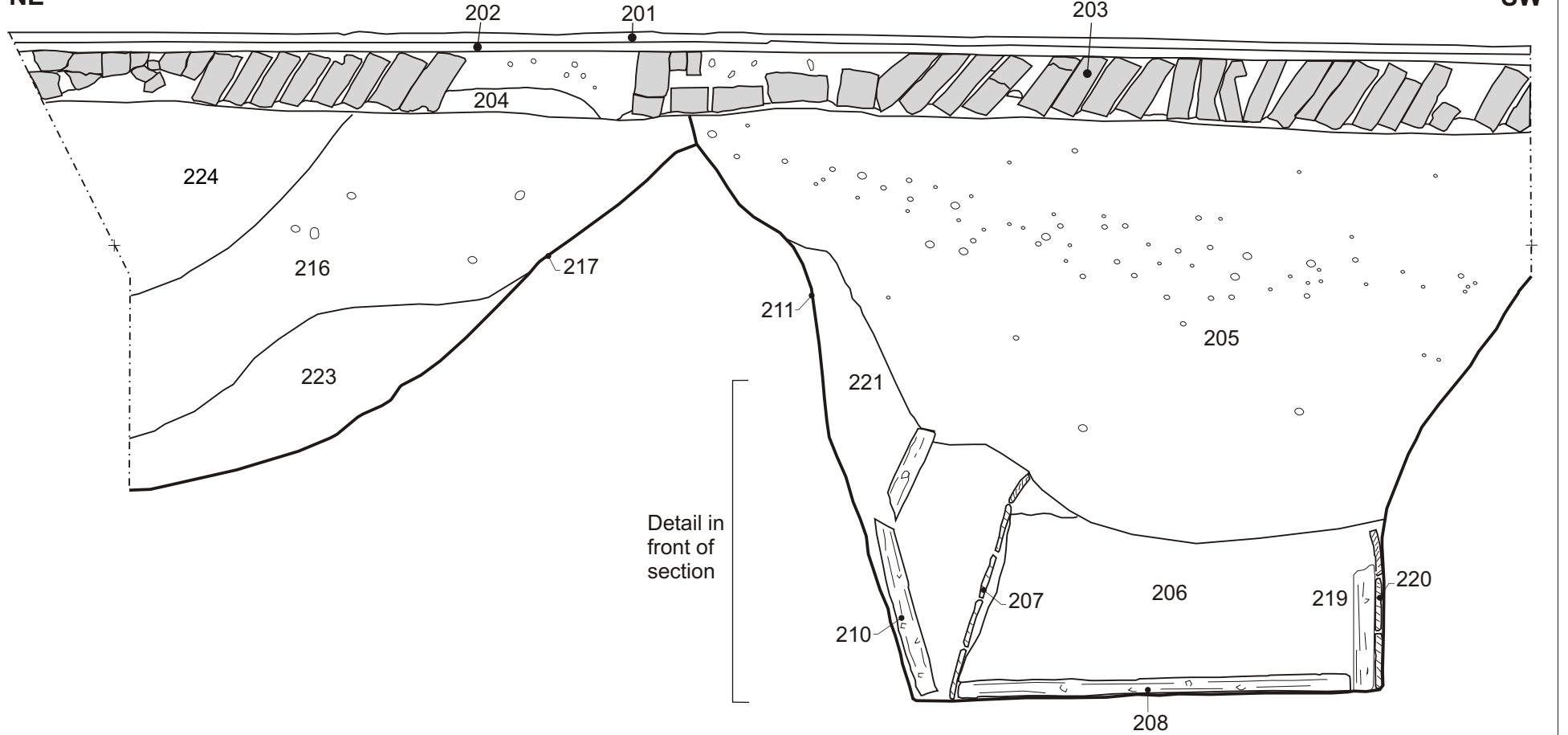
Section of Trench 1 Fig 3





**Section 2**

NE SW



Section of Trench 2 Fig 4



Plate 1: A 19th-20th century building foundation and floor in Trench 1



Plate 2: Natural sand and gravel at the base of Trench 1

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Plate 3: Roman ditch [217] in Trench 2



Plate 4: Post-medieval wood-shored ditch [211] in Trench 2

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