C150 Deighton - Appleton Wiske, North Yorkshire

Archaeological watching brief

by
Archaeological Services
University of Durham

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January Managery	710			
CNY	2093			
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Rec'd	02/05/02			

on behalf of

Director of Environmental Services NYCC

ASUD Report 898 February 2002

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County Hall, Northallerton, North Yorkshire, DL7 8AH

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1. Summary

The project

- This report presents the results of an archaeological watching brief conducted madvance of road surfacing and drainage work on the route of the C150, a minor road between Deighton and Appleton Wiske, approximately 8 5km north of Northallerton, North Yorkshire The C150 follows the line of a Roman road which is believed to have connected Stamford Bridge, near York, with Newcastle upon Tyne
- The works were commissioned by Mouchel North Yorkshire, on behalf of the Director of Environmental Services, North Yorkshire County Council, and conducted by Archaeological Services University of Durham, in accordance with a specification provided by Mouchel

Results

An earlier cobbled surface was found to underlie the tarmac road. This preserved wheel ruts, and incorporated areas of repair. The cobbles he on top of a bank of clay that is different from the surrounding glacially-deposited material. A stone culvert was found towards the middle of the road works area, running across the road. No closely-dateable material was found. The general form of the site suggests that there may be elements of the Roman road surviving here. This cannot be determined with certainty without comparison with a section of the road line which has not been altered in modern times.

Recommendations

No further work is proposed for this site. It is recommended that any further opportunities for examination of the form and extent of the underlying road should be taken up

2. Project background

Location (Figure 1)

The site lies on the line of the C150 between the villages of Deighton and Appleton Wiske, North Yorkshire The OS grid reference is NZ 384 026

Development work

The work entailed the reconstruction and re-surfacing of the road over a distance of 550m. In conjunction with this reconstruction work a scheme of drainage work was also undertaken, this necessitated the excavation of 13 gulley crossings across the complete width of the existing road. These cuts were 0.75m wide x 0.60m m depth. A drainage trench, Im wide and up to 2m in depth, was excavated along the whole of the eastern side of the road to a total length of 550m, a haunching trench, 1.2m wide and 0.4m m depth was also cut along both sides of the existing road, for reconstruction of the edges of the carriageway.

Objective

The objective of the scheme of works was to record any archaeological material exposed in the course of excavation work, and to assess the nature, extent, and potential significance of any surviving archaeological features present

Specification

2 4 The works have been undertaken m accordance with a specification provided by Mouchel North Yorkshire (Appendix 3)

Dates

Fieldwork was undertaken between 15th January and 13th Febmary 2002 This report was prepared between 6th Febmary and 12th March 2002

Personnel

The fieldwork was conducted by Mark Douglas This report was prepared by Mark Douglas, with illustrations by Lmda Bosveld Specialist work was conducted by Dr Jacqui Cotton (macrofossil analysis) The Project Manager was Richard Annis

3. Landuse, topography and geology

The site lies at a mean elevation of c 70m OD, m an area of gently undulating arable farmland. The underlying geology is comprised of compact boulder clay over Permian and Triassic sandstones. The area is open, with few trees in the immediate neighbourhood of the site. The land on either side of the road is in arable cultivation, the soils are clayey and water-retentive. To the south of the work area, the line of the road is continued as a green lane and a bridleway, and here the vegetation cover is somewhat thicker.

4. Historical and archaeological background

41 The line of the Roman road, which mns northwards on a line roughly parallel with Dere Street to the west, has been traced or inferred from sections of surviving routes, boundaries, and hedge alignments No archaeological work is known to have been carried out in the neighbourhood of the site However, some excavation work has been carried out on the line of the saine road in the area of Fardeanside, some six kilometres to the north. These excavations were carried out by members of the Teesside Archaeological Society (TAS) within the past few years, as yet, no account of the work has been published. The road as discovered by TAS was seen to be a slight and lightly metalled feature in that area The line of the road and a possible crossing point on the River Tees were also examined by the TAS group The only other reported excavation on the road is one referred to by Margery, who says that the road was examined by E W B Peacock, possibly near Brawith Hall, Thirsk The road was found to constructed from "cobbles and stone chips, 24 feet wide with kerbs, and up to 6 inches thick"

5. Results of the watching brief

Scope of the works (Figures 1 & 2)

5 1 In order to examine the nature of the ground, and to evaluate the archaeological impact of the drainage trench that was to be excavated along eastern edge of the road, a number of test pits were opened. A total of six pits (trenches E, F, G, H, I, and S) were excavated along the proposed line of the trench The haunching work was carried out in four stages, the initial trenches (A and B) being excavated on both sides of the southern section of the road, this was followed by work in two trenches (C and D) on the northern section Following the excavation of the haunching trenches, the crossing gulleys were excavated to link the surface drains on opposite sides of the road Those that were recorded archaeologically are referred to as trenches L, M, O, P, and R A system of chainage measurements was used to locate features encountered along the length of the site. The measurement commences at 0m at the extreme southern end of the proposed works and extends to 550m at the northern end Any chainage measurement inentioned in the text relates to this, and can be referred to the site plan, in figures 1 and 2, the chainage figures are shown in red alongside the road

The test pits

The test pits were excavated, under archaeological supervision, by a JCB 3CX excavator fitted with a toothless bucket Each excavation measured 2m by 1 5m in area, all were located along the eastern edge of the existing road. The stratigraphic sequence was the same in all of the trenches. In each case, an orange-brown glacially-deposited boulder clay [context no 9] was reached at a depth of 0.7m. Above this there was a light friable clay-loam subsoil [4], immediately above was topsoil [3], a brown clay loam, 0.2m in depth. No archaeological deposits were identified in these pits, and no artefacts were recovered.

¹ Margery, I D, 1955 Roman Roads in Britain, John Barker, London, p 432

Haunching trenches A and B

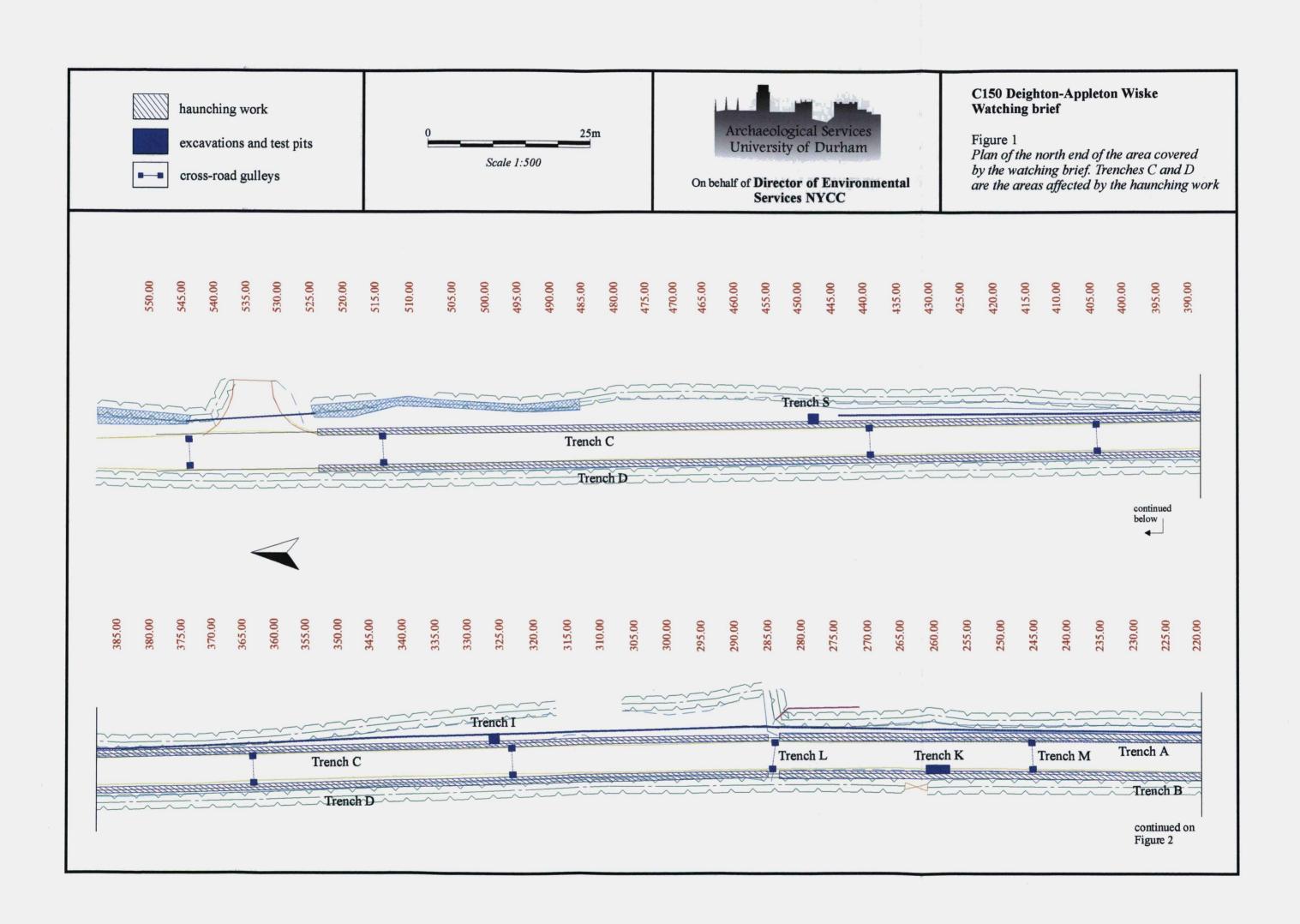
- 53 Trenches were excavated along both sides of the southern section of the existing road They were cut to allow the edges of the road to be strengthened before it was re-surfaced Each trench measured 1 2m wide by 0 4m deep, and they were 285m in length. Along the total length of the trenches an average width of 0 6m of the tarmac surface of the existing road was removed. The removal of the modern tarinac road surface [1] and the underlying modern road foundation [2] exposed an earlier cobbled road surface [5] This surface comprised tightly packed river cobbles, ranging in size from 10mm to 150mm, with the average size being in the region of 100mm. This cobbled surface was laid over a compact redeposited clay foundation [6], below this was the natural boulder clay [9] The redeposited clay sloped downwards slightly on both sides of the road, forming a cambered profile The cobbled road surface was visible for the entire length of these trenches A section was recorded archaeologically across each of the haunching trenches These small areas, trenches J and N, provided no useful information for the interpretation of the road
- Two finds were recovered during the excavation of trenches A and B A small fragment of animal bone was found in trench A, and a piece of a handle from a medieval pottery jar or vessel was collected in trench B Of the two finds, only the animal bone came from a secure context [5]

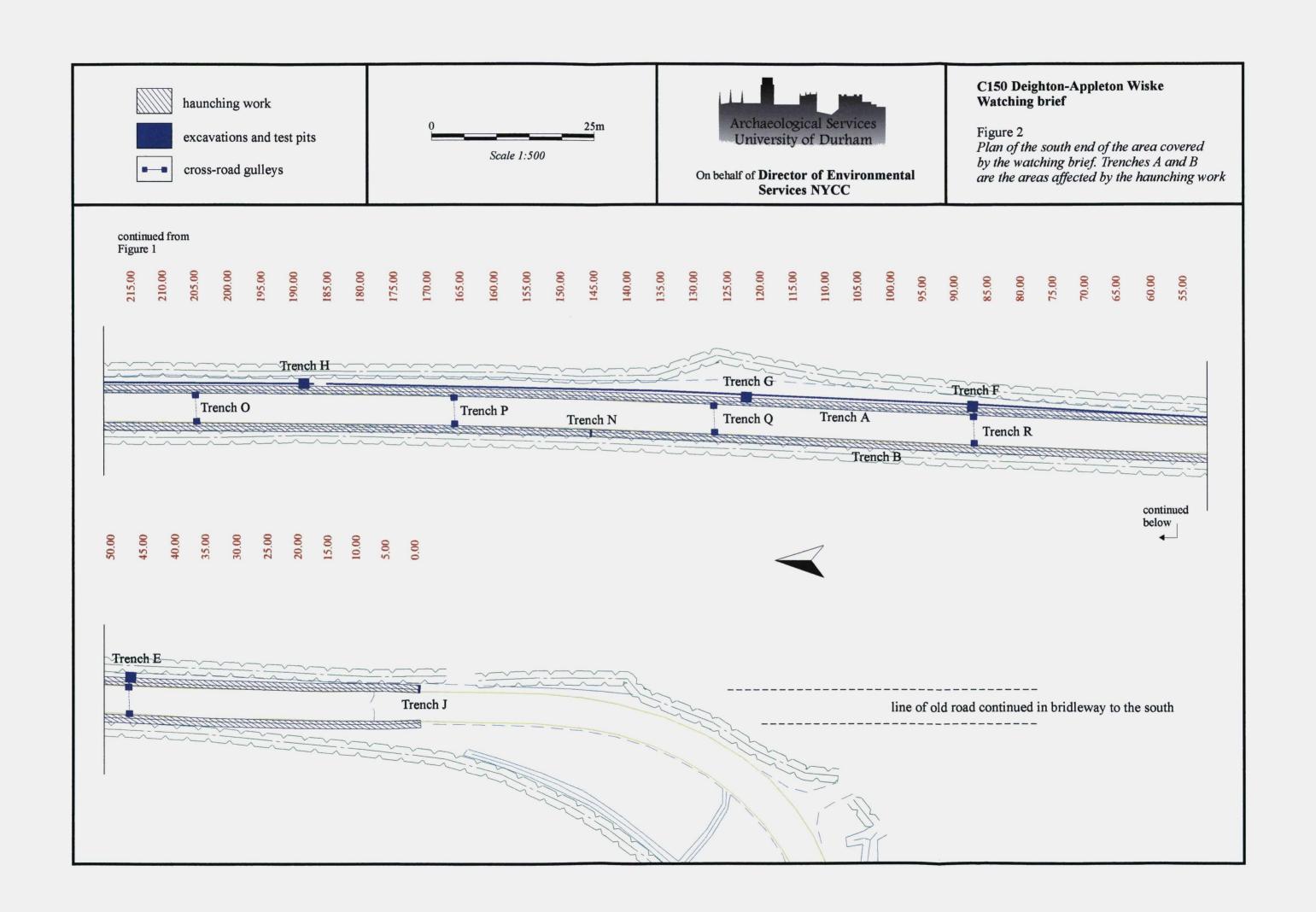
Haunching trenches C and D

5 5 Trenches were excavated along both sides of the northern section of the road, in the same way as A and B had been cut to the south. These trenches were slightly narrower than A and B, being Im wide and 0 4m deep. The total length of these cuts was 245m The cobbled surface of the earlier road was once again visible along the total length of these trenches At chainage 448m, a stone-built culvert [7] was revealed in Trench S (Figure 4) This feature was of sandstone slab construction, consisting of two upright stone slabs placed on edge, 0 35m apart, with capping stones dry-laid on top The supporting stones were laid directly on the natural underlying clay of the site. The culvert could be seen to mn below the cobbled road surface, and it extended to a distance of 1 2m beyond both the eastern and western edge of the earlier road. It was clearly designed to carry surface water from one side of the road to the other, however, it was found upon inspection to be completely filled with silt [8] The scale of the construction of this feature does indicate that some considerable effort had been expended in its assembly, and that it may well be a feature of some antiquity However, as no definite dating evidence was found in connection with it, all that can be stated concerning its age is that it was built prior to the construction of the cobbled road, as it passes undemeath it It is entirely feasible to suppose that it is contemporary with the road

The gulley crossings

As part of the drainage works carried out on the site, a number of gulley crossings were excavated across the width of the existing road (Figures 1 and 2) The excavation of these trenches provided an opportunity to examine the cross section of the earlier cobbled road surface, and also to ascertain whether



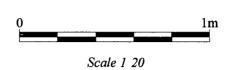


C150 Deighton-Appleton Wiske, watching brief

Figure 3
Section of trench R



On behalf of **Director of Environmental**Services NYCC



Stone

Roots

WEST

EAST

2 105 65 std

105 65 site datum

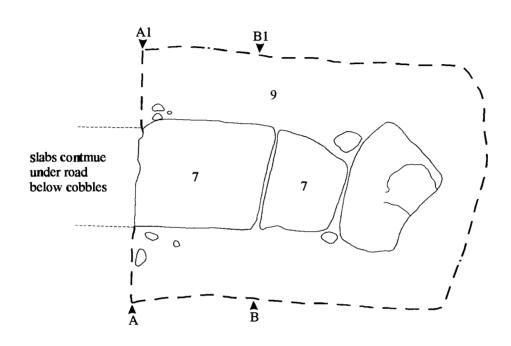
C150 Deighton-Appleton Wiske Watching brief

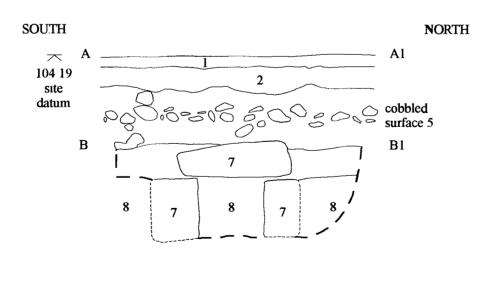
Figure 4
Plan and section of trench S

Scale 1 20 1m



On behalf of Director of Environmental Services NYCC





Stone

an earlier road lay beneath it. In total, 12 gulley crossings were excavated, all of which were examined. Four of these trenches were recorded archaeologically, both by photography and drawn sections. All of the sections showed a similar configuration in their stratigraphic sequence, exemplified by the section drawn at Trench R (Figure 3). This cross-cut was excavated at chainage 85m. The section shows a road foundation of redeposited clay [6] extending to a depth of at least 0.5m below the modem road surface. Above this there was the earlier cobbled road [5], which here showed evidence of wheel mitting. Placed directly on top of these cobbles was a uniform deposit of iron furnace-slag [2], laid as the foundation for the modem road, above this layer was the modem tarmac road surface [1]. There was no evidence for any form of road surface pre-dating the construction of the cobbled road.

6. The finds

A total collection policy was followed with respect to any archaeological finds discovered on the site. The assemblage included a number of artifacts which were recovered from the topsoil, which upon inspection were deemed to be of no archaeological significance relative to the road. These recent materials were discarded

Pottery

One fragment of medieval pottery was recovered from an insecure context m
Trench B

Animal bone

A single small fragment of undiagnostic cattle bone was recovered from the cobbled road surface in Trench A

Building materials

A significant number of brick fragments came form the either withm or directly above the cobbled surface [5] The majority of these fragments came from two specific areas, one at chainage 115, and the other at chainage 310 These undoubtedly represent repairs to the edges of the road surface, as no brick fragments whatsoever were found in the sections that were cut across the road

7. The environmental evidence

Method statement

7 1 Two samples, taken from the fill of the culvert [8] and from a redeposited clay horizon [6], were manually floated and sieved through a 500µm mesh. The residues were retained and all finds recorded. The residues were then scanned using a magnet for metal fragments. The flots were dried slowly, then scanned at x40 magnification for waterlogged and charred botanical remains. Plant macrofossils were identified by comparison with modem reference material held in the Environmental Laboratory. The abundance of each waterlogged species was noted and total counts of charred species were logged, the results of this process are given in Table 1 (Appendix 2).

Results

7 2 The processing of the samples produced small flots dominated by mineral deposits and root material with occasional fragments of charcoal and coal present A charred grass seed was preserved in the flot from the culvert, while both samples contained a few waterlogged seeds

Discussion

The limited presence of charcoal and coal within the sample flots suggests that the contexts contain little anthropogenic waste material. The waterlogged seeds are present in low numbers only, which limits substantial interpretation, although the sedge seeds may indicate former damp conditions within the context. The single charred seed preserved was a grass seed that could not be accurately identified due to the degradation of diagnostic characteristics over time. Consequently, this seed can provide no data on the chronology or function of the context. No further work is necessary for either sample.

8. Conclusions and recommendations

- 8 1 The results of the archaeological watching carried out at Appleton Wiske clearly demonstrated that an earlier road was indeed m existence on the site That this road did actually follow the line of the a Roman road seems to be a matter based on firm evidence However, m view of the lack of positive evidence, no conclusive date can be ascribed to the cobbled road discovered at the site. The road seen at the site does carry some resemblance to that described by Margery, which was uncovered in the region of Thirsk Both sections of road have a cobbled surface, although the width of the Thirsk section is recorded as being 24 feet [7 05m] with kerbs, whereas at Appleton it is more m the region of 4 2m and lacks any defining edge. With regard to the construction of the road at Appleton Wiske there is no definitive evidence to suggest that it is of Roman date However, the construction methods of the period do seem to differ depending on the logistical importance of the road and the availability of building material locally. It appears from other sites, such as Fardeanside and the A66 near Vale House in the Stainmore Pass², that the form of Roman roads in the north of England may not be exactly as set out m surviving descriptions of Roman engineering works
- While the scant evidence from this site must remain inconclusive, it might well be elucidated by further work on the road in the future. One possibility for the collection of more information might be the excavation of a section of the Green Lane that continues the line of the road to the south of the site. This can be presumed to be substantially less-disturbed than the metalled part of the highway, any positive evidence from this section of the old road would add greatly to interpretation of the present site, and would aid future planning decisions.

² Vyner, BE (ed.), 2001 Stainmore The Archaeology of a North Pennine Pass, Hartlepool

Appendix 1: Context information

The table below provides a summary list of the contexts recorded in the course of the watching brief. The • symbols in the columns at the right indicate the presence of finds of the following types. P pottery, B bone, M metals, F flint, S slag, O other materials.

No	Description		P	В	M	F	S	0
1	Modem tarmac road surface							
2	Furnace slag road foundation						•	
3	Topsoil beside road							•
4	Clay loam subsoil		•					•
5	Cobbled road surface			•				•
6	6 Redeposited clay road foundation							
7	Stone culvert							
8	Clay silt fill of culvert			-				•
9	Undisturbed natural boulder clay							

Appendix 2: Environmental material

Table 1

Context		Drain fill [8]	Redeposited clay [6]			
Volume processed (ml)		5,000	4,000			
Volume of flot (ml)		25	75			
Volume of flot assessed	(ml)	25	75			
Residue contents						
Iron fragments (g)		<0.1	<0.1			
Flot matrix (relative abi	undance)					
Charcoal		1	1			
Coal		1	1			
Coarse sand		2	2			
Modem roots		2	3			
Molluscs		1				
Sılt/cla y		3	2			
Charred remains (total	counts)					
(g) Poaceae	(grass-undiff)	1				
Waterlogged remains (r	elative abundance)					
(w) Carex spp	(sedge)	1				
(t) Rubus fruticosa	(bramble)		11			

[c-cereal] Relative abundance is based on a scale from 1 (lowest) to 5 (highest)

Appendix 3: Project specification

C150 ROAD FROM DEIGHTON TO APPLETON WISKE, NORTH YORKSHIRE STANDARD WRITTEN SCHEME OF ENVESTIGATION (WSI) FOR LIMITED ARCHAEOLOGICAL RECORDING ("WATCHING BRIEF")

- 1. Summary
- 1 1 1 The projected course of a Roman road follows the route of the C150 road from Deighton to Appleton Wiske This road is part of a mam route heading north from the Humber towards Newcastle, ruining parallel to the mam Roman road, Dere Street (now the Al) For long distances, the course of the road has been established by the Ordnance Survey Archaeology Division, following lines of roads, hedges and parish boundaries However, the condition and survival of below-ground archaeological deposits along the road route is unknown
- The ground-disturbing works associated with the proposed haunching and drainage will include excavations within both verges of the C150 up to 2m in width and 0.7m in depth. Such works have the potential to encounter archaeological features or finds associated with the Roman road and its use
- An archaeological watching brief has, therefore, been advised by the County Archaeologist to be undertaken by a professional archaeological organisation during the ground-disturbing works, in accordance with the County Council's Standard Written Scheme of Investigation (WSI) for Limited Archaeological Recording ('Watching Brief) for Utilities Works This is in order that any archaeological remains uncovered can be identified and recorded
- 2 Objectives
- The objectives of the archaeological evaluation work within the proposed development area are
 - The Archaeologist who is carrying out the WSI will supervise all excavation work. The Archaeologist will base with the Contractor for his programme of works for the excavation for the proposed road construction and drainage. The purpose of the work is to enable the recording and recovery of archaeological remains affected to a limited and clearly defined extent by pipe trenches, manhole chamber excavation and road wideming trenches. The Archaeological work will require the Contractor to be held up while recording takes place.
 - 2 3 to prepare a report summarising the results of the work and recording the archaeological implications of proposed development,
 - to prepare and subimt a suitable archive to the appropriate museum
- 3. Tenders
- Archaeological contractors should submit their estimates or quotations to the commissioning body with reference to the County Council's Guidance for Developers Archaeological Work and Research Questions for Assessments, Evaluations and Small Scale Interventions in North Yorkshire
- 3 2 Archaeological contractors shall include with their quotations the following details
 - a) a note of the research potential or academic questions presented by the site
 - b) A strategy for the proper recording of the archaeology, including a breakdown of tasks, deployment of staff-time, recording systems to be used, the kinds of evidence to be collected, and the criteria used to evaluate the results
 - c) A listing of the staff and specialists to be employed, their experience or qualifications, position, and areas of responsibility
 - d) A breakdown of costs exclusive of VAT including
 - (1) staff-time and costs for each of the specified works,
 - (11) travel expenses,
 - (111) equipment and plant hire costs,
 - (iv) ancillary costs such as search fees, publicity or security,
 - (v) overheads or on-costs, and

- (vi) contingent or variation fees for unexpected conditions or archaeology daily, weekly or hectare rates if the work is variable or dependent on other variables
- (vu) A period for which the quotations will remain valid
- 4 Variations to Work
- An allowance of time, or a contingent sum for bad weather, should be agreed as part of any contract. Variations to work arising from the presence of structures or archaeological remains not anticipated by the written scheme of investigation or the archaeological contractor should be subject to consultation with the Archaeologist, NYCC and the commissioning body, and put into effect as appropriate with the written agreement of the parties involved.
- 5 Access, Safety and Monitoring
- 5 1 Access to the site should be arranged through the commissioning body
- 5 2 It is the archaeological contractor's responsibility to ensure that Health and Safety requirements are fulfilled
- The project will be monitored by the Archaeologist, North Yorkshire County Council, to whom written documentation should be sent before the start of the WSI confirming
 - a) the date of commencement,
 - b) the names of all finds and archaeological science specialists hkely to be used m the evaluation
- Where appropriate, the advice of the Regional Advisor for Archaeological Science (Yorkshire) at English Heritage may be called upon
- It is the archaeological contractor's responsibility to ensure that monitoring takes place by arranging monitoring points as follows
 - a) a prelimnary meeting or discussion at the commencement of the contract to agree the extent of the proposed works
 - b) progress meeting(s) during the fieldwork phase at appropriate points in the work schedule, to be agreed
 - c) a meeting during the post-fieldwork phase to discuss the draft report and archive before completion
- It is the responsibility of the archaeological contractor to ensure that any significant results are brought to the attention of the Archaeologist, North Yorkshire County Council and the commissioning body as soon as is practically possible. This is particularly important where there is any likelihood of the contingency arrangements being required.
- 6 Brief
- The projected course of the roman road follows the C150 from Deighton to Appleton Wiske, as identified by the Ordnance Survey. The ground-disturbing works associated will included excavation for the proposed road widening of up to 1 m in width, and 0.7m depth on both side of the road. The proposed drainage works are to be undertaken in the East Verge with the average depth to invert of 1.2m. Such works have the potential to encounter archaeological features or finds associated with the Roman road and its use
- Archaeological contractors should quote for a initial three week period of site works for the WSi, with a contingency of a day rate for works extending beyond this three week period. The hours of work shall be 8 00am to 4 00pm each week day and till 1 00pm on Saturday, The proposed excavation works shall be investigated to determine the nature, depth, extent and state of preservation of any archaeological deposits. The project should be undertaken in a manner consistent with the guidance of MAP2 (English Heritage, 1991)
- The mam Contractor will remove overburden such as turf, topsoil, made ground, rubble or other superficial fill materials by machine using a mim-digger fitted with a toothless or ditching bucket, and this will be under the supervision of the archaeologist Mechanical excavation equipment shall be used judiciously, under archaeological supervision down to the top of archaeological deposits, or the natural subsoil (C Horizon or soil parent material), whichever appears first Bulldozers or wheeled scraper buckets should not be used to remove overburden above archaeological deposits Topsoil should be kept separate from subsoil or fill

- materials Thereafter, hand-excavation of archaeological deposits if encountered within the WSI should be carried out
- Metal detecting, mcluding the scanning of topsoil and spoil heaps, should only be permitted subject to archaeological supervision and recording so that metal finds are properly located, identified, and conserved All metal detection should be carried out following the Treasure Act 1996 Code of Practice
- Due attention should be paid to artefact retrieval and conservation, ancient technology, dating of deposits and the assessment of potential for the scientific analysis of soil, sediments, biological remains, ceramics and stone All specialists (both those employed in-house and those sub- contracted) should be named in project documentation, their prior agreement obtained before the fieldwork commences and opportunity afforded for them to visit the fieldwork in progress
- All artefacts and ecofacts visible during excavation should be collected and processed, unless variations in this principle are agreed with the Archaeologist, North Yorkshire County Council In some cases, sampling may be most appropriate
- Finds should be appropriately packaged and stored under optimum conditions, as detailed in First Aid for Finds (Watkinson & Neal, 1998) In accordance with the procedures of MAP2 (Enghsh Heritage, 1991), all iron objects, a selection of non-ferrous artefacts (including all coins) and a sample of any industrial debris relating to metallurgy should be X-radiographed before assessment. Where there is evidence for industrial activity, large technological residues should be collected by hand, with separate samples collected for micro-slags. In these instances, the guidance of English Heritage/Historical Metallurgy Society (1995) should be followed.
- Samples should be taken for scientific dating, principally radiocarbon dating, where dating by artefacts is insecure and where dating is a significant issue for the development of subsequent mitigation strategies
- Buried soils and sediment sequences should be inspected and recorded on site and samples for laboratory assessment collected where appropriate, in collaboration with a recognised geoarchaeologist. The guidance of Canti, 1996 should be followed.
- A strategy for the sampling of deposits for the retrieval and assessment of the preservation conditions and potential for analysis of all biological remains should be devised. This should include a reasoned justification for the selection of deposits for sampling and should be developed in collaboration with a recognised bioarchaeologist. Sampling methods should follow the guidance of the Association for Environmental Archaeology (1995). Bulk samples and samples taken for coarse-sieving from dry deposits should be processed at the time of fieldwork wherever possible.
- Upon completion of archaeological field recording work, a full and appropriate programme of analysis and publication of the results of the evaluation should be completed, in the event that no further excavation takes place. The post-excavation assessment of material should be undertaken in accordance with the guidance of MAP2 (English Heritage, 1991).

7. Archive

- Archive deposition should be undertaken with reference to the County Council's Guidelines on the Transfer and Deposition of Archaeological Archives. A field archive should be compiled consisting of all primary written documents, plans, sections and photographs. Catalogues of contexts, finds, soil samples, plans, sections and photographs should be produced and cross-referenced.
- 7 2 The archaeological contractor should liaise with an appropriate museum to establish the detailed requirements of the museum and discuss archive transfer in advance of fieldwork commencing. The relevant museum curator should be afforded access to visit the site and discuss the project results.

8. Copyright

Copyright m the documentation prepared by the archaeological contractor and specialist subcontractors should be the subject of an additional licence in favour of the museum accepting the archive to use such documentation for their statutory educational and museum service functions, and provide copies to third parties as an incidental to such functions

- 9. Report
- An evaluation report should be prepared following County Council's guidance on reporting Reporting Check-List The report should set out the aims of the work and the results as achieved Diagrams should be included to illustrate the location and depth of archaeological deposits m relation to existing ground levels, and projected depths of disturbance associated with the development proposals, where these are known The report should identify the archaeological potential of the site, the research questions applicable to the site, and the deposits, finds or areas needing further investigation. The report should also include a listing of contexts, finds, plans and sections, and photographs
- 9 2 All excavated areas should be accurately mapped with respect to nearby buildings and roads
- At least six copies of the report should be produced and submitted to the commissioning body, North Yorkshire County Council Heritage Unit, the museum accepting the archive, English Heritage Yorkshire Region and the National Monuments Record, Swindon
- 10 Further Information
- 10 1 Further information or clarification of any aspects of this Archaeological brief may be obtained from

Gail Falkingham, MIFA

Archaeologist

North Yorkshire County Council

Heritage Unit County Hall

Northallerton

North Yorkshire DL78AH

Tel 01609 532839 Fax. 01609 779838

Further information or clarification of any aspects of the proposed construction works may be obtained from

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Northallerton

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Tel 01609 785842 Fax: 01609 785801

10 3 References

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