

**THE CLWYD-POWYS ARCHAEOLOGICAL TRUST**

**Extension to the Cae Rhys sand and  
gravel quarry, Pen-y-cefn, near  
Caerwys, Denbighshire**

**ARCHAEOLOGICAL EXCAVATION**

**CPAT Report No 563**

**CPAT Report No 563**

**Extension to the Cae Rhys sand and  
gravel quarry, Pen-y-cefn, near  
Caerwys, Denbighshire**

**ARCHAEOLOGICAL EXCAVATION**

**R Hankinson**  
August 2003

Report for Celt Rowlands Ltd

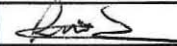
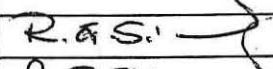
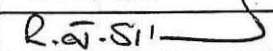
**The Clwyd-Powys Archaeological Trust**  
7a Church Street, Welshpool, Powys, SY21 7DL  
tel (01938) 553670, fax (01938) 552179  
© CPAT

**CPAT Report Record**

**Report and status**

CPAT Report Title	Extension to the Cae Rhys sand and gravel quarry, Pen-y-cefn, near Caerwys, Denbighshire: Archaeological Excavation		
CPAT Project Name	Cae Rhys II		
CPAT Project No	1110	CPAT Report No	563
Confidential (yes/no)	No	draft/final	Final

**Internal control**

	name	signature	date
prepared by	R. Hankinson		21/08/03
checked by	R.J. Silvester		21/08/03
approved by	R.J. Silvester		21/08/03

**Revisions**

no	date	made by	checked by	approved by

**Internal memo**


**The Clwyd-Powys Archaeological Trust**

7a Church Street Welshpool Powys SY21 7DL

tel (01938) 553670, fax 552179

© CPAT

## CONTENTS

- 1 INTRODUCTION
  - 2 LOCATION, TOPOGRAPHY AND GEOLOGY
  - 3 ARCHAEOLOGICAL BACKGROUND
  - 4 EXCAVATION
  - 5 CONCLUSIONS
  - 6 ACKNOWLEDGEMENTS
  - 7 REFERENCES
- APPENDIX 1: SPECIFICATION
- APPENDIX 2: PROJECT ARCHIVE
- FIGURES
- PLATES

## 1 INTRODUCTION

- 1.1 In May 2003 the Contracts Section of the Clwyd-Powys Archaeological Trust (CPAT) was invited by Celt Rowlands & Co to prepare a specification and quotation for undertaking an archaeological excavation on land adjacent to the existing Cae Rhys sand and gravel quarry at Pen-y-cefn, near Caerwys, Denbighshire. The excavation was required as a condition of the granting of planning permission (Application No 47/2002/0495/MA) for an extension to the quarry by Denbighshire County Council, the local planning authority.
- 1.2 The area of the extension had been the subject of an archaeological evaluation carried out by CPAT in July 2002, which had revealed the presence of in-situ remains of a Roman road (Hankinson, 2002). It was subsequently determined that further work was needed to investigate the nature of the road and a brief was therefore prepared by Mrs F Gale, Denbighshire County Archaeologist, acting as the archaeological curator for the region.
- 1.3 The CPAT specification for the work was approved by Mrs Gale, and the accompanying quotation was accepted by Celt Rowlands & Co on behalf of their clients. The archaeological evaluation was carried out in August 2003 and this report compiled immediately thereafter.

## 2 LOCATION, TOPOGRAPHY AND GEOLOGY

- 2.1 The excavation was located at SJ 10777557, to the south of the main A55 dual carriageway at Pen-y-cefn, near Caerwys, Denbighshire (see Fig. 1). This lies within the area designated for the extension of the quarry to the south-east and south-west of its present site.
- 2.2 Cae Rhys quarry lies near the northern end of the Clwydian range of hills, which forms a barrier between the Vale of Clwyd to the west and the Dee Estuary to the east. The local topography consists of an undulating plateau varying in height from approximately 160m OD to 230m OD.
- 2.3 The solid geology of the area consists of undivided Dinantian limestones, generally known as Carboniferous Limestone (1994 British Geological Survey map), although these are locally overlain by glacial sands and gravels of the Pleistocene era. The soils of the immediate area consist of both fine loamy and silty soils belonging to the Denbigh 1 Association, and fine loamy soils belonging to the Brickfield 2 Association (1983 Soil Survey of England and Wales map).

## 3 ARCHAEOLOGICAL BACKGROUND

- 3.1 The quarry extension is crossed by the line of a Roman road running westwards from Deva (Chester) to Varis, a settlement not accurately located but usually considered to be in the vicinity of St Asaph. This road was termed Iter XI in the Roman route list known as the Antonine Itinerary (Davies 2002, 21) and also as RR67a in the modern Margary classification which remains the standard terminology for roads in Britain (Margary 1973). The road runs on an approximately east to west alignment, and can be detected as an extant and visible section of *agger* in the field to the east of Cae Rhys.
- 3.2 Two trenches had been excavated across the Roman road at Waen Gate, Rhualt (SJ 066748) about 4km to the west of Cae Rhys in 1989 (Brassil, 1989), prior to road improvements. In one trench, the road survived as a low causeway, preserving the remains of a 6m-wide *agger*, with flanking ditches, each 0.7m wide and 0.4m deep. This section of the road surface consisted of a mix of cobbled and gravel-clay metalling, 0.15m thick. In the second trench, only a 1.5m width of road surface and the flanking ditch on its north side appeared to have survived later disturbance.

- 3.3 The evaluation carried out by CPAT in 2002 (Hankinson 2002) revealed that in-situ remains of the Roman road were present in the area of the extension. The road was best preserved in the western of the two trenches (Trench A), where it appeared to have a metallated gravel surface with shallow flanking ditches, giving an overall width of approximately 7m.

#### 4 EXCAVATION (Fig 2)

- 4.1 The brief for the excavation specified that a single trench be excavated across the line of the Roman road that had been identified during the evaluation, prior to its destruction by sand and gravel extraction. The aims of the excavation were to identify the method of construction of the road and its possible dating by the removal of a section of the road down to the undisturbed natural subsoil. For the purposes of clarity in the accompanying plan (Fig. 1), which also depicts the two previous evaluation trenches (A and B) in the area of the extension, this trench has been termed Trench C.

- 4.2 Quarry working considerations led to the removal of much of the topsoil and underlying ploughsoil separately over the length of the road in the quarry area. Accordingly, between 0.3m and 0.5m of this material was removed mechanically under archaeological supervision, prior to the commencement of the excavation. Following discussions with the archaeological curator, the excavation trench was then placed in the location which appeared to provide the most potential for structural survival. The excavation was carried out stratigraphically and a drawn, written and photographic record was maintained throughout (see Appendix 1).

##### **Trench C** (10.5m x 1.6m; Fig. 2)

- 4.3 The excavation trench was located between the two evaluation trenches (A and B) in the approximate centre of the north-west arm of the quarry extension. After the mechanical removal of the majority of the topsoil and ploughsoil, subsequent excavation was carried out entirely by hand. To facilitate the comparison of any layers of road metalling, a 0.1m to 0.2m-wide section of each identified surface was left in-situ within the trench. In all six road surfaces were identified. In the following description, numbers in brackets are layer numbers which also appear on Fig 2.
- 4.4 The natural subsoil within the trench consisted of loose orange silt (8), containing many angular stones, overlying which, but only beneath the line of the later road, was a lens of pale grey stony silt (24), 4.9m wide and up to 0.06m thick, probably a leached subsoil horizon. Above this, and overlying the subsoil beyond the limits of the later road, was a loose rich brown silt (23), up to 0.1m thick, which is likely to represent a buried soil deposit, and it in turn was covered by a mixed dark-grey, brownish and orange silt (13), 0.05m thick, which extended to a width of 7.85m and appeared to represent disturbed or trampled material, probably combined with vegetation clearance. A small fragment of mortar was recovered from the upper surface of layer 23, which is likely to have been deposited during this phase.
- 4.5 The earliest road surface was composed of small stones compacted into a pale, pinkish-grey silt (22), 0.1m thick. This road was approximately 5.75m in width and the material in the base of its makeup included some red boulder clay which is comparable with the natural subsoil where the Roman road was excavated in 1989 at Waen Gate, Rhualt (see para 3.2).
- 4.6 The succeeding road surface consisted of small stones compacted into a matrix of pale grey clay silt (18), up to 0.1m in thickness. The road represented by layer 18 was approximately 5.2m wide, and its base was represented by gritty orange silt which sealed the earliest road surface (22).
- 4.7 Above this was a lens of pale grey clay silt (17), 0.05m thick, and then a third surface comprising small rounded stones compacted into a pale grey, gritty clay (14) that created a layer 0.06m in thickness and approximately 5.45m wide.

- 4.8 The overlying road surface was composed of compacted pale grey stony silt (15), 0.04m thick. It represented a road approximately 5.2m wide and contained three possible wheel-ruts (19, 20 and 21), running east-west in its upper surface. The wheel-ruts averaged 0.1m wide by 0.02m deep, and some leaching resulting from water accumulation in them was recognised in the layers beneath. This layer was sealed beneath a lens of gritty orange sand (11), 0.03m thick.
- 4.9 The succeeding road surface was represented by a markedly cambered layer of stones set in variegated orange and grey-brown silt (12), up to 0.15m thick. It was evident that this layer represented an undisturbed road surface, approximately 4.5m in overall width, which had been built up to prevent the accumulation of surface water. On its south side was a shallow ditch (16), 0.9m wide and 0.17m deep, filled with a pale yellow smooth silt (6), and presumably a drainage feature. Ditch 16 was situated immediately to the north of a second ditch (9) and was clearly earlier as its fill had been partially removed when 9 was cut. Ditch 16 certainly represented a ditch flanking the south side of the road phase represented by layer 12, but it may also have functioned at an earlier date in conjunction with at least some of the earlier road surfaces. A bank of disturbed material (25), 0.1m high, on the south side of ditch 16, may represent spoil excavated from the ditch. On the north side of this phase of the road, a lens of pale yellowish-grey gritty silt (7) was identified which appeared to represent a progressive accumulation of material washed from the road surfaces.
- 4.10 The uppermost layers of the road consisted of, in the centre, a layer of loose rounded gravel (2), 0.06m thick, flanked on its north side by a contemporary layer of compact yellowish stony silt (3), 0.04m thick, and on its south side by a contemporary layer of pale yellow gritty silt (4), up to 0.08m thick. On the south side of layer 4 was a ditch or drainage channel (9), 0.8m wide and 0.25m deep, with a fill (10) of yellow-flecked light grey-brown silt. This ditch cut a bank of pale yellow silt (5) on its south side, the latter evidently of artificial origin for it post-dated the original construction phase of the road, represented by layer 13, although its precise origin and function is unclear. Ditch 9 may also have partially cut the bank of disturbed material (25), noted above.

## 5 CONCLUSIONS

- 5.1 A considerably more elaborate picture of the nature of the Roman road has emerged from the excavation than was provided by the initial evaluation trenches excavated in 2002, creating a record of the section of Roman road that will be destroyed by sand and gravel extraction. A total of six discrete road surfaces were recorded.
- 5.2 The initial phase of construction activity appears to have consisted of the clearance of vegetation and consolidation of the existing soil to provide a foundation for the first road surface (22). The material used in the first road included some boulder clay which matches the natural subsoil revealed in the 1989 excavation of the road at Waen Gate, Rhualt, approximately 4km to the west.
- 5.3 Subsequently, the original road surface was renewed on three occasions by the construction of compacted road surfaces (18, 14 and 15, respectively), producing an embanked agger. The width of the four earliest road surfaces varied from 5.2m up to 5.75m. Although the surface appearance of these layers is typical of a Roman road, it seems unlikely that any of them had associated flanking ditches, an anomaly which may be explained by the free-draining nature of the natural subsoil in the locality. The latest of these road surfaces (15) appeared to retain evidence of wheel-ruts.
- 5.4 It is possible that the thin layer of sand (11) above road surface 15 may represent a hiatus in the use of the road, as the subsequent road surface (12) is only 4.5m wide and of a completely different form, having a pronounced convex camber in contrast to the earlier, almost level, surfaces. This later road appears to have an associated ditch (16) on its south side, but there is no evidence of a corresponding ditch on the north side to compare with the arrangement recorded in Trench A of the 2002 CPAT evaluation.

- 5.5 The final road had a poor quality gravel surface (2), only 2.6m wide, which appears to have been disturbed by ploughing, and is flanked by stone and silt layers. Ditch 16 was infilled by a layer of silt prior to the construction of this final surface and a second ditch (9) was excavated on its south side.
- 5.6 It is evident from the three trenches which have been excavated in the area of the quarry extension that the surviving remains of the road at this location are very variable in their nature. Possibly, this may be partly due to the loss of more recent features caused by plough damage, but is more probably a result of the inconsistent nature of the two most recent road surfaces. No direct evidence which could confirm the dating of any of the surfaces has been obtained, but it is possible that the roads which these two later surfaces represent could conceivably demonstrate later Roman or even post-Roman use of the original Roman road.

## 6 ACKNOWLEDGEMENTS

- 6.1 The writer would like to thank the following people for their assistance during the project: Brian Williams, CPAT; Mrs F Gale, Denbighshire County Archaeologist, for her advice; and Mr L Williams for facilitating the excavation.

## 7 REFERENCES

Brassil, K, 1989, 'Waen Gate, Rhualt, St Asaph', *Archaeology in Wales*, 29, 52.

Davies, H, 2002, *Roads in Roman Britain*, Stroud: Tempus.

Hankinson, R, 2002, *Proposed extension to the Cae Rhys sand and gravel quarry, Pen-y-cefn, Caerwys, Denbighshire*, Welshpool: CPAT Report No 484.

Margary, I D, 1973, *Roman Roads in Britain*, London: John Baker.

Smith, B, & George, T N., 1961, *British Regional Geology - North Wales*. London: HMSO.

### *Cartographic sources*

1983 Soil Survey of England and Wales map (Sheet 2 - Wales) and Legend (1:250,000 scale)

1994 British Geological Survey map of Wales (Solid edition at 1:250,000 scale)



**APPENDIX 1**  
**CAE RHYS ROMAN ROAD RR67a**  
**SPECIFICATION FOR AN ARCHAEOLOGICAL EXCAVATION**  
**BY THE CLWYD-POWYS ARCHAEOLOGICAL TRUST**

## **1 Introduction**

- 1.1 The proposed development involves the extension of Cae Rhys Sand and Gravel works (Denbighshire CC Planning Application No 47/2002/0495/MA). Denbighshire Archaeology Service, acting as archaeological advisors to the local authority, have determined that an archaeological excavation should be undertaken to record the nature and construction of Roman Road RR67a prior to the extension of the quarry. Accordingly, a Brief has been prepared which details the works required.
- 1.2 The development site lies adjacent to the A55 in an area currently used as pasture. Information held by the Regional Sites and Monuments Record indicates the present of a Roman road crossing the development area. In the field to the east of the area the Roman road is visible as a slight earthwork. The Roman road is part of that which runs from Chester to Caernarfon and a previous evaluation in 2002 identified the remains of the road to the west of the quarry, surviving as a degraded metalled surface with flanking ditches.

## **2 Objectives**

- 2.1 The objectives of the excavation are:
  - 2.1.1 to reveal by means of archaeological excavation, the nature, condition, significance and, where possible, the chronology of the archaeology within the area of the proposed development in so far as these aims are possible;
  - 2.1.2 to prepare the site archive for deposition;
  - 2.1.3 to prepare an interim report outlining the results of the excavation, to be followed by a published report in *Archaeology in Wales*.

## **3 Methods**

- 3.1 The field evaluation will consist of a single trench, measuring 8 x 2m. The programme of works will be agreed with the client, and the position of the trench approved by the curator, in advance of site work commencing. Any alterations to this scheme will only be undertaken following full consultation with the curator and client.
- 3.2 The excavations will be undertaken using a machine excavator with a toothless bucket to remove modern overburden down to the level of the first recognisable archaeological horizon. Thereafter, all excavation will be conducted by hand unless otherwise agreed with the curator in advance. The trench will be completely excavated to the surface of natural deposits and all archaeological contexts identified will be adequately sampled to define their function, date and relationship to other features, in so far as these aims are possible. If appropriate, samples will be taken for possible environmental or technical evidence.
- 3.3 Contexts will be recorded on individual record forms and be drawn and photographed as appropriate. All photography will be in 35mm format black and white and colour slide. All features will be located as accurately as possible with respect to buildings and boundaries identified on modern Ordnance Survey maps and levels will be related to Ordnance Datum where possible.
- 3.4 All artefacts will be related to the context from which they were derived and will be treated in a manner appropriate to their composition.

- 3.5 Following the on-site work an illustrated and bound report will be prepared according to the principles laid out in the Curatorial Brief. This will be in A4 format and contain conventional sections on: Site location, Topography and Geology; Historic Background; Evaluation; Conclusions and Recommendations and References, together with appropriate appendices on archives and finds.
- 3.6 The site archive will be prepared to specifications laid out in Appendix 3 in the Management of Archaeological Projects (English Heritage, 1991).

#### **4 Resources and Programming**

- 4.1 The evaluation will be undertaken by a team of two skilled archaeologists under the overall supervision of Mr RJ Silvester, a senior member of CPAT's staff who is also a member of the Institute of Field Archaeologists.
- 4.2 All report preparation will be completed by or with the assistance of the same field archaeologist who conducted the evaluation.
- 4.3 It is anticipated that the evaluation will be completed within 4 days. The report will be completed within 2 weeks of the completion of on-site works. A copy of the report will be deposited with the Regional SMR and Cadw: Welsh Historic Monuments. The curator will be informed of the timetable in order to arrange for monitoring if required. CPAT would require at least two weeks written notice before commencing works.
- 4.4 Requirements relating to Health and Safety regulations will be adhered to by CPAT and its staff.
- 4.5 CPAT is covered by appropriate Public and Employer's Liability insurance.

N.W. Jones  
9th May 2003

**APPENDIX 2**  
**PROJECT ARCHIVE**

**Site archive**

25 Context record forms  
2 black and white negative films  
2 colour slide films  
1 colour print film  
Photographic catalogue  
2 A1 site drawings

**Finds**

Context 23  
1 small fragment of mortar

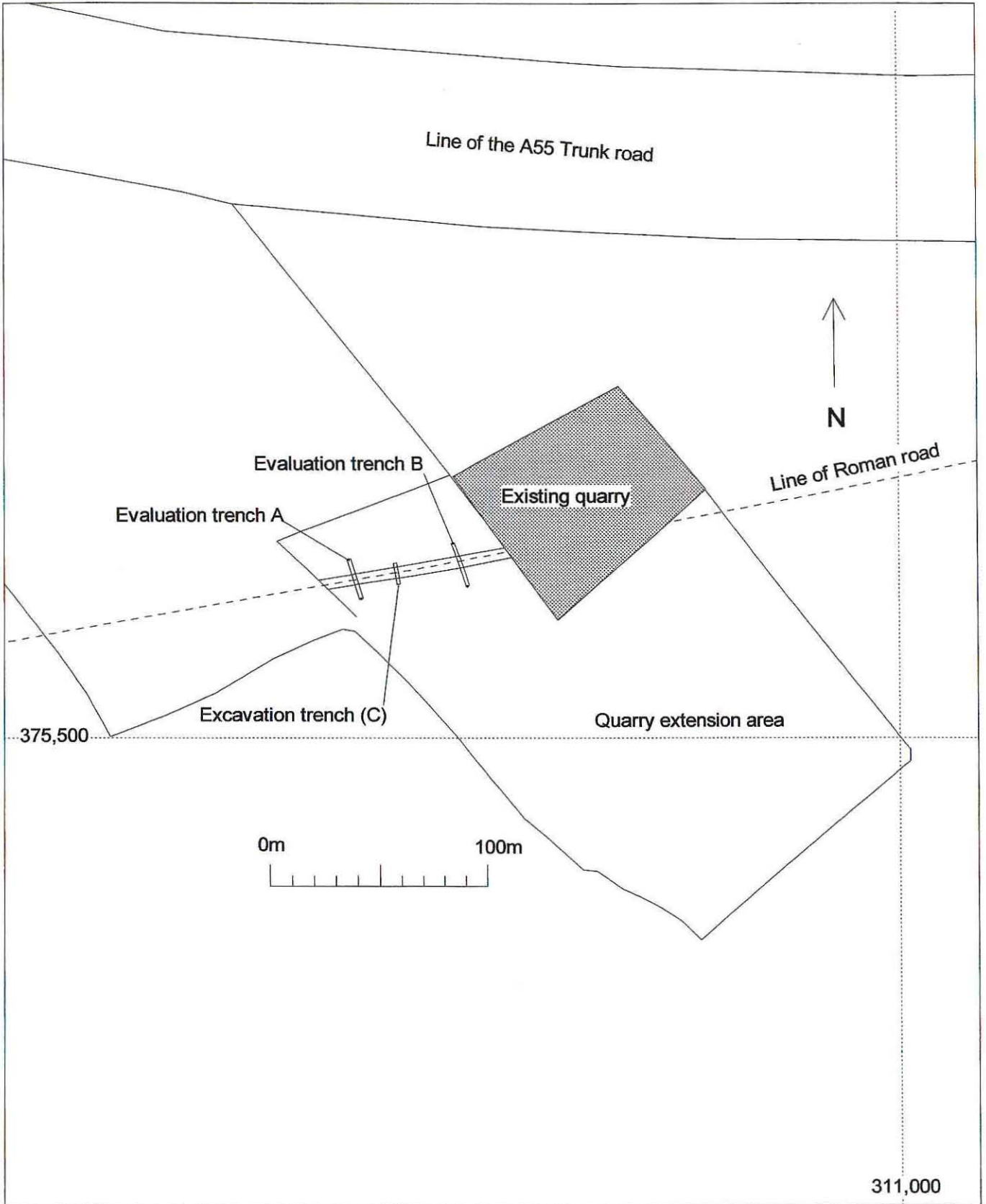


Fig. 1 Location of excavation in relation to the preceding evaluation trenches (Scale 1:2,500)



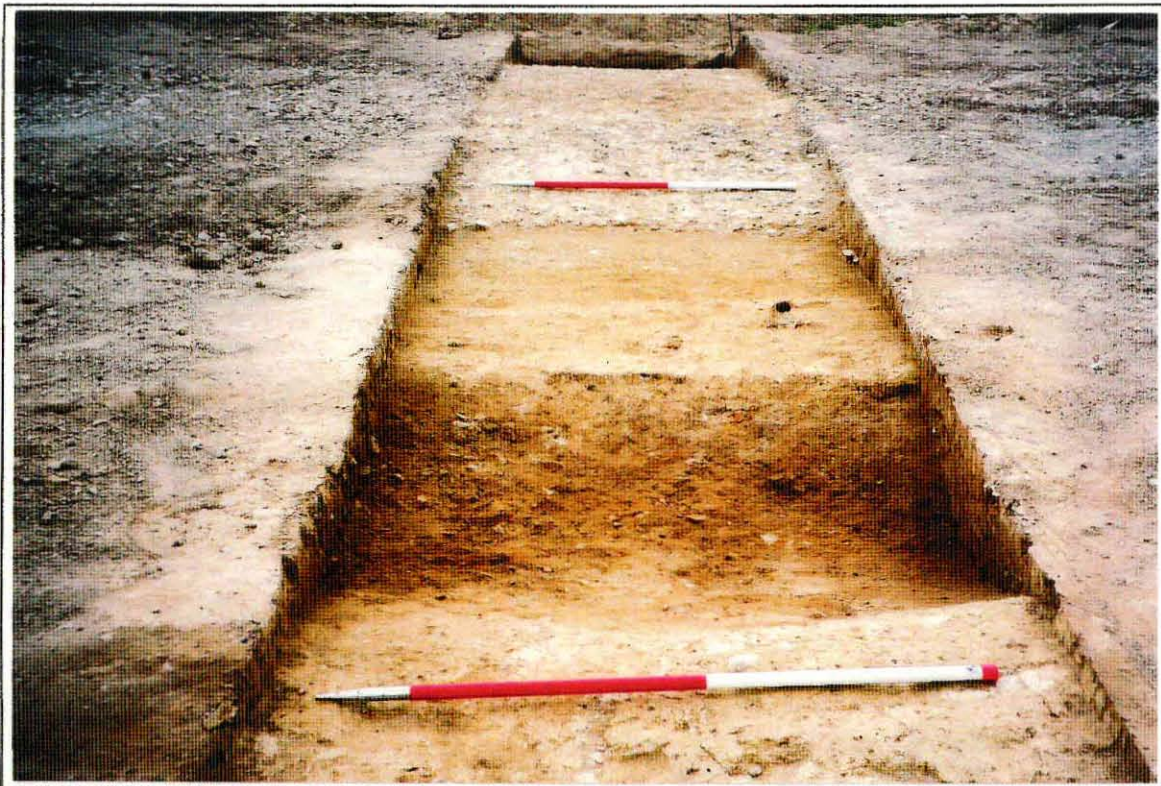


Plate 1 Upper surface of road surface (12) and fill of earlier ditch (16) after excavation of later ditch (9).  
Photo CPAT 1418.07



Plate 2 Road surface (15) showing possible wheel-ruts. Photo CPAT 1418.10

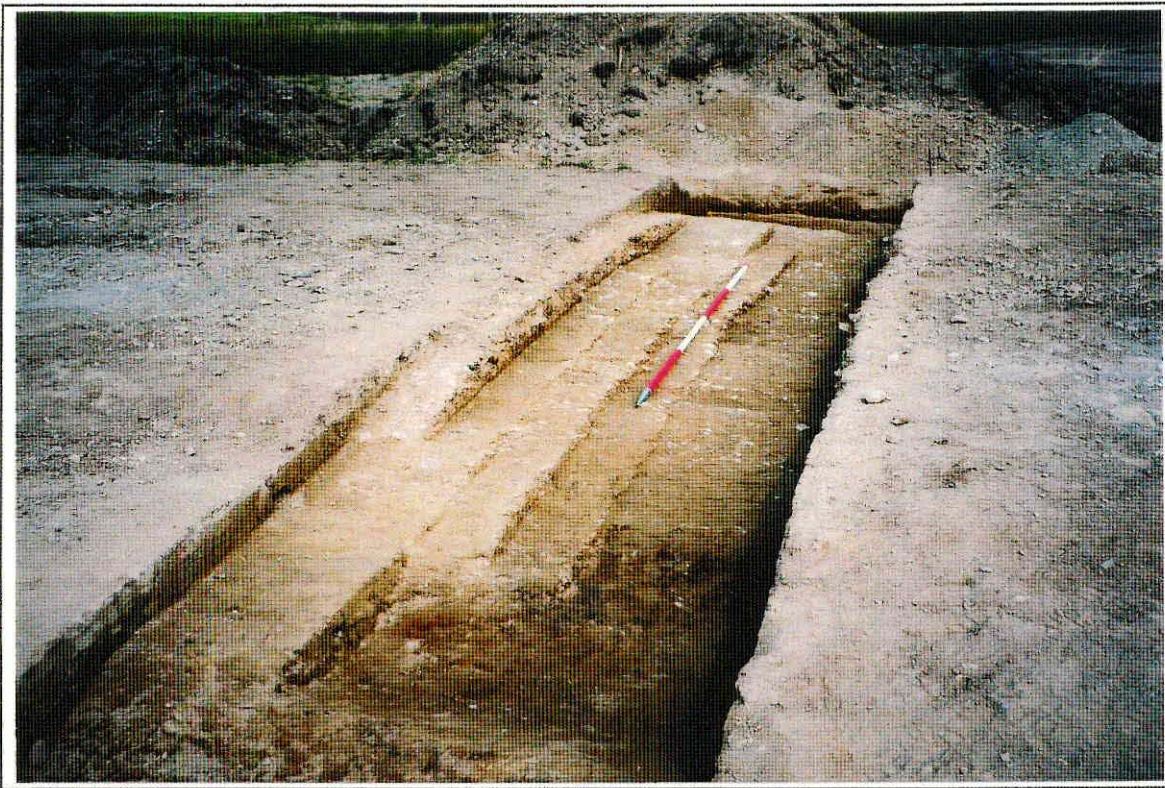


Plate 3 Earliest road surface (22) also showing intermediate surfaces and section of earlier ditch (16).  
Photo CPAT 1418.13



Plate 4 Upper surface of disturbed layer (13) denoting construction phase of road. Photo CPAT 1418.14

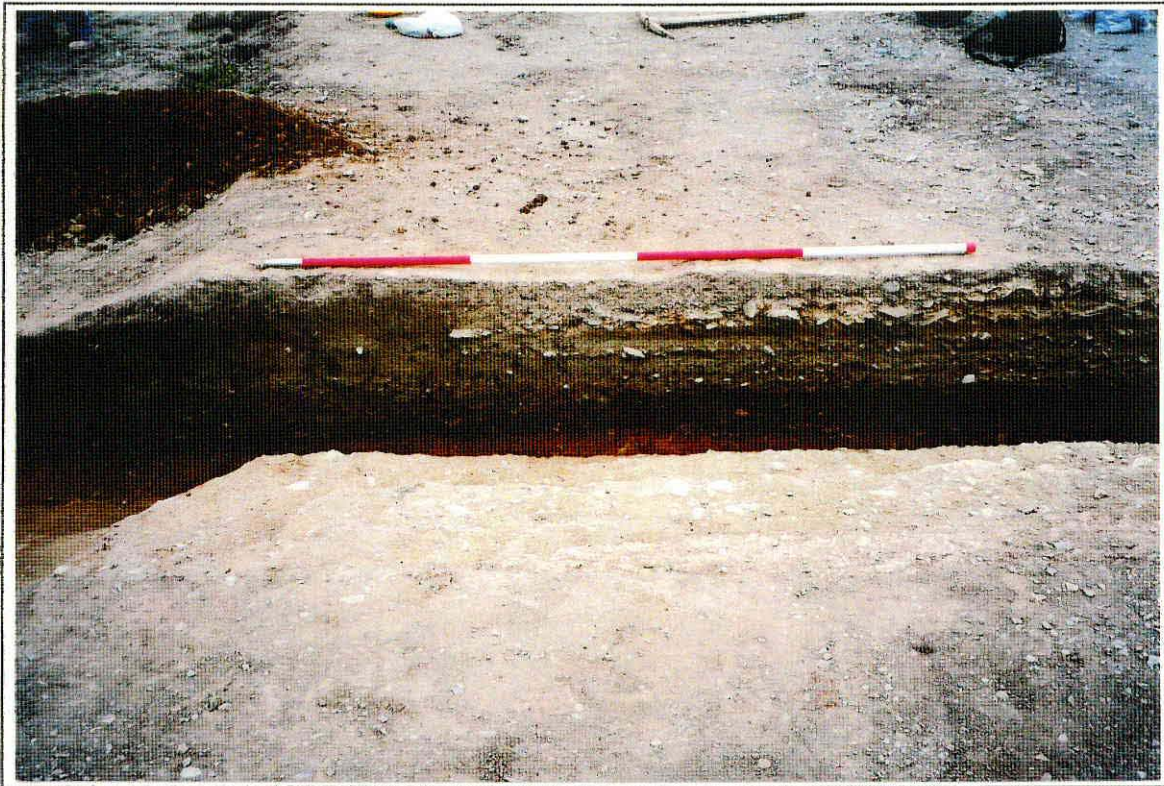


Plate 5 North part of section after excavation. Photo CPAT 1418.21



Plate 6 Central part of section after excavation. Photo CPAT 1418. 22



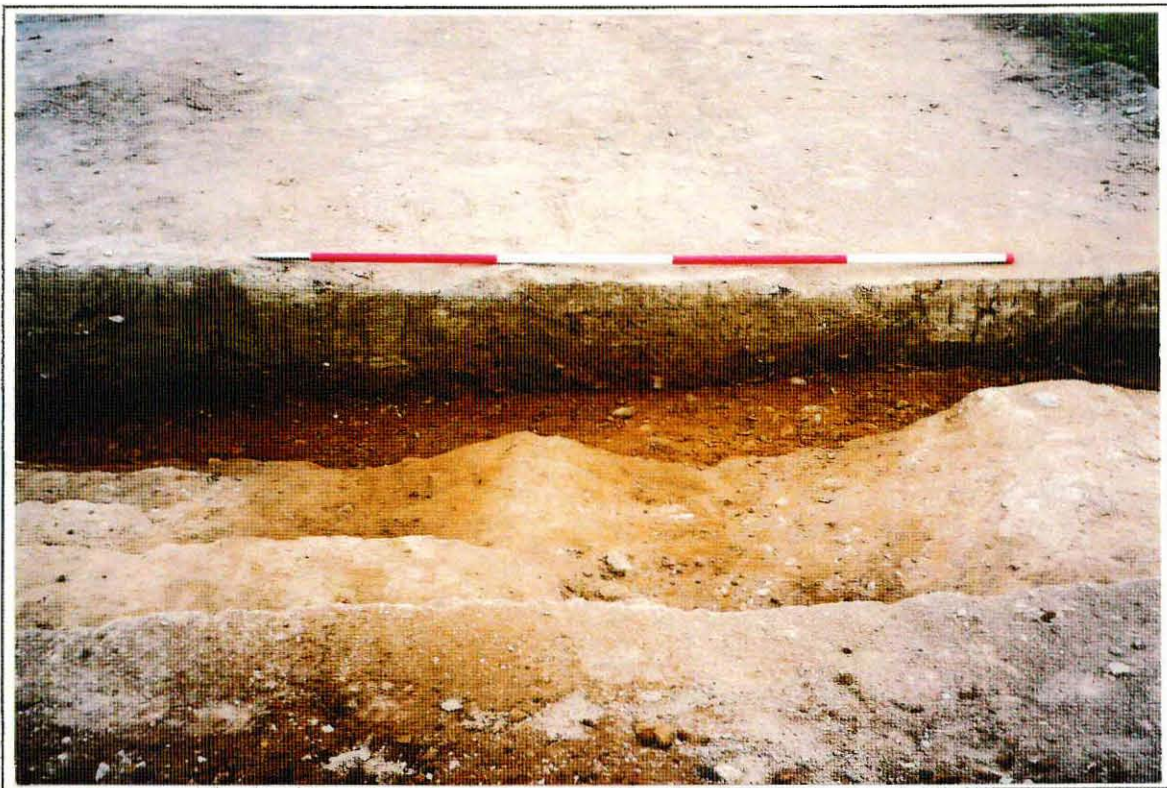


Plate 7 South part of section after excavation. Photo CPAT 1418.23