

Summary

- *Pre-Construct Archaeological Services Ltd (PCAS) was commissioned by Hughes Craven Ltd, on behalf of Ancaster Copper Hill Stone Ltd, to undertake an archaeological evaluation on land to the southwest of Copper Hill Quarry, Ancaster, in the South Kesteven District of Lincolnshire.*
- *This work was undertaken to fulfil a condition attached to planning permission (Application No. S10/2847) for the commercial extraction of limestone.*
- *The evaluation involved a programme of trial trench excavation, comprising a total of 3 trenches, each 20m by 2m and targeting possible features identified by a preceding geophysical survey.*
- *No archaeological features of any kind were positively identified in any of the three trenches. The identified possible features (geophysical anomalies) may have resulted from geological variation within the natural substrate, or from modern waste material within the plough-soil. No artefacts of archaeological significance were observed.*
- *These negative results would suggest that further investigation is unlikely to yield any more significant information.*

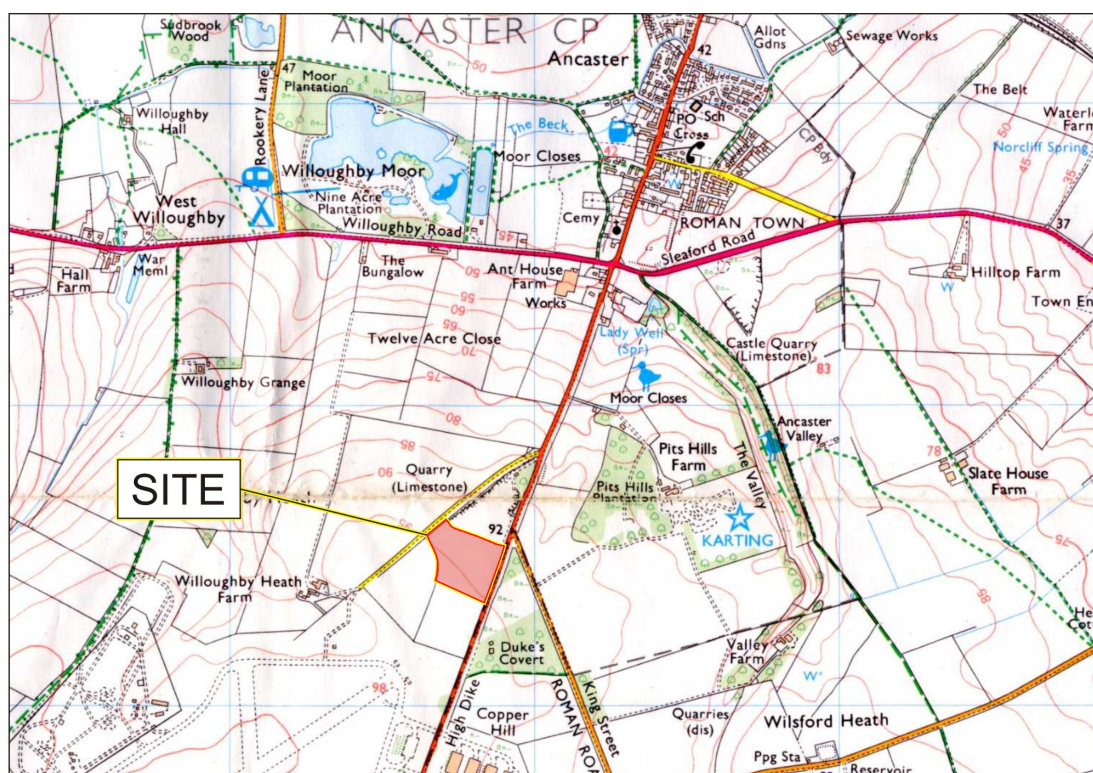


Fig. 1 Site location map. Scale 1:25 000
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1.0 Introduction

Pre-Construct Archaeological Services Ltd (PCAS) was commissioned by Hughes Craven Ltd, on behalf of Ancaster Copper Hill Stone Ltd, to undertake a programme of trial trench evaluation on land to the southwest of the Copper Hill Quarry, Ancaster, in the South Kesteven District of Lincolnshire. Site works were undertaken by the author between the 19/12/11 – 21/12/11.

This programme of archaeological work was undertaken following consultation with Dr Beryl Lott, Principal Archaeologist, Lincolnshire County Council and in accordance with an approved Specification for an Archaeological Scheme of Work (PCAS 2011a), the recommendations of *Planning Policy Statement 5, Policy HE6; Code of Conduct* (Institute for Archaeologists, 1994 as revised), *Standards and Guidance for Archaeological Evaluations* (Institute of Field Archaeologists, as revised 2008) and the Lincolnshire County Council Archaeology Handbook (as revised 2010).

2.0 Site Location and description (see Figs. 1, 2 and Photo No. 1)

The village of Ancaster is located in the South Kesteven District of Lincolnshire, c. 6.5km west of Sleaford and c. 8km north-east of Grantham. The site is c. 1km southwest of the village on the west side of the B 6403, High Dike, part of the former Roman Ermine Street, close to where it is joined by a second Roman road, now known as King Street, which approaches from the southeast.

The site comprises an irregular area of land, approximately 4 hectares in extent, adjacent to the B 6403 which defines its eastern edge, with an area of scrub/woodland (Duke's Covert) beyond. The south of the site is marked by new fencing, with arable land between the site and Barkston Heath military airfield. The west boundary is defined by sparse hedging and new fencing with more arable land and the access road to Willoughby Heath Farm. To the north is the now exhausted Copper Hill Quarry, excavated to a depth of c. 60m below ground level at its southern end. The site is currently arable land, and was formerly part of the same field to the south, now separated by the new fencing. It is centred on NGR SK 9778 4247.

The site lies on the limestone ridge known generally as the Lincoln Cliff, to the south of the point where it is cut through by the Ancaster Gap, a winding valley between Ancaster and Sleaford to the east. The village itself is located at the foot of the Gap on the northern side. This site is located on the broad, generally flat plateau of Willoughby Heath at c. 95m OD. The site itself has a very slight north-south ridge running along its centre, with a general slight dip down along the northern edge. The ploughsoil within its centre is much more stony than it is along its eastern and western edges.

The British Geological Survey records no drift deposits on the site, although discrete deposits of glacial sand and gravel are recorded directly to the southwest. The solid geology within this area is recorded as a Lincolnshire Limestone (undivided) (BGS 1972).

3.0 Planning background

Planning permission to extend the Copper Hill quarry into a plot of land to the south was granted in December 2010 (planning application no. S10/2847). subject to a Screening Opinion and a Scoping Opinion (EIA 40/10, Lincolnshire County Council), which noted the presence of environmental and archaeological factors giving rise to possible constraints.

In accordance with the Scoping Opinion, a desk-based assessment of the site was undertaken in order to identify and assess any archaeological constraints that might inform a planning application for limestone extraction (PCAS 2011b).

This evaluation, based largely upon the findings of the desk-based assessment/geophysical survey, is intended to confirm and clarify the archaeological potential of the site.

4.0 Archaeological and historical background

A desk-based assessment has already been undertaken (PCAS 2011b), therefore only the salient points are provided here.

The Ancaster Gap is considered to have been a prime site for prehistoric settlement, combining a strategic position at the junction of several overland trade routes with the advantages of readily available water and light, well-drained, soils that were easy to cultivate. Two groups of cropmarks to the north-west of the present Copper Hill Quarry have been provisionally identified from aerial photography as prehistoric enclosures with a trackway and a boundary, but no cropmarks, or any other prehistoric remains, have been recorded within 300m of the site (PCAS 2011b).

It has been suggested that the prehistoric precursor of Ermine Street was utilised by the first northward march of the Roman Ninth Legion, before being surveyed and laid out as a paved road once the occupation was firmly established (Whitwell 1992 p. 12). Roman Ermine Street was the major highway from London to the regional capital at Lincoln; it was originally constructed in the earliest years of the Roman occupation, and was later extended northwards to York as the frontier was pushed back. In the neighbourhood of Grantham and Ancaster, the line of Ermine Street is known as the High Dyke, and is followed by the modern B 6403. A number of outlying Roman remains have been recorded around Ancaster, particularly in the vicinity of Ermine Street, but none on or in the immediate neighbourhood of the site (PCAS 2011b).

The place-name 'Ancaster' is first documented as *de Anacastro* in the mid-12th century: it derives from the Old English personal name *Ana* and the Old English *cæster*, 'Roman fort or military site', giving 'Ana's land in the Roman fort' (Cameron 1998 p.3). However, there is no definite evidence for a settlement on Ana's land during the Anglo-Saxon period or the early Middle Ages, and there is no reference to any settlement named 'Ancaster' in the Domesday Survey of AD 1086 (PCAS 2011b).

The high ground in the neighbourhood of the Copper Hill Quarry appears to have been unprofitable for cultivation throughout the Middle Ages, and to have been used for upland pasture and occasional small-scale stone quarrying (commemorated in the place-names 'Pits Hills', directly to the east of Copper Hill Quarry, and 'Castle Pits' to the north-east). The area was enclosed in 1774, and the enclosure award set aside a parcel of land roughly corresponding to the northern half of the present Copper Hill Quarry for the quarrying of stone to construct and repair the new roads laid out in the award (*ibid.*).

The Enclosure Commissioners' stone pit appears never to have been in commercial use as a quarry, and historic Ordnance Survey mapping indicates that all work here had ceased before the end of the 19th century. The quarry was reopened in the late 20th century and extended to the south (*ibid.*).

A geophysical survey, carried out as part of the preceding archaeological assessment of the quarry area, identified a possible linear zone of pit-like anomalies along the eastern edge of the site, which may have represented traces of a backfilled quarry, possibly associated with the construction of either Roman Ermine Street or the later High Dyke (*ibid.*). It is the eastern side of the site, nearest to the Roman road, that formed the focus for this evaluation.

5.0 Aims and objectives

The purpose of evaluation is to gather sufficient information to establish the presence/absence, extent, depth, condition, character, quality and date of any archaeological deposits within a proposed development site. Such information is used to assist the Local Planning Authority to reconcile, in this instance, mineral extraction within their own policy framework of safeguarding archaeological remains when at risk.

Specifically, potential archaeological features identified by the preceding geophysical survey were investigated.

6.0 Methodology

The adopted methodology followed the scheme set out within an approved Specification (PCAS 2011a). Three trenches, each 20m x 2m, were laid out along the eastern boundary of the site, targeted on geophysical anomalies identified by earlier survey. The trenches were opened using a 360° mechanical excavator fitted with a smooth blade. All machining was carried out under supervision until the natural substrate was encountered.

The trenches were subsequently hand cleaned, and all features and deposits were investigated and recorded. Context sheets were completed for each deposit, and multi-context drawings were produced in both plan and section. Plans were recorded at 1:100 and sections 1:20. Colour slide and digital photographs were taken to complement these accounts.

7.0 Results (see Figs. 2-4 and Photo Nos. 2-7)

A uniform stratigraphic sequence was observed within the three trenches: a moderately deep ploughsoil was present and was consistently deeper towards the east (down slope). No subsoil was present within any of the trenches and, where the natural substrate consisted of fine/loose sediments, evidence of modern plough scarring was apparent.

The top of the natural substrate was notably variable and consisted of solid, but highly fractured and weathered, limestone to the west (up slope) with a mix of fractured limestone and sand to the east. In all three trenches red sandy silts with varying amounts of limestone fragments sealed the more solid geology along the eastern sides of the trenches. This material clearly in-filled around outcropping stone and is considered to be of glacial origins rather than a post-glacial accumulated subsoil (see Photo No. 2).

Trench 1 (Fig. 3, Photo Nos. 2 and 3)

This trench was located close to the northeast corner of the site and was targeted on a pair of parallel linear anomalies identified by geophysical survey. The survey

interpreted these features as the product of cultivation or vehicle tracks, and it was this interpretation that was to be tested.

The natural substrate, which consisted of a mix of outcropping, highly fractured limestone and mottled sands and silts, (102), was encountered c. 0.4m below the existing ground level at the eastern end of the trench, and only c. 0.3m at the western end. This was sealed by a slightly sandy silt-loam ploughsoil (101). No archaeological features or surface finds were identified.

The interpretation that the linear anomalies were the product of probably dumped material within the ploughsoil, dragged out during ploughing, would appear to be valid.

Trench 2 (Fig. 3, Photo Nos. 4 and 5)

This trench was located along the eastern side of the site, and it targeted a group of possibly pit-like anomalies identified by geophysical survey.

The natural substrate (203), similar to that observed in Trench 1, was sealed by a red sandy silt deposit with well-sorted limestone fragments and rare medium-sized pebbles (202), at the eastern end of the trench. Two hand-dug sondages excavated into this deposit showed it to be c. 0.3m deep and thinning out towards the west, following the natural rise in the underlying stone.

No convincing cut was observed in the natural substrate to indicate the deliberate excavation of material, and nothing was observed within deposit (202) which suggested it was anything other than an entirely natural accumulation. The diverse nature of the natural substrate at this location is noted in the geophysical survey report.

Both the natural substrate (to the west) and deposit (202) were sealed by up to 0.48m of ploughsoil at the east end of the trench (down slope). No convincing archaeological features were identified.

Potentially it is deposit (202), and similar concentrated pockets of the same material, which have been identified as possible pits by the geophysical survey, particularly as the natural slope of the ground is down to the east and a concentration of this material may be expected within the lower lying part of the site. However, it should also be noted that the same red silts were observed in Trench 1 (see also Trench 3 below) in an area where the geophysical survey did not identify potential pits: as such, the anomalies identified by geophysical survey may rather have been the product of further waste material within the soil alongside the road.

Trench 3 (Fig. 4, Photo Nos. 6 and 7)

This trench was located in the southeast corner of the site, targeted on a possible linear feature identified by geophysical survey.

The mixed sand and fractured stone natural substrate (303) was encountered c. 0.4m below existing ground level. This was sealed by c. 0.5m of red sandy silt with well sorted limestone fragments and rare medium sized pebbles (302) (identical to deposit (202) in Trench 2). A sondage excavated into this deposit showed it to be in-filling an apparently natural hollow.

Both the natural substrate and deposit (302) were sealed by up to 0.38m of topsoil (301), which was deepest at the eastern end of the trench (down slope). No archaeological features or surface finds were identified and nothing corresponding to the identified linear feature was observed at this location.

8.0 Discussion and conclusion

No archaeological features were identified during the evaluation and no surface finds were recovered. Nothing corresponding to the potential linear anomalies identified by geophysical survey at the location of Trenches 1 and 3 was observed and they may therefore have been the product of material introduced into the soil and dragged out by ploughing.

Similarly the existence of possible pits (interpreted geophysical survey anomalies) remains unproven. It is notable, however, that although the silty deposit (202) may appear to correspond with the general location of these features, the same material was also observed in both Trenches 1 and 3, where pit-like anomalies were not identified.

The negative results from this evaluation would suggest further investigation is unlikely to yield any more significant information.

9.0 Effectiveness of methodology

The methodology employed was entirely sufficient to allow the investigation and recording of deposits exposed within the evaluation trenches.

10.0 Bibliography

British Geological Survey 1972 *Grantham: England and Wales 1:50,000 Series sheet 127, Solid and Drift Edition*. BGS, Keyworth, Nottingham.

Cameron K. 1998 *A Dictionary of Lincolnshire Place-Names*. The English Place-Name Society, Nottingham.

Institute for Archaeologists, 2008. *Standard and Guidance for Archaeological Evaluations*. Reading: IfA

Pre-Construct Archaeological Services Ltd 2011a *Specification for a Scheme of Archaeological Evaluation Trenching: Proposed Minerals Extraction, Copper Hill Quarry, Ancaster, Lincolnshire*.

Pre-Construct Archaeological Services Ltd 2011b *Archaeological Desk-Based Assessment: Proposed Minerals Extraction, Copper Hill Quarry, Ancaster, Lincolnshire*.

Whitwell J. B. 1992 *Roman Lincolnshire: History of Lincolnshire II*. History of Lincolnshire Committee, Lincoln.

11.0 Site archive

The documentary and physical archive for this scheme is currently in the possession of Pre-Construct Archaeological Services Ltd. This will be deposited at The Collection, Lincoln within six months of completion of the full report under Accession No. 2011.456.