

**LANCASTER**  
UNIVERSITY  
**ARCHAEOLOGICAL**  
UNIT

NYCC HER	
SNY	18599
ENY	5894
CNY	10747
Parish	6078
Rec'd	

November 1997

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**A1 MOTORWAY SERVICE AREA**  
**ARKENDALE, N YORKS**  
**Archaeological assessment**  
**and geophysical evaluation**

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SNY	18599
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A1 Motorway Service Area, Arkendale  
North Yorkshire

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Desktop Assessment &  
Geophysical Survey

Report no 1997-98/ (014)/AUA 7755

Checked by Project Manager.	
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November 1997

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Research for the desk-top survey was conducted by Jo Bell. The geophysical survey was undertaken by GSB. Overall project management and editing of the report was undertaken by Alan Lupton.

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## SUMMARY

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The Lancaster University Archaeological Unit undertook a desk-top assessment and geophysical survey of land on both sides of the A1 motorway at Arkendale, North Yorkshire (SE 399 619) in late October and November 1997 at the request of Clive Brook Associates, who acted on behalf of J J Harrison (Properties) Ltd.

Earlier archaeological fieldwork in the vicinity of the study area had suggested that archaeological remains, particularly of the prehistoric period, might survive, and a brief was accordingly produced by the County Archaeologist for North Yorkshire, specifying that desk-based and geophysical survey should be undertaken in advance of the site's development as a motorway service area.

The desk-top survey included a search and appraisal of relevant archaeological, documentary and published sources. Aerial photographs indicated that there may have been at least one prehistoric enclosure within the study area, but the site has unfortunately been destroyed by previous works to broaden the A1 motorway. Other than the general movement of a prehistoric population over the area, suggested by the presence of small quantities of worked and unworked flint, few traces of past archaeological activity have been noted.

Similarly, activity in the study area is poorly documented for all historic periods prior to the eighteenth century, although faint traces of rig-and-furrow field patterning suggests that it was farmed in the Middle Ages. The buildings of Hollins Farm are thought to date from the eighteenth century, and maps from this date show the layout of the area remaining largely static.

A geophysical survey was undertaken over 3.2ha of the study area. The survey did not produce any significant clustering of magnetic anomalies that may relate to sub-surface archaeological features.

Although the possibility of discovering archaeological remains on site cannot be ruled out, it is thought unlikely, given the results of the desk-top assessment and the geophysical survey that significant archaeological deposits will be threatened by this development.

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## 1. INTRODUCTION

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### 1.1 CIRCUMSTANCES OF PROJECT

- 1.1.1 The Lancaster University Archaeological Unit (LUAU) was commissioned by Mr Clive Brook of Clive Brook Associates, acting on behalf of J.J Harrison (Properties) Ltd, to conduct a desk-top assessment and geophysical survey of the proposed site for a motorway service area on the A1 motorway near Arkendale, North Yorkshire (Fig 1). The proposed site occupies land around the site of Hollins Farm, on both sides of the motorway, and lies approximately 5km south of the town of Boroughbridge and about 1km to the north-east of the village of Arkendale.
- 1.1.2 The assessment/survey was undertaken to collate all available evidence relating to archaeological and historical activity on the site, and to assess the likelihood of survival of prehistoric or other archaeological remains, particularly in view of the results of earlier fieldwork in the area done during previous works on the A1.
- 1.1.3 This report was compiled on 3rd-4th November 1997. It details the results of the desk-top assessment and the geophysical survey, and presents recommendations for further archaeological work on the site.

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## 2. DESK-BASED SURVEY

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### 2.1 METHODOLOGY

- 2.1.1 A desk-based study of the proposed development was undertaken in accordance with an LUAU project design which is included here as *Appendix 3*.
- 2.1.2 The assessment consisted of a rapid inspection and appraisal of maps, photographs, archives, historical records, archaeological reports and published sources relevant to the study area, in order to provide an informed judgement on the archaeological potential of the site.
- 2.1.3 Sources were drawn from LUAU archives, from the North Yorkshire County Records Office in Northallerton, and the libraries of the Black Gate Museum, the Literary and Philosophical Society and the University of Northumbria, all in Newcastle upon Tyne. The Sites and Monuments Record at County Hall, Northallerton was also inspected.
- 2.1.4 Particular sources consulted at the County Records Office included maps dating from the mid-nineteenth century onwards and an eighteenth century Enclosure Award. Journals and secondary publications were consulted at the Literary and Philosophical Society of Newcastle upon Tyne, the Black Gate Museum and the library of the University of Northumbria at Newcastle upon Tyne. In addition, the reports produced by M Griffiths Associates and Northern Archaeological Associates in connection with road-widening works from 1991 were consulted at the office of the County Archaeologist for North Yorkshire, where the Sites and Monuments Record and the aerial photographs for the study area were also inspected.
- 2.1.5 Examination of further documentation was limited to a rapid appraisal of relevant sources available for the assessment area. Particular sources used are listed in the bibliography.

### 2.2 FIELDWORK

- 2.2.1 A brief visit was made to inspect the site and confirm topographical and other evidence.

### 2.3 GEOLOGY AND TOPOGRAPHY

- 2.3.1 The study area straddles the A1(M) at Arkendale, North Yorkshire and lies c5km south of the market town of Boroughbridge, and c2km east of the small town Marton-cum-Grafton. The site consists of undulating farmland, incorporating the area of Hollins Farm and surrounding fields on the west side of the A1 (predominantly under pasture) and further fields on the east side, which had been recently seeded.

- 2.3.2 The local geology consists of drift deposits, including glacial sands, gravels and alluvium. The soils comprise till and glaciofluvial drift of the Bishampton 1 soil association (SSEW 1983).

## 2.4 ARCHAEOLOGICAL CONTEXT

- 2.4.1 Prehistoric and Romano-British archaeology is relatively abundant in the surrounding landscape, including the famous standing stones in the town of Boroughbridge known as The Devil's Arrows, the henge complex around Thornborough and a possible Romano-British settlement at Allerton Grange. Another Romano-British occupation in the vicinity included the settlement at Aldborough, 3-4km from the study area.

- 2.4.2 That the area was occupied during the prehistoric period is suggested by an aerial photograph taken in 1976 (see *Appendix 2*) which shows that at least one subcircular prehistoric enclosure survived in the northern part of the study area until it was destroyed by the widening of the A1 in recent years (N Campling, pers comm). Aerial photographs give no indication of further prehistoric features within the study area, and geophysical survey has likewise failed to locate any such features (see below *section 3*).

- 2.4.3 Fragments of worked flint recovered during previous archaeological fieldwork suggest that traces of prehistoric activity may survive (Griffiths and Associates 1992, 38-39), particularly in the south-western part of the study area (see Fig 2). Flint is not indigenous to the area, and its presence therefore suggests human intervention. The motorway corridor is 'notably lacking in positive evidence of prehistoric occupation and exploitation' (Griffiths and Associates 1992, p3), and so these fragments are valuable evidence for prehistoric activity within the study area.

- 2.4.4 A fragment of Romano-British pottery has been recovered from the study area at SE 398 616 (SMR 6679), but no typological information is available, and the sherd may have been carried in to the area by manuring.

- 2.4.5 Of the early historic to medieval period, little archaeological evidence survives. Possible Viking settlement in the area, suggested by the name 'Arkendale', is not supported here by any archaeological evidence. Aerial photographs are thought to show traces of rig and furrow ploughing patterns (Fig 3) suggesting medieval cultivation of the area, and therefore a possible medieval predecessor to the present Hollins Farm. However, this ploughing method was not used solely in the Middle Ages, and in places survived to the eighteenth century.

## 2.5 HISTORICAL CONTEXT

- 2.5.1 Situated within the pre-1974 West Riding of Yorkshire and presently in North Yorkshire, the study area lies on either side of the present A1, which follows the line of a road dating to at least 1774 and possibly much earlier. The area is situated in a part of the county which has apparently never been intensively

occupied or developed. Historical information specific to the site is limited in scope, and is drawn mainly from maps (see Figs 4-6).

- 2.5.2 The post-Roman and early medieval period have left no record directly relevant to the study area, though the place name Arkendale itself suggests Viking settlement, as at Arkengarthdale, further north in Yorkshire (Tyson 1995, 8). The Middle Ages saw an expansion of land cultivation in the region as population grew, and rig-and-furrow field patterns suggest that the study area was under cultivation at that time, but this is not certain.
- 2.5.3 All historic periods until the eighteenth century are poorly documented for the study area, but an Enclosure Award of 1774 is available for Arkendale, which includes the study area. No documentary evidence is available of pre-enclosure field patterns, but it is likely that there was considerable reorganisation at this date, with common land and strip fields being redistributed and enclosed under the ownership of private landholders. The Award includes field- and place-names which cannot be precisely located, since no plan accompanies it, but concludes by ordering that '*...the road heretofore used over the several antient Inclosures....called the Hollings shall hereafter be discontinued and disused.*' The Hollings, believed to be the site later occupied by Hollins Farm, is mentioned elsewhere in the document as one of two '*antient Inclosures*', suggesting a history of enclosure, and possibly cultivation, prior to 1774. The Hollins Farm buildings are thought to date to the eighteenth century, and may belong to a new farm set up after enclosure, or a rebuild of an earlier farm on the same site. Other pieces of land mentioned in the Award include '*A wood,...[possibly the wood now known as Barnkiln Wood]...Windmill Hill, Riffa[?] Flat...Holgate Field...West Field...A large pond of water in Arkendale...called the Marr...Whitcroft's...the dales...Windmillhill Field...the Chapel Door in Arkendale...*' but it is not known how many of these relate to the assessment area (CRO, MIC 600).
- 2.5.4 Following the 1774 Enclosure Award, the study area is known from nineteenth and twentieth century maps detailed in *Appendix 1*, which show the area remaining in use as a farm or private house amongst fields. The mid and late nineteenth centuries saw some growth in neighbouring towns and settlements such as Ripon, and the nearby market town of Boroughbridge, but a continuation of agriculture and relative stasis in rural areas nearby including the study area, as shown in these maps.
- 2.5.5 A road referred to in the Enclosure Award of 1774 may be visible as a linear feature running north-south to the immediate east of Hollins Farm. Such a route is mentioned in the document as '*the road heretofore used over the several antient Inclosures....called the Hollings*'.
- 2.5.6 Present day field boundaries partly preserve those visible on maps of the mid-nineteenth century onwards, which may in turn preserve post-Enclosure boundaries. An absence of later development means that present field boundaries may preserve parts of much older enclosure boundaries.

2.5.7 Documentary evidence therefore indicates that the site has never been heavily populated or built upon (with the exception of Hollins Farm and another building to its west), and that field boundaries within the study area have remained relatively unchanged since the first available maps.

## 2.6 CONCLUSIONS

2.6.1 A prehistoric enclosure in the extreme north of the study area is believed to have been destroyed during previous road works. Worked and unworked flint fragments recovered from the south central area of the study area are indicative of human activity in the prehistoric period, and led to recommendations in a previous report (Griffiths and Associates 1992) that test pits would be warranted.

2.6.2 The farm and its field system are believed to date largely from the eighteenth century, and may preserve details of earlier agricultural patterns on the site. These are not felt to merit further archaeological exploration.

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### 3. GEOPHYSICAL SURVEY

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#### 3.1 AIMS OF SURVEY

3.1.1 Sample blocks of gradiometry were undertaken over areas of proposed development within the application area in an attempt to locate any anomalies of possible archaeological interest and to determine their nature and extent.

#### 3.2 SURVEY AREA

3.2.1 Gradiometer survey was carried out at six locations (A-F) and totalled 3.2ha. The survey blocks were positioned to cover approximately the location of proposed buildings within the development area, as requested by N Campling (North Yorkshire County Archaeologist).

3.2.2 The location of the detailed survey areas is shown in Figure 7, at a scale of 1:2500.

3.2.3 The survey grid was set out by GSB Prospection and tied-in to existing field boundaries.

3.2.4 The survey was under the direction of Dr S M Ovenden-Wilson and was carried out on the 27-29th October 1997.

#### 3.3 DISPLAY

3.3.1 Figures 8 and 9 show grey scale images of the results from the western and eastern half of the site, respectively, in their relative locations at a scale of 1:1250. Figures 10 and 11 are accompanying summary interpretation diagrams at the same scale.

3.3.2 The data from each survey area are displayed as X-Y traces and dot density plots at a scale of 1:500. Digitised interpretation diagrams for each survey block are also provided at the same scale. For ease of display the data from Area F has been subdivided as indicated on the location diagram.

#### 3.4 GENERAL CONSIDERATIONS - COMPLICATING FACTORS

3.4.1 The conditions for survey were generally good; the fields were either under grass or had a short crop cover. One of the fields did have a crop which prevented Area C being extended further to the south. Fortunately no anomalies appear to extend southwards into this area.

3.4.2 The data from each survey area contain numerous small-scale responses produced by ferrous objects, likely to be of modern origin. While the most prominent of

these have been noted on the interpretation diagrams, they are not referred to in the text unless considered relevant.

### **3.5 RESULTS OF GRADIOMETER SURVEY**

- 3.5.1 **Area A (Figures 8, 10 and A.1):** the data from this survey area are generally quiet although a weak north-west - south-east trend is apparent. This corresponds to slight earthworks visible on the surface suggesting earlier cultivation of this pasture field.
- 3.5.2 A few weak pit-type responses have been noted but an archaeological interpretation for these is extremely tentative.
- 3.5.3 **Area B (Figures 8, 10, B.1 - B.2):** a strong linear magnetic response is apparent in the north of the survey area and is due to a buried pipe. The band of magnetic disturbance along the southern limit of the survey area is caused by a metal fence within the adjacent hedge.
- 3.5.4 No anomalies of possible archaeological interest have been located within this area.
- 3.5.5 **Area C (Figures 8, 10 and C.1):** the data are dominated by bands of magnetic disturbance along the northern and southern edges of the survey block and are due to electric fences marking the perimeter of the field.
- 3.5.6 A ditch-type anomaly has been located in the western half of the survey area. While an archaeological origin cannot be ruled out the lack of any associated responses makes an archaeological interpretation difficult.
- 3.5.7 **Area D (Figures 9, 11 and D.1):** the data from this survey block are dominated by very strong magnetic responses throughout the majority of the area. This is due to modern material, some of which is evident on the surface. These strong anomalies will have completely masked any weaker responses from archaeological features, if present.
- 3.5.8 **Area E (Figures 9, 11, E1 - E.2):** the data from this block shows the most clearly defined anomalies. These include two relatively clearly defined ditch-type anomalies. While an archaeological origin for these cannot be dismissed such an interpretation is cautious given the limited extent of the responses. However, these responses lie on an area of higher ground which would perhaps support an archaeological origin. Although it is possible that plough damage may have occurred, one would have expected more geophysical evidence if these anomalies reflect a 'site'.
- 3.5.9 The broad linear response in the north of the survey area coincides with a hollow and is most likely to represent localised soil variations.
- 3.5.10 **Area F (Figures 9, 11, F1.1 - F2.2):** isolated pit-type responses have been noted throughout the survey area. The lack of any associated ditches and the dispersed

nature of the responses suggest that an archaeological origin is unlikely. Given the number of ferrous responses it is possible that some of the pit-type responses are due to more deeply buried ferrous material, or possibly localised pedological variations.

### 3.6 CONCLUSIONS

- 3.6.1 The data collected from the west of the A1 was extremely quiet magnetically except in the vicinity of metal fences and a buried pipe where clear zones of magnetic disturbance are apparent. Linear trends which correlate with earthworks visible on the surface have been located within Area A and appear to reflect previous cultivation. Within Area C a short length of ditch-type anomaly has been located which may be of archaeological interest although such an interpretation is tentative.
- 3.6.2 The three survey blocks to the east of the A1 show varied responses. Area D is dominated by magnetic disturbance caused by modern material. Within Areas E and F isolated ditch- and pit-type responses have been noted. While some of the responses appear archaeological, the lack of a wider context makes an archaeological interpretation tentative.

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## 4. CONCLUSIONS

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### 4.2 RECOMMENDATIONS

- 4.1.1 Examination of relevant aerial photographs, documentary and cartographic evidence does not suggest the presence of significant prehistoric archaeology in the study area. The geophysical survey undertaken as part of this assessment is felt to offer sufficient evidence that significant in-cut archaeological features do not survive within the proposed development area. Further archaeological investigation of the site could be limited to a series of test pits concentrated in the south-western part of the site, designed to confirm the presence/absence and/or significant clustering of any potential scatters.
- 4.1.2 Surviving archaeology of the historic periods is not felt to warrant further archaeological intervention. No further action concerning remains of the historic period is therefore recommended in advance of development.

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