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ARCHAEOLOGICAL RESEARCH & CONSULTANCY AT THE UNIVERSITY OF SHEFFIELD

A52 RADCLIFFE ON TRENT BYPASS

ENVIRONMENTAL ASSESSMENT STAGE 2 REPORT ON ARCHAEOLOGY & BUILT HERITAGE

ARCUS 202
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VOLUME I - TEXT

THE DEPARTMENT OF TRANSPORT

East Midlands Regional Office

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1.0 INTRODUCTION

1.1 PROJECT BACKGROUND

This document comprises a Stage II Report for a Cultural Heritage Study in respect of a proposed Highways Agency scheme to improve the existing A52 trunk road between Holme House and Bingham, at Radcliffe-on-Trent. The proposed route runs to the south of Radcliffe-on-Trent from just to the west of the junction of Stragglethorpe road with the A52 to just to the east of the Saxondale roundabout on the A46. The overall length of the scheme is *c* 7km (**Illustration No. 1**).

Stage II of the study will lead directly to the preparation of a further phase of study, Stage III, which will form part of the Environmental Statement (ES) to be submitted in support of the planning application for construction of the road.

This Stage II Report has been produced in accordance with the guidelines set out by the Department of Transport in *Design Manual for Roads and Bridges (DMRB)* Volume 11 (Environmental Assessment), Section 3 Part 2, Cultural Heritage.

1.2 PROJECT AIMS

The aims of this study have been:

- To identify individual sites and areas of potential archaeological interest within the search area
- To consider the detailed design and potential impact of the route on the known and potential archaeology of the study area
- To propose possible archaeological mitigation methods along the route

1.3 THE SEARCH CORRIDOR

A search corridor for this study was drawn up in consultation with the County Archaeological Officer (CAO) for Nottinghamshire. This zone extends approximately 1km to either side of the proposed new road, between Polser Brook to the west and Newgate Farm, Bingham, to the east. To the north, the search corridor incorporates the route to be relieved (the extisting A52) and the archaeologically sensitive Saxondale area. This is a very wide search corridor, but was felt to be appropriate, given the archaeolgically sensitive nature of the area. In response to initial concerns by Dr Andrew Brown of the Inspectorate of Ancient Monuments (English Heritage) that the westerly limit appeared truncated, the search corridor was extended slightly to the west, to Basingfield Lane. The search corridor employed for this assessment therefore comprises a zone bounded by NGR SK 618 378 to the west and SK 693 370 to the east (**Illustration No. 2**).

1.4 GEOLOGY AND LAND USE

Reference is made to British Geological Survey (BGS) map sheet No 126 for Nottingham (Solid with Drift). Much of the subject area is situated on Keuper Marl (**Illustration No. 3**). The extreme north west of the site, which is to the immediate south of the broad alluvial flood plain of the Trent, straddles the transition between clays and the river gravel of the Bassingfield Terrace (Knight and Howard 1994). The river gravel is partially alluvium-enclosed.

The study area lies predominantly on clay soils of the Dunnington Heath series (Soil Survey of England and Wales, Map Sheet 3), with a small area of alluvium to the western end of the search corridor, noted above. The area is predominantly one of arable farming, involving intensive ploughing and cereal cultivation, with areas of permanent pasture. Land usage in the central part of the study area includes leisure activity (the Radcliffe on Trent Golf Course) and the grounds of the now closed Saxondale Hospital.

2.0 ARCHAEOLOGICAL REMAINS: THE PLANNING CONTEXT

Archaeological remains are a finite and non-renewable resource. The archaeological resource is afforded protection by means of Statutory Instruments (including Scheduled Ancient Monument legislation), by District and County Development Plans, and by locally and nationally adopted strategies.

2.1 PLANNING AND POLICY GUIDANCE 16 (PPG 16)

The Secretary of State's policy on the preservation and recording of archaeological remains is summarised in DoE *Planning and Policy Guidance 16: Archaeology and Planning* (PPG 16; 1990), which also gives advice on the handling of archaeological remains under the development plan and control systems.

The options open to planning authorities for dealing with archaeological remains are set out in paragraphs 15 - 31 of PPG 16, which emphasise that the desirability of preserving an ancient monument and its setting is a material consideration in determining planning applications, whether that monument is scheduled or unscheduled. Among the courses of action open to planning authorities are the following:

> **Where early discussions with local planning authorities or the developer's own reasearch indicate that important archaeological remains may exist, it is reasonable for the planning authority to request the prospective developer to arrange for an archaeological field evaluation to be carried out before any decision on the planning application is taken. .... Evaluations of this kind help to define the character and extent of the archaeological remains that exist in the area of proposed development, and thus indicate the weight that should be attached to their preservation. They also provide information**

useful for identifying potential options for minimising or avoiding damage. On this basis, an informed and reasonable planning decision can be taken.

(Paragraph 21)

Planning authorities should seek to ensure that potential conflicts are resolved and agreements with developers concluded before planning permission is granted. Where the use of planning conditions is necessary, authorities should ensure that, in accordance with DOE Circular 1/85, they are fair, reasonable and practicable.

(Paragraph 29)

In cases when planning authorities have decided that planning permission may be granted but wish to secure the provision of archaeological excavation and the subsequent recording of the remains, it is open to them to do so by the use of a negative condition ie, a condition prohibiting their carrying out of development until such time as works or other action, eg an excavation, have been carried out by a third party.

(Paragraph 30)

2.2 NOTTINGHAMSHIRE STRUCTURE PLAN POLICIES FOR THE PROTECTION OF ARCHAEOLOGICAL SITES

Policy 3/4 of the Nottinghamshire Structure Plan Review (Explanatory Memorandum April 1994) sets out the County Council's policy on the protection of Ancient Monuments and archaeological sites. It states that in considering development proposals affecting area of archaeological or historical interest, permission will not normally be given for:

a Development which would result in any disturbance to a Scheduled Ancient Monument and/or its setting; and

b Development on other sites of archaeological importance which would involve significant alteration or cause damage, or which

would have a major impact on the setting of the archaeological remains.

It is also stated that:

Where there is an overriding need for development, conditions will be imposed to ensure that adequate provision for the site to be surveyed, excavated or recorded as appropriate.

Adequate preservation by record of archaeological sites impacted by development is, therefore, a material consideration in the planning process, and is ensured by planning conditions imposed before planning consent.

There are no Scheduled Ancient Monuments within the present application area. However, the present study has identified several areas of potential archaeological importance, which would be directly impacted or detrimentally affected by the proposed new road. These areas are discussed in section **8.0**. Mitigation proposals are set out in section **9.0**.

2.3 STRUCTURE AND LOCAL PLAN POLICIES RELATING TO THE PROPOSED DEVELOPMENT

2.3.1 Nottinghamshire Structure Plan

Policy 5/10 of the Nottinghamshire Structure Plan Review (Explanatory Memorandum April 1994) states that provision will be made for the A52 Radcliffe-on-Trent Bypass, at priority level 2. Paragraph 5.61 notes that the County Council will also press for upgrading of the A52(T) between Gamston and Holme House.

2.3.2 Rushcliffe Borough Local Plan

Rushcliffe Borough Council are in the process of approving a new Borough Local Plan. The following discussion therefore makes reference

both to the current Local Plan, and to the proposed modifications, which were published for consultation in November 1994.

A new policy has been inserted after paragraph 6.12 of the current Local Plan (Modification No 81), states that:

> **The Borough Council will protect from development the routes of the following road schemes:**
>
> **D. A52 Radcliffe on Trent to Grantham Improvement.**

To this end, the only part of the A52 allocated in the new Borough Local Plan is the provision of 500 houses at Bingham, outside the present search corridor.

2.3.3 Saxondale Hospital

The grounds of Saxondale Hospital, with Home Farm and its environs, form part of Saxondale Conservation Area. This Conservation Area, designated by Rushcliffe Borough Council, is subject to statutory planning considerations. The trajectory of the proposed road parallels the southern boundary of the Saxondale Conservation Area, at a distance of approximately 100m.

A planning application to develop the hospital site for housing has been made by David Wilson Homes (North Midlands) Ltd. It is understood that the application will go forward to Committee in January 1995. Plans provided by David Wilson Homes indicate that the development would comprise the conversion of the existing Victorian hospital buildings, and the erection of 200 new houses in the grounds.

The archaeological potential of this area is discussed in section **6.2.2**, below.

3.0 METHODOLOGY

This report has been carried out in accordance with the objectives for a Stage II Archaeology Report set out in the Department of Transport's *Design Manual for Roads and Bridges*, Volume 11, Environmental Assessment.

Work was carried out in 5 stages:

- Collation of data from the Nottinghamshire Sites and Monument Record, and from local planning authority registers for designated and other buildings.
- Collation of data from other documentary sources
- Air-photographic assessment
- Walk-over surveys
- Evaluation of individual sites on the basis of data gathered in phases 1-4, and preparation of maps and statements in accordance with *DMRB* Volume 11 Section 3 Part 2

The relevant authorities and interested parties were consulted in the course of this work. The authorities consulted are set out in **Appendix 1**.

3.1 COLLATION OF DATA FROM THE SITES AND MONUMENTS RECORD AND THE HISTORIC BUILDINGS RECORD

The Nottinghamshire Sites and Momuments Record (SMR), and the Nottinghamshire Historic Buildings Record, held by Nottinghamshire County Council, were consulted for information on all known archaeological sites and artefactual find-spots, and all known buildings of historic importance, within the search area.. In the **Schedule of Sites (5.0**,

below), all SMR-documented sites within the search corridor are listed, and a brief summary of the SMR record is provided. The position of each site or find is shown in **Illustration No. 4** (a synthesis of sites identified from all sources), and its extent indicated where this can be determined. One building within the search area is documented in the Nottinghamshire Historic Buildings Record. This is also described below, and shown on **Illustration No. 4**.

3.2 COLLECTION AND COLLATION OF DATA FROM OTHER DOCUMENTARY SOURCES

In the course of this study, documentary and cartographic sources were consulted by Dr J Webster at the Nottingham University Library (East Midlands Collection) and at the offices of the Nottinghamshire County Council Sites and Monuments Record (SMR). Dr T Cooper consulted documentary and cartographic sources at Nottinghamshire Archives. A thorough search was also made of national and local periodicals. All sources consulted are listed in **Appendix 2**.

3.3 AERIAL PHOTOGRAPHIC ASSESSMENT

Aerial photographic assessment is a complimentary part of multi-disciplinary archaeological investigation. It provides information which cannot easily be detected by other means, through the accurate mapping of archaeological sites recorded as cropmarks, soilmarks, and shadows cast by upstanding earthworks. At the same time, however, seasonal, agricultural, meteorological and environmental factors all affect the extent to which buried or upstanding sites can be detected from air photographs. These limitations are discussed with relation to the study area at **6.2.1**, below.

Air Photo Services (Cambridge) were commisioned by ARCUS to undertake aerial photographic assessment of the search corridor. It should be noted that after this assessment had been commissioned, the search

corridor was extended slightly at its western limit, in response to initial comments from English Heritage (see section **1.3**, above). This westerly extension did not form part of Air Photographic Services original brief, but because the photographic asssessment included some sites to the west of Polser Brook in order to preserve the integrity of the archaeological discussion, the aerial photographic assessment in fact incorporates the entirety of the revised search corridor, with the exception of **Site No. 1**, which is documented in the SMR.

The entire study area was subjected to aerial photographic library search. The following collections were consulted:

- Cambridge University Collection of Aerial Photographs (CUCAP)
- National Library of Air Photographs (NLAP)
- Nottinghamshire County Council Collection

Following photograph interpretation, interpreted features were computer rectified, where appropriate, and mapped at 1 : 10000. Ridge and furrow field systems were in most cases drawn schematically, without rectification. Wherever possible, headlands (banks formed at the point where the plough turned) were digitised to give positional accuracy and create a framework for the mapping of the associated ridge and furrow.

The results are mapped in **Illustration Nos. 4-7**. **Illustration No. 4** comprises a synthesis of sites identified from all sources, **Illustration No. 5** (see wallet) shows the findings of the aerial photographic assessment. The aerial photographic report (**Appendix 3**) divided the application area into sixteen zones, for discussion purposes. **Illustration No. 6** shows the correspondence between these sixteen zones, and the site numbers assigned in the present schedule, and mapped in **Illustration No. 4**. Finally, **Illustration No. 7** compares the medieval agriculture located by aerial photographic assessment with that shown on a pre-Enclosure map of part of Radcliffe parish (**4.2**, below).

Air Photographic Services' Report, *A52 Radcliffe on Trent Bypass, Nottinghamshire Aerial Photographic Assessment: Archaeology*, forms **Appendix 3** of this study. The results of the assessment have been integrated into the **Schedule of Sites (5.0)** and subsequent discussion.

3.4 WALK-OVER SURVEYS

A walk-over survey comprises a rapid initial appraisal of a study area, in order to assess the condition of known archaeological features, and to determine whether further, non-documented, archaeological features survive at ground level. A walk-over survey of the subject area was carried out by Dr J Webster and Mr J Symonds in November 1994. The trajectory of the proposed road was walked in its entirety, and areas of known and potential archaeological significance within the search corridor were also visited.

In consultation with the CAO, it was agreed that a more detailed walk-over of a 100m corridor directly on the trajectory of the proposed road would also be appropriate, in order to identify and map any surface artefact scatters. This survey was carried out by Dr J Webster and Ms T Roper in January 1995. Diagnostic finds were noted on the ground. The findings of the walk-over survey are discussed more fully in sections **5.1 and 6.2.4**, below, and are mapped in **Illustration No. 9**.

4.0 THE HISTORICAL CONTEXT

4.1 MEDIEVAL SAXONDALE

One of the most archaeologically sensitive areas to be considered in this study is the shrunken medieval village of Saxondale. In this section, documentary evidence for the history of Saxondale is discussed, in order to place the archaeological data discussed below in context.

The place-name *Saxondale* probably derives from the Old English *Saxeana denu*, meaning 'the Saxons' valley'. The name probably denoted an isolated Saxon settlement in an area otherwise dominated by Anglians (Clover *et al* 1940, 241).

At the time of the compilation of Domesday Book (1086) Saxondale was in the wapentake (local administrative unit) of Bingham. Two Anglo-Saxons had held twelve bovates of land between them and, in total, land had been available for four ploughs. After the Norman Conquest of 1066, the land had been transferred to the ownership of Roger de Busli, one of the major landowners in the Nottinghamshire and South Yorkshire areas, who held the manor and two ploughs in demesne (for his own use). The village comprised thirteen households (five of which were headed by freemen) who shared two ploughs between them and an acre of meadow. The settlement also had a church. In total the land was worth 25^{s}, the same value as had been assessed before the Conquest (Page 1906, 266).

A shallow depression to the north west of Fosse Way, marked on Ordnance Survey maps as "Moothouse Pit" (**Site No. 41**, below), is thought to have been the site of the ancient meeting place of the wapentake of Bingham. The site is described by one writer as being "like a miniature amphitheatre" (Glover *et al* 1940, 219). As a possible meeting-place for the wapentake court (with Anglo Saxon, or earlier, origins), it is obviously of significant historical and archaeological importance .

Saxondale is next mentioned in 1220. In that year, the community of the realm agreed to provide a "gift" to the crown of 2 shillings per each plough-team in use on manors throughout the country at the Midsummer of that year. This tax was levied to pay off crown debts and to enable the continuation of the war against the French. As noted above, Saxondale was assessed at 2 shillings. This suggests there might have been some contraction in the scale of the lord's demesne farming of the manor since the late eleventh century, since 2 ploughs had been mentioned in Domesday Book (Book of Fees, Part II, 1445).

Through the remainder of the thirteenth century and into the fourteenth, land transfers in Saxondale were dominated by the accumulating acquisitions made by the neighbouring priory at Shelford. In 1227 the prior was in dispute with two local landowners regarding the ownership of one bovate of land, and by 1242 the priory had acquired land in the form of one knight's fee, which was held ultimately from the crown as an ancient fief (Close Rolls, 1227-31: 539; Curia Regis Rolls, vol. XIII: 228). In 1304 Shelford obtained another messuage (ie, house plot with attached land) in the village. A few year later a bovate of land was acquired by Worksop priory (Patent Rolls, 1301-7: 326; Charter Rolls, vol. 3: 302).

The Lay Subsidy of 1334 records 36 separate settlements in Bingham wapentake, the assessments of which varied from the £4 16^{s} 8^{d} paid by Bingham itself, to the 7^{s} 6^{d} rendered by Boghton. Saxondale (18^{s} 6^{d}) and Holme Pierrepont (17^{s} 3^{d}) were two of the lowest assessments, and were therefore among the more insignificant villages in the wapentake. Radcliffe-upon-Trent, in contrast, paid £4 5^{s} 8^{d} (Lay Subsidy, 1334, 232).

By 1349 Shelford priory had consolidated its holdings in Saxondale into a complete manor. On the surety of this, Shelford made an annual payment of 5 marks for the endowment of a chantry in the parish church of Newark. The prior of Shelford made a similar grant a year later in favour of Lincoln Cathedral and again, amongst a number of its appropriated churches, the manor of Saxondale was cited as surety (Patent Rolls, 1348-50: 289, 509).

By the mid-fourteenth century Shelford priory, like many of the major landowners in the country, had begun a policy of leasing much of the land and properties on its estates. One of the major beneficiaries in the Saxondale area was the Leek family of Sutton-in-the-Dale, Derbyshire, who by 1324 had acquired a messuage, 72 acres of arable and 4 acres of meadow land from the priories of Shelford and Thurgarton. (The latter of which was situated a little to the north east. adjacent to Fosse Way (IPM, Ed. VI vol. II: 507)). An inquisition carried out in 1359 revealed that when John de Leek died of plague in 1350 he had also acquired the farm of 20s of rents in the village, for which he made an annual payment to Shelford of 10^{s} (IPM, Ed. III vol. X: 481). The priory itself still held the manor of Saxondale, which by the mid-fourteenth century was a knight's fee, held of Sir Thomas Furnivall and valued at 100^{s} (Train, 1952, 58).

By 1459 the manor had also passed to the Leek family. An inquisition of 1467 reveals that Hugh Hotot also had financial interests in the manor, in the form of a twice-yearly suit of court (Renshaw, 1956, 49, 60). By the late fifteenth century the manor had come into the hands of William Perot of Shelford as a subenfeoffment which had been granted by the Countess of Shrewsbury. The manor was still officially valued at 100^{s}. per annum (Renshaw, 1956, 69).

The transition from the medieval to the modern period saw the gradual decline of Saxondale. The 1664 Hearth Tax return shows that there were about ten, mainly poor households in the village, and at the second assessment of this tax, ten years later, there were only eight. This compares to the 48 households which made up the village of Cropwell Butler. In the same period Radcliffe-upon-Trent had expanded from 66 to 75 households (Webster 1988, 69, 94). By the time that local antiquarian Robert Thoroton was writing his history of the county, in the later eighteenth century, Saxondale contained "only three or four dwellings of any consequence" (Thoroton 1789, 286).

4.1.1 Saxondale church

The church at Saxondale (**Site No. 48**, below, and see also **Site No. 45**) was mentioned in Domesday Book, and is possibly of Anglo-Saxon origin. As noted above, the name Saxondale suggests an isolated Saxon settlement in the Danelaw. It may be for this reason that Saxondale had a church by the mid-eleventh century.

Subsequently, the church was taken into possession by Shelford priory, most likely during the late-twelfth or early-thirteenth centuries. From this time on its status would have been that of a chapel of ease within the parish of Shelford. The Robert Thoroton recorded that, following the dissolution of the monasteries in 1535, the property of Shelford priory had come into the hands of the Stanhope family who continued in possession up until the end of the eighteenth century. As a chapel of ease, the church was practically worthless to the Stanhopes, and at some time following the dissolution they demolished the building. Thoroton notes that in the late eighteenth century a number of local farmers in Saxondale were using stone coffins (which had come from the ruined church) as troughs for their cattle (Thoroton 1789: 286).

4.1.2 Saxondale: conclusions

Saxondale was once a fairly significant manor, farmed in part directly by the lord at the high point of the medieval economy (the mid-twelfth century) The settlement suffered during the subsequent period of economic and demographic decline, marked by the famines of the early fourteenth century and the arrival of the Black Death in 1348. From this time, there has been a marked shrinkage of the village. The earthwork features (**Site No. 47**) and the significant remains of ridge and furrow (**Site Nos. 42, 46, 50-52**) in the environs of the village all attest to the shrinkage of the medieval settlement.

4.2 THE MEDIEVAL AGRICULTURAL LANDSCAPE

A second important archaeological characteristic of the application area is its intensive medieval agricultural land use. Much of this medieval landscape has been destroyed by ploughing and development, although some upstanding earthwork traces survive. Vestigial and cropmark evidence for extensive ridge and furrow field systems and their associated headlands have also been recognised from air photographs (see **Illustration Nos. 4 and 5**, and **Section 5.0**). But it is clear from the study of early cartographic sources that the pre-Enclosure strip field systems of the Radcliffe area were originally far more extensive than the surviving evidence suggests. The field systems shown on a pre-Enclosure map of Radcliffe parish, made in 1787, are illustrated in **Illustration No. 7**. Those agricultural traces also recognised during aerial photographic assessment of the same area are also highlighted. Although the correspondence is excellent, it is clear that some 60% of the original strip fields have been obliterated by ploughing, or by the construction of Radcliffe on Trent Golf Course and the Saxondale Hospital.

5.0 SCHEDULE OF SITES

A schedule is given below of all sites of archaeological or built heritage interest within the survey area, identified either from existing sources of information (**3.1 and 3.2**), air photographic assessment (**3.3**), or by walkover survey (**3.4**). Sites are listed from east to west, and are grouped by parish. The information is synthesised in **Illustration No. 4**.

The following abbreviations and terms should be noted:

SMR
Site documented in the Nottinghamshire Sites and Monuments Record (plus SMR number)

APA
Site recognised by aerial photographic assessment. APA numbers correspond to the sixteen areas or zones into which the Aerial Photographic Assessment Report divided the study area for discussion purposes. The concordance of these sixteen areas with the site numbers assigned in the present schedule is shown in **Illustration No. 6**.

Ridge and furrow
Ridge-and-furrow comprises corrugations in the surface of a field. These are made by generations of ploughing, which gradually built ridges on the field surface with parallel furrows between them. It is a typical feature of medieval agricultural landscapes, and in some cases has been found to pre-date the Norman Conquest.

Cropmarked ridge and furrow is plough-flattened, and visible only as crop and/or soil marks on air photographs. *Vestigial* ridge and furrow is plough-flattened, but shows on air photographs as vestigial traces of earthworks which may not be visible on the ground. *Extant* ridge and furrow survives on the ground as upstanding earthworks.

Parishes and their boundaries

The parish boundaries accepted here are those mapped at 1:10 000 on the 1990 base map of the application area provided by Sir Alexander Gibb and Partners (DRG. No. 90535). Some slight changes have been made to the parish boundaries in this area (presumably during the 1970s), and as a result the present boundaries differ slightly in some places to those shown on the SMR base maps (OS Second Edition 1: 10 000 series, sheets SK 63 NE, SK 63 NW, SK 64 SE), and other earlier maps. The differences are shown in **Illustration No. 4**. Two results of this discrepancy should be noted.

- **Site No 16** is listed under Radcliffe on Trent in the present study, and under Holme Pierrepont in the SMR. **Site Nos. 37** and **38** are listed under Cropwell Butler Parish here, and under Saxondale Parish in the SMR.

- In two of the instances where the proposed road would impact present parish boundaries, former parish boundaries would also be impacted. For mapping purposes, the impact points of the **present** boundaries are recorded below (**Site Nos. 15** and **54**). However, as the former boundaries are obviously of greater antiquity, the impact points on the **earlier** boundaries are also noted and discussed in both cases.

HOLME PIERREPONT

Site No. 1
NGR SK 6190 3830
SMR 789
Cropmark of a double ring ditch enclosure, period uncertain. Located in permanent pasture.

Site No. 2
NGR centred SK 625 386
APA Area No. 1
On the basis of aerial photographic assessment, an area of archaeological potential was identified at the northernmost point of the search corridor (APA Area No. 1). These features, comprising ring ditches, enclosures, ditches, and possible gravel quarrying, lie to the north of the assessment area, but there is a strong likelihood that they may extend into the assessment area, where they are masked by the alluvium-gravel interface.

Site No. 3
NGR SK 6215 3795
SMR 1153
Post-medieval smithy, shown on the OS Second Edition 1: 2500 County Series map. No further documentation.

Site No. 4
NGR SK 6220 3760
SMR 799
APA No. 4a
Enclosure complex, and linear features. Many curvilinear features appear to the north. The SMR suggests these are probably not archaeological.

The aerial photographic assessment carried out for this study also examined the cropmark features at this location (APA Area No. 4a). The archaeological features mapped were far less extensive than those recorded by the SMR, and were identified as cropmarks of a ditched enclosure and possible ring ditch at NGR SK 622 376. However, it has

been stressed by Air Photo Services (Chris Cox *pers. comm.*) that the features plotted here are those which could be confidently identified as of probable archaeological origin: they therefore represent the *minimum* archaeology in this area. This complex of features is situated on a geological transition, and therefore proved extremely difficult to map: whilst, as noted by the SMR, some of the features here may be of geological origin, this is not certain. Equally, other archaeological features may be masked. The area is one of high archaeological potential.

Site No. 5
NGR SK 6370 3780
SMR 871
Bronze Age flanged axe head, with cable flanges, found in ploughed soil in the 1950s (*East Midlands Archaeological Bulletin* 1964, 7, 23). See **Site No. 7** for finds from a nearby quarry.

Site No. 6
NGR SK 6260 3785
SMR 873, 873a
A Saxon cemetery (**SMR 873**), discovered by labourers digging for gravel. The burials were two feet below the surface and accompanied by weapons and urns. Only a few finds were preserved. Finds include three varieties of urn, a beehive quern, a weight, a lock, bronze attachments for bucket handles, cruciform brooches, buckles and many beads of glass, porcelain and amber. Although clearly a Saxon cemetery, a few Roman finds were made (**SMR 873a**). These include a fragment of glass cup with the inscription 'Semper', and an animal brooch.

Site No. 7
NGR SK 6256 3771
SMR 1120, 1120a
Pit or ballast hole (**SMR 1120**), containing eight hearths, around a very large boulder. A posthole was located in the NE corner of the same field, and burnt quartzite boulders in the fields to the S and SE. Numerous pottery sherds were found in the ballast hole (**SMR 1120a**). These were originally regarded as Bronze Age and later as Bronze Age or 'Celtic'.

Four sherds found in 1951 were originally stated to date to the Late Neolithic, but have now been reclassified as Iron Age or Roman. These four fragments are among material from the site which was deposited at Nottingham University Museum. This assemblage includes numerous sherds of Roman coarse ware, and four fragments of plain Samian ware.

Site No. 8
SK 630 380
APA Area No. 2
Aerial photographic assessment noted traces of ground disturbance in this area (APA Area No 2). This disturbance is probably due to undated quarrying.

Site No. 9
NGR SK 6282 3787
SMR 0800
Roman tile fragment and samian potsherd. The findspot was under plough at the time the find was made, and nothing of significance was seen on the ground. No further information is available.

Site No. 10
NGR SK 6280 3770
SMR 0945
Flint waste flakes and a core, found in 1967 (*East Midlands Archaeological Bulletin* 1974, **10**, 40). Date uncertain.

Site No. 11
NGR SK 6301 3820
Historic Buildings Record No 3/64 (Grade II Listed Building)

Holme House: an early nineteenth-century farmhouse, with mid nineteenth-century alterations. Hipped slate roof with eaves overhang. The building is rendered (probably over red brick) and has two storeys, with five bays. The central mid nineteenth-century porch is set on a plinth with pilasters, cornice and parapet. Inner, part-glazed door with overlight. Either side are two glazing bar sashes with five similar smaller sashes

above. Attached to the right and set back is a lower, two storey, single bay wing.

Site No. 12
Holme Pierrepont
NGR SK 6305 3818
SMR 1130
Well of uncertain date, shown on the 1914 OS 1:2500 County Series Map. In the grounds Holme House (**Site No. 11**, above).

Site No. 13
NGR SK 634 378 (Mineral Railway) and SK 634 381 (Holme House)
APA Area No. 5/6
Extant and vestigial ridge and furrow to the south of Holme House (**Site No. 11**) recognised by aerial photographic assessment at SK 634 378 and SK 634 381 (APA Area No. 5). Further ridge and furrow to the east of Home House (centred SK 632 384, APA Area No. 6) is probably part of the same complex. The majority lies in an area of rough, overgrown ground to the south of the garden of Holme House. During the preliminary walkover survey, additional earthworks were noted in the area of ridge and furrow to the east of Home House. These comprised a linear depression (aligned E-W) and two possible raised rectilinear platforms.

Site No. 14
NGR SK 6335 3780
SMR 0847
Linear feature, noted by T&PAT as a possible feature during archaeological assessment at Holme Pierrepont. This feature was not recognised during the present aerial photographic assessment, and may not be of archaeological significance.

Site No. 15
NGR SK 634 382 (point at which present boundary impacted)
NGR SK 638 381 (point at which former boundary impacted)
Holme Pierrepont/Radcliffe on Trent parish boundary. To the immediate east of the Mineral Railway. No surviving above-ground features.

As discussed below (**6.1.4**), parish boundaries can sometimes be of considerable antiquity, but it is often difficult to date them with any confidence. This example, which follows an uneven trajectory to the north of the subject area, is exactly aligned with the Mineral Railway for much of its course through the application area, and the original alignment has clearly been revised: the OS Six Inch to 1 Mile map of 1883 (Sheet 43 NW) shows the parish boundary as following the meandering watercourse to the east of the present boundary (see **Illustration No. 4**). This watercourse would be impacted by the proposed road at SK 638 381. Subsequent discussion of the boundary will focus on this grid reference.

RADCLIFFE ON TRENT

Site No. 16
NGR SK 6370 3780 (centred)
SMR 801, SMR 801a
APA Area No. 6
The SMR records a double ring-ditch earthwork at SK 6370 3780 (**SMR 0801**) with an outer linear continuation to the northwest. Although initially recorded from air photographs (Pickering 6338/3; 6337/1,2), the ring-ditch was not identified on aerial photographs examined for the present study, and is possibly of non-archaeological origin. A bank was recognised by aerial photographic assessment (see below), and probably corresponds to the linear feature recorded in the SMR. It is possibly a field boundary.

The ring-ditch is surrounded to the north and south by ridge and furrow (**SMR 0801a**). These agricultural traces were also apparent on aerial photographs consulted for the present study (APA Area No. 6). They comprise cropmarks of ridge and furrow, plus a field boundary (NGR SK 640 379). The latter is probably a more recent feature.

Site No. 17
SK 637 384
APA Area No. 6

Vestigial and cropmark ridge and furrow, in the vicinity of Lamcote Fields Farm, recognised by aerial photographic assessment (APA Area No. 6).

Site No. 18
SK centred 645 380
APA Area No. 6
Cropmarked ridge and furrow, to the east of the Sewage Works, recognised by aerial photographic assessment (APA Area. No. 6)

COTGRAVE

Site No. 19
NGR SK 6431 3754
SMR 1147
Post-medieval water pump, shown on the 1919 OS County Series 1:2500 Map. No documentation.

RADCLIFFE ON TRENT (continued)

Site No. 20
SK 644 385
APA Area No. 7
Cropmarked and vestigial ridge and furrow and headland near Grantham Road, recognised by aerial photographic assessment (APA Area No. 7). A small pit or depression was also noted.

Site No. 21
SMR 1077
NGR SK 6519 3852
An oval-shaped depression at the Sun Pit Plantation. Possibly a former quarry. No documentation.

Site No. 22
NGR SK centred 652 385
APA Area No. 8

Ridge and furrow complex at the Sunpit Plantation, recognised by aerial photographic assessment. (APA Area No. 8). Comprises cropmarked possible headlands (SK 650 387), some surviving and some vestigial ridge and furrow (SK 653 384), and vestigial ridge and furrow (SK 657 384).

Site No. 23
NGR SK 6532 3866
SMR 5420
Windmill of post-medieval date. Mapped on the OS Old Series (1 Inch to 1 mile, Sheet 71) map of 1836-8, but now destroyed. The millstone (1.5m diam) is preserved in the garden of Millfield House. No documentation.

Site No. 24
SK 655 378
AP Area No.
Vestigial and extant ridge and furrow to the east of Hall Farm, recognised by aerial photographic assessment (AP Area No. 9)

Site No 25
NGR SK 6550 3870
SMR 1078
Quarry, or possible hollow way, centred on the above grid reference. No documentation.

Site No. 26
NGR SK centred 656 390
APA Area No. 11
Ridge and furrow at Radcliffe on Trent Golf Course, recognised by aerial photographic assessment (APA Area No. 11). Some extant, the remainder vestigial and cropmarked.

Site No. 27
NGR SK 6584 3923
SMR 1074
Post-medieval brick works, mapped on the 1914 OS County Series 1:2500 map.

Site No. 28
NGR SK 6594 3923
SMR 0887
Silver penny of Edward I or II (1300-1340), found in the back garden of 51 Covert Crescent. Found in clay soil, *c* 1ft below the surface (*East Midlands Archaeological Bulletin*, 1958, 1, 10).

Site No. 29
NGR SK 660 396
Post-medieval brick-kiln. Although not documented by the SMR, the OS Old Series (1 in : 1 mile) Map Sheet LXX1, surveyed 1836-8, indicates another brick-kiln to the west of SMR-documented **Site No 00**, below. This is located to the east of what is now the Nursery on the A52 (Grantham Road).

Site No. 30
NGR SK 6600 3927
SMR 1073
Quarry mapped on the 1914 OS County Series 1:2500 map; no other documentation.

Site No. 31
NGR SK 6612 3943
SMR 1075
Post-medieval wind pump, shown on the 1914 OS County Series 1:2500 map; no other documentation.

Site No. 32
NGR SK 661 379 and SK 662 380
APA Area No. 10
Ridge and furrow complex in the environs of Radcliffe Barn Farm, recognised by aerial photographic assessment (AP Area No. 10). Comprises cropmarked ridge and furrow (SK 661 379) and some extant ridge and furrow (SK 662 380).

Site No. 33
NGR SK centred 664 394 and SK 666 395
APA Area No. 11
Ridge and furrow in the environs of Parr's Barn Farm (SK 664 394 and 666 395), recognised by aerial photographic assessment (APA Area No. 11). Extant when photographed in the 1930s, now levelled.

Site No. 34
NGR SK 670 393
APA Area No. 12
Cropmarked ridge and furrow in the vicinity of Home Farm, recognised by aerial photographic assessment (APA Area No 12).

Site No. 35
NGR SK 669 385 (point at which bisected by proposed road)
Cropwell Butler/Radcliffe on Trent parish boundary, formed by a canalised, narrow ditch. This boundary is also shown on the OS 1:2500 County Series map of 1914.

CROPWELL BUTLER

Site No. 36
NGR SK 6723 3962
SMR 1072
Post-medieval brick and tile works, noted on the OS 1:2500 County Series Map (1914), where it is stated to be disused. No further SMR documentation.

Site No. 37
NGR SK 6718 3980
SMR 0923
Post-medieval brick kiln. This site is shown on the OS Old Series (1 Inch to 1 Mile, Sheet 71), surveyed 1836-8. and therefore pre-dates 1836. No further documentation is available.

Site No. 38
NGR SK 6761 3960
SMR 1071
Quarry, mapped in 1914 in the OS County Series at 1:2500. No SMR documentation.

Site No. 39
NGR SK
SMR 1081
Well, period uncertain. Mapped in 1914 in the OS County Series at 1:2500.

Site No. 40
SK 683 393 and SK 682 395
APA Area No. 13
Cropmarked ridge and furrow near Lings Farm, recognised by aerial photographic assessment (APA Area No 13). SK 683 393 was extant when photographed in 1955, SK 682 395 is cropmarked.

Site No. 41
NGR SK 6828 3898
SMR 809
A quarry-like depression known as the Moothouse Pit. According to Wortley (1954), the Saxon chief Bynna who gave his name to Bingham held the Hundred Court in this hollow. (**4.1**, above). Although the site is regularly ploughed, no finds have been made here. The feature appears natural.

Site No. 41a
NGR SK 683 391 (approximation only)
Possible tumulus, now destroyed, *c* 100m from the Moothouse Pit (**Site No. 41**) Stukeley's *Itinerarum Curiosum* 1724 included an engraving of the crest of the hill immediately to the south of the Saxondale roundabout. The engraving appears to show a barrow in the centre of, and therefore post-dating, the Roman Road. It is possibly of Anglo-Saxon date. (*Archaeology of the Fosse Way Volume Two* T&PAT 1992, 80-81). The

modern course of the Fosse Way deviates at this point, possibly to circumnavigate the mound. A substantial verge is left on the east side of the road, and it is possible that a section of the original Fosse Way might survive in the verge at this point (T&PAT 1992, 80).

SAXONDALE

Site No. 42
NGR SK 671 390 (centred)
APA Area No. 13
Cropmarked ridge and furrow in the environs of Oatfield House, to the north and south of the A52, recognised by aerial photographic assessment (APA Area No. 13).

Site No. 43
NGR SK 6734 4001
SMR 1942
Quarry, mapped in 1914 in the OS County Series, at 1:2500. No further SMR documentation.

Site No. 44
NGR SK 6776 4001
SMR 1943
Quarry, mapped in 1914 in the OS County Series, at 1:2500. No further SMR documentation.

Site No. 45
NGR SK 6815 3988
SMR 5474
Pottery, and stone coffins of Saxon or early medieval date, found in 1937. Presumably related to Saxondale church. See **Site No. 48**, below; and Thoroton's (1790) comment on the removal of coffins from the church.

Site No. 46
SK 684 398
APA Area No. 13

Ridge and furrow at Manor Farm Cottages, recognised by aerial photographic assessment (APA Area No 13). This was surviving when photographed in 1953.

Site No. 47
NGR SK 6820 3990
SMR 0808
Earthworks of Deserted Medieval Village of Saxondale, and field system. Soil disturbance indicates possible village shrinkage (AP OS, 64/218 16-17). See **4.1**, above.

On air photographs available to the SMR (St Joseph LI 67, LI 68). little shows except strip cultivation. Air photographs examined for the present assessment record extensive traces of ridge and furrow in the environs of the DMV: these are recorded below (**Site Nos. 46, 50-52**).

Site No. 48
NGR SK 6832 4003
SMR 5473
Church of Saint Martin, mentioned in Domesday Book (**4.1.1**, above). The church became the property of Shelford Priory, and was still standing in 1552. At the Dissolution, the church came to the Stanhopes, who pulled it down on the pretext that it was only a chapel-of-ease. Stone coffins and skeletons have been found on several occasions (Godfrey 1907, 432), and coffins are reported by Thoroton to have been taken for use as troughs in the locality (Thoroton 1790, 285).

Site No. 49
NGR SK 6827 3986
SMR 1070
Post-medieval pump, mapped in 1914 (OS County Series 1:2500).

Site No. 50
NGR SK 681 401, and SK 684 401
APA Area No. 13

Ridge and furrow (earthwork in 1933) in the environs of Lodge Farm. Recognised by aerial photographic assessment (APA No. 13).

Site No. 51
NGR SK 688 399
APA Area No. 13
Ridge and furrow to the north of Saxondale Roundabout, recognised by aerial photographic assessment (APA Area No 13), now levelled.

Site No. 52
NGR SK 678 401
APA Area No. 13
Ridge and furrow to the south of the dismantled railway, recognised by aerial photographic assessment (APA Area No 13).

Site No. 53
NGR SK 685396 (centred)
A concentration of worked flints, immediately to the north and south of the Saxondale roundabout. Probably of Late Neolithic or Early Bronze Age date. Found during fieldwalking by Trent and Peak Archaeological Trust in 1991/2 (noted in *T&PAT Draft Report on Diamond Cable Watching Brief*).

Site No. 54
NGR SK 687 397 (point at which impacted by proposed interchange)
NGR SK 686 395 (point at which former boundary impacted)
Parish boundary between Saxondale and Cropwell Butler, following the existing A52 (Grantham Road). As mapped on the OS Six Inch to One Mile map of 1892 (Sheet 43 NE), the parish boundary did not originally follow the line of the A52, but took a parallel course one field to the south. (see **Illustration No. 4**). This former boundary would be impacted at approximately SK 686 395, where it converges with the Cropwell Butler/Bingham parish boundary (**Site No. 56**, below). The original boundary survives as a low bank with some hedge and tree cover.

Site No. 55
The Fosse Way (within application area NGR SK 687 397 - SK 682 388)

The modern A46 (Fosse Way) is on, or very close to, the alignment of a major Roman Road. The Fosse Way was constructed in the Julio-Claudian period. It extends from Lincoln to Exeter.

BINGHAM

Site No. 56
NGR SK 684 391 - SK 687 397 (points between which impacted by proposed interchange)
Parish boundary between Cropwell Butler and Bingham, on the alignment of the A46 (Fosse Way). This boundary is noted on the OS Six Inch to One Mile map of 1892.

Site No. 57
SK 688 392
APA Area No. 14
Cropmarked ridge and furrow at Foss Farm, recognised by aerial photographic assessment (APA Area No. 14).

5.1 WALK-OVER SURVEY OF 100m CORRIDOR

Isolated artefacts were noted in the course of this survey, but no discrete artefact scatters were located. It is important to note, however, that this survey was carried out in early January, at a time when most of the regularly ploughed fields along the route (18 from a total of 30 fields) had been re-sown. 3 fields were ploughed, but not harrowed, 13 fields were sown with a young crop of winter wheat or similar, and 2 were fields of stubble (land use is shown in **Illustration No. 9**). Observation conditions were, not, therefore ideal.

The walk-over survey was carried out simply in order to facilitate a rapid assessment of base conditions, and to provide parameters for recommendations for subsequent work. It should in no sense be regarded as a substitute for a full programme of field-walking (see section **00**, below).

The following diagnostic artefacts were noted. Their approximate positions are shown in **Illustration No. 9**.

FIELD No.	FIND No.	FIND TYPE	DESCRIPTION
4	A	Roman pottery	1 sherd Derbyshire ware, C1st-2nd AD
8	A	Worked flint	Fragment of a scraper made on a secondary flake: retouch confined to edge. Period uncertain
23	A	Worked flint	Small secondary flint flake. Period uncertain
23	B	Worked flint	Primary flint flake. Period uncertain
25	D	Roman pottery	1 sherd Derbyshire ware, C1st-2nd AD
25	B	Worked flint	Flint flake fragment. Period uncertain
26	A1	Roman pottery	1 sherd Roman greyware
26	A2	Medieval pottery	1 sherd redware, probably medieval
27	A	Worked flint	Scraper made on a large rejuvenated flake. Heavily worn and possibly heat treated. Period uncertain.
29	B	Worked flint	Heavily patinated and plough-damaged flint flake. Period uncertain.

6.0 ARCHAEOLOGICAL CHARACTERISTICS OF THE APPLICATION AREA

In this section, the known archaeology of the application area is summarised, and the potential for further archaeology is assessed.

The application area is one of some archaeological sensitivity, particularly at its extreme west and east ends. The west end, situated on the gravel/alluvium interface, has produced crop mark sites similar to those found further to the west and north on the archaeologically rich gravels of the river Trent. There is considerable potential for further sites on the gravel/alluvium interface within the application area, which is an area of high archaeological potential. The eastern sector, and in particular the area of Saxondale Roundabout, is also archaeologically rich, producing evidence from several periods (a Neolithic/Bronze Age flint scatter; Roman activity, and medieval agriculture). The central part of the area, on heavy clay soils, provides evidence for extensive medieval ridge and furrow, and its associated headlands. As discussed below, the archaeological potential of the central area (particularly for the Roman and prehistoric periods) remains something of an unknown quantity.

6.1 THE KNOWN ARCHAEOLOGY

For ease of discussion, the known archaeology may be grouped under three headings:

- **An area of known and potential archaeology on the gravel/alluvium interface at the extreme west of the area**
- **An extensive medieval agricultural landscape, across much of the application area**
- **The multi-period archaeology of the Saxondale Roundabout area**

These areas are considered at **6.1.1-6.13**, below. The parish boundaries, which form a fourth feature of possible archaeological significance, are considered at **6.1.4**.

6.1.1 The western limit of the search area

The western limit of the study area (**Site Nos. 1-2 and 4**) should be regarded as one of archaeological importance. Within the application area, two crop mark sites (**Site Nos. 1** and **4**) are recorded in the SMR, and although no further definite archaeological features were visible from air photographs consulted for the present study, the area to the immediate south of the A52 (between Bassingfield Lane and Lamcote Field) lies on the interface of the alluvium and the archaeologically rich Trent river gravels (Bassingfield Terrace) (**See Illustration No. 3**). Many of the cropmark sites of the Middle Trent may be partially sealed by alluvium (Knight and Howard 1994, 14), and further archaeological features may be masked by alluvium at this location.

The search area is situated on the edge of the area of remarkably dense cropmarks, probably of Iron Age or Romano-British date, which characterise the gravel terraces of the Middle Trent Valley (Knight and Howard 1994, 14). Excavation has already demonstrated the potentials of the river gravels to the north and north west. A cropmark site at nearby Gamston (SK 602 369), situated on Bassingfield (second) Terrace river gravel, has recently been excavated. The site comprises an extensive enclose settlement with Early Iron Age, or possibly Later Bronze Age origins, but dating mainly to the later first millenium BC (Knight 1992, Elsdon 1993, 16).

Evaluation has also been carried out on cropmarked features to the northwest of the application area, at Holme Pierrepont Quarry (NGR centred SK 6192 3827). Air photographs of the site revealed up to eight ring ditches, a rectilinear enclosure, a long curvilinear ditch. Trial trenching was carried out in 1993, when the cropmarks were threatened by a proposed extension to the Tarmac Roadstone Ltd Holme Pierrepont

Quarry, and provided evidence for multi-period activity. This included later Neolithic/Early Iron Age flint tool manufacture (Trench 01); a double ring ditch of Iron Age date (Trench 02); a Bronze Age cemetery on the site of a former ring ditch (Trench 03); and a late Iron Age ditch and Anglo-Saxon inhumation (Trench 08) (Woodhouse 1993).

Further Roman and Iron Age enclosures were excavated at Holme Pierrepont (SK 616 391) in the 1970s (O'Brien 1979, Elsdon 1993, 16).

6.1.2 The medieval agricultural landscape

The principal known archaeological characteristic of the application area is its medieval agricultural landscape. The overview afforded by aerial photographic assessment is one of intensive medieval agricultural land use, in the form of extensive ridge and furrow field systems and their associated headlands. The cropmark evidence is most extensive in the environs of Holme House (**Site No 13**), Lamcote Fields Farm (**Site Nos. 16-17**), Sunpit Plantation (**Site No. 8**), Radcliffe on Trent Golf Course (**Site No. 26**), and Saxondale village (**Site Nos. 42, 50-52**).

Ridge-and-furrow, particularly where it is degraded, is not of particular archaeological importance when considered in isolation. However, this archaeological resource of the application area should also be considered in terms of its **group value**, as individual components of a wider medieval landscape.

As described above, group value is one of eight non-statutory scheduling criteria laid down in Annexe 4 of *Planning and Policy Guidance 16: Archaeology and Planning* (PPG16), and states that the value of a single monument may be greatly enhanced by its association with related contemporary monuments. Despite piecemeal erosion of the medieval farming landscape by ploughing and development, a fraction of it survives in the form of upstanding earthworks, and air photographic and cartographic evidence demonstrate that medieval land use was both intensive and extensive in the application area. The group value of the

surviving Radcliffe/Saxondale medieval landscape may on this basis be assessed as high.

6.1.3 Saxondale roundabout area

Prehistoric, Roman, possible Anglo-Saxon, and medieval activity are all documented in this area.

Prehistoric

In 1991/2 Trent and Peak Archaeological Trust (T&PAT) undertook an evaluation (by fieldwalking) of the Fosse Way between Newark and Widmerpool. In the course of fieldwalking, a concentration of worked flints was found immediately to the north and south of the Saxondale roundabout (**Site No. 53**) (scatter noted in *T&PAT Draft Report on Diamond Cable Watching Brief*).

Roman

The modern course of the Fosse Way (A46) closely follows that of the Roman Fosse Way, and is therefore of considerable archaeological importance (**Site No. 55**). The Fosse Way traverses the eastern part of the study area, on a NE-SW alignment. Approximately 1.1km of the Fosse Way, including its junction with the existing A52 (Saxondale roundabout) lies within the application area.

Some evaluation has been carried out on the Fosse way within the application area, but the scope of this assessment has been limited. In 1991/2, Trent and Peak Archaeological Trust undertook the first phase of an evaluation in respect of a Highways Agency scheme for the proposed dualling of the A46 from Newark to Widmerpool. This evaluation was limited to desk-based study and fieldwalking. Within the application area, two previously undocumented sites were identified (**Site Nos. 41a** and **53**). In 1993/4 T&PAT, with ARCUS, carried out a watching brief on the laying of fibre optic cables along the verge of the A46 between Saxondale and RAF Swinderby. The area explored was extremely narrow (trenches 0.25 - 0.5m in width), and no assessment could be made of the road's environs.

A second phase of evaluation for the proposed A46 Newark to Widmerpool improvement is currently being carried out by John Samuels Archaeological Consultants, on behalf of David Tyldesley and Associates (Environmental Consultants). It is understood from information kindly supplied by the archaeological consultants that a programme of evaluation, involving limited trial trenching, is intended in the area of the Moothouse Pit (**Site No. 41**). The evaluation will focus on the Moothouse Pit itself, and the approximate location of the possible Anglo-Saxon tumulus (**Site No. 41a**). The deviation in the modern course of the A46 at **Site No. 41a** will also be investigated, as it may be the case that the Roman way might survive below the verge adjoining this deviation. Access to the land has not been successfully negotiated, and the evaluation has therefore not yet been undertaken (T Sumpter, John Samuels Archaeological Consultants, *pers. comm.*).

During the Fosse Way evaluation carried out by T&PAT in 1991/2, fieldwalking did not produce Roman pottery scatters within the application area, although a small cluster of Romano-British pottery was noted at SK 691 402, to the north. (*T&PAT Draft Report on Diamond Cable Watching Brief.*

The CAO has also reported that traces of structures and evidence interpreted as relating to the course of the Roman road (to the left of centre of the present road alignment) were noted when Saxondale roundabout was constructed (Mike Bishop, *pers. comm.*).

In 1993/4 Trent and Peak Archaeological Trust (T&PAT), with ARCUS, carried out a watching brief on the laying of fibre optic cables in a trench along the roadside verge of the A46 between Saxondale and RAF Swinderby (*T&PAT Draft Report on Diamond Cable Watching Brief).* Trench B (SK 8877 3971 - SK 6913 4023) incorporated the junction of the A46 and the A52 at Saxondale. No archaeological features or artefacts were recorded in this trench, but the area evaluated was extremely restricted (trench widths 0.25 - 0.5m). There is a clear potential for further Romano-British remains in this area.

The Fosse Way (A46) also forms the parish boundary between Cropwell Butler and Bingham (see section **6.1.4**, below).

Anglo-Saxon

There is a possibility that an Anglo-Saxon tumulus (no surviving surface features) overlay the Roman Fosse Way near Lings Farm (**Site No. 41a**).

Medieval

Cropmarked and vestigial ridge and furrow also occur in the environs of Saxondale Roundabout (**Site Nos. 46, 50-52, 57**).

6.1.4 Parish boundaries

The proposed road impinges upon several parish boundaries within the application area. Two boundaries would be bisected by the proposed road: these are the Holme Pierrepont/Radcliffe on Trent parish boundary (**Site No. 15**: original boundary bisected at approximately SK 638 381), and the Cropwell Butler/Radcliffe on Trent parish boundary (**Site No. 35**, crossed at approximately SK 669 385). Two further boundaries would be impacted by the construction of the proposed interchange at Saxondale roundabout. These are the parish boundary between Saxondale and Cropwell Butler, which now follows the existing A52 (**Site No. 55**, original boundary impacted at approximately SK 686 395), and the boundary between Cropwell Butler and Bingham, which follows the A46 (Fosse Way) (**Site No. 56**, impacted from SK 684 391 - SK 687 397).

Parish boundaries are sometimes extremely difficult to date, but can often be of considerable antiquity The basic modern administrative units (civil parishes) broadly correspond to the parishes, manors, tithings and townships of the medieval and later landscape (Aston 1985; 32), and their boundaries sometimes go back to the Roman period. There are also instances where parish boundaries seem clearly to pre-date Roman roads (Aston 1986).

The boundary between Cropwell Butler and Bingham (**Site No. 56**), which follows the Fosse Way, is clearly aligned on an older landscape division.

Cartographic evidence (First Edition OS) demonstrates that the remaining boundaries discussed here (**Site Nos. 15, 35, and 55**) were in existence in the late nineteenth century. Without excavation, however, it is not possible to establish their antiquity. The original boundary between Saxondale and Cropwell Butler (**Site No. 55**) survives as a low bank, while the boundary at **Site No. 35**, and the original boundary at **Site No. 15** are both marked by watercourses. In each of these three cases, therefore, there is a potential for surviving archaeologically significant horizons.

6.2 POTENTIAL ARCHAEOLOGY

6.2.1 Factors limiting current understanding

This study assesses the archaeological character and potential of the application area, based on existing information principally drawn from the Nottinghamshire SMR and from the aerial photographic assessment commissioned as part of this study. For a number of reasons, these data provide an incomplete picture of the application area.

In assessing the archaeological potential of any area, it is important to note that the SMR should not be regarded as a complete record of the archaeology within the area, but rather as a summary of the present level of knowledge. Secondly, although the aerial photographic assessment carried out as part of the present study has not identified sites of likely pre-medieval date, it must emphasised that much of the study area is on clay or alluvium, both of which tend to mask archaeological features.

To the north of the study area, where the Trent Valley river gravels begin, there is evidence for very detailed and complex archaeological landscapes, showing as cropmarks. Because these gravels drain freely, they have the capacity to produce moisture stress in crops in times of drought, thus creating the cropmarks by which many archaeological sites are identified from aerial photographs. While these freely draining gravels may have been more attractive to prehistoric farmers than the heavier clays which

predominate in the study area, it is important to remember that the potential for crop-mark identification on clay soils is limited, because clay soils are slow to produce crop marks, except in times of extreme moisture stress. Further, unrecognised, sites may therefore exist within the study area.

It is equally possible that the medieval land use in this area actually masks prehistoric archaeological features. Frequently, as medieval ridge and furrow landscapes are ploughed away, an underlying pre-medieval landscape is revealed, showing as crop and soil marks. On clay soils, however, such sites are revealed only rarely and faintly. Some prehistoric sites may therefore be masked beneath ridge and furrow, or by soil type.

When the application area is placed in its wider context, the potential for further archaeology is high, particularly towards the eastern and western limits of the area. The potential of the central, clay soils is at present unquantifiable, but the results of the walk-over survey carried out along a a 100m corridor on the road line are instructive in this context, in that small quantities of worked flint and Roman pottery were noted (**5.1**).

In all cases, the archaeological potential of the application area can only be more fully defined by further archaeological evaluation, but on the basis of existing data, some specific areas of archaeological potential may be suggested:

6.2.2 The medieval landscape

The known medieval archaeology of the application area has been discussed above (**6.1.2**). However, much of what we know to have been an extensive medieval farming landscape has been eroded by agriculture or development. As noted above (**4.2**), the field systems shown on a pre-Enclosure map of part of Radcliffe parish, made in 1787 (**Illustration No. 7**) indicate that some 60% of the original strip fields of Radcliffe parish alone have been obliterated by ploughing, or by the construction of Radcliffe on Trent Golf Course and the Saxondale Hospital. There is,

therefore, potential for further medieval archaeology within the application area.

Whilst this possibility is extremely difficult to quantify, some areas of potential may be suggested.

Holme House environs

The possibility of isolated settlements within the application area should not be overlooked. In particular, with the decline of Saxondale from the early fourteenth century, settlement might have dispersed in the area, with individual farmsteads encroaching over time on the earlier strip field system (topographically, this seems to be the case, for example, at Radcliffe Barn Farm).

In this context, earthworks were noted in the meadow to the east of Holme House (**Site No. 13**) during the preliminary walkover survey. It was not possible to determine whether these features (a wide linear hollow and two raised, rectilinear, platforms ?overlying the ridge and furrow) were of archaeological significance, but it is possible that they may represent settlement of uncertain date.

Saxondale medieval village and environs

Surprisingly little is known about the medieval archaeology of this area. The full extent of what was a fairly significant settlement focus is uncertain, and given the strong likelihood of village shrinkage, the potential for settlement evidence in the immediate environs of the A52 is high.

6.2.3 Saxondale Hospital

A further area of potential is the grounds of Saxondale Hospital. The grounds of the Victorian hospital were landscaped in the nineteenth century. The hospital site is surrounded on all sides except the west by surviving traces of medieval agricultural landscape, including some at Home Farm (**Site No. 34**), within the Saxondale Conservation Area. It is also clear from the pre-Enclosure map of Radcliffe Parish (**Illustration**

No. 7) that further traces were obliterated during construction of the hospital. There is clearly a potential for undocumented medieval activity on the hospital site. In addition, because the hospital grounds have not been subject to intensive twentieth-century ploughing, there is also a potential for well-preserved archaeology from both the medieval and pre-medieval periods.

6.2.4 Potential suggested by walk-over survey

As described above (**5.1**), small quantities of worked flint and Roman pottery were noted during the walk-over survey. Although these were individual finds, rather than obvious scatters, their presence does suggest the possibility of prehistoric and Roman activity within the application area. Fields **4**, **25**, and **26** produced Roman pottery (field **26** also producing one possible medieval sherd), and fields **8a**, **23**, **25**, **27**, and **29** produced worked flint. Given the very limited nature of the walk-over survey, both in terms of the area covered and the ground conditions, there is a clear potential for further such finds elsewhere.

6.2.5 Palaeo-environmental data

Two watercourses within the application area delineate parish boundaries (**Site Nos. 15 and 35**), and are therefore of archaeological interest. They are, at the same time, potential sources of palaeo-environmental data, relating to past environments. Deposits may include organic remains, which may be relatively well-preserved in the anaerobic conditions of the watercourse banks.

7.0 EVALUATION OF SITES LIKELY TO BE IMPACTED

This section provides an evaluation of sites and finds described in the **Schedule of Sites (5.0)**. As described above **(1.5)**, in order to place the archaeology of the affected area in context, the search area for this project was set at *c* 1km around the centre line of the proposed road. Many sites towards the perimeter of this area are at too great a distance to be affected by construction. The exercise below identifies and evaluates those sites which are close enough to the centre line to be either impacted or detrimentally effected by the construction of the proposed road. **All sites within 200m of the centre line of the preferred route are evaluated.**

Sites are evlauated on the basis of the non-statutory scheduling criteria listed in **7.1, below**, and in Annex II of *DMRB* Volume 11.. These criteria have been systematised by the application of point-scales, as set out in the English Heritage *Monument Evaluation Manual* (Part II). The scoring system is applied in order to facilitate the rapid and consistent application of the non-statutory criteria, and represents the professional judgement of the Stage II Archaeological Consultants.

7.1 CRITERIA USED TO DEFINE LEVELS OF SIGNIFICANCE

The format employed here to evaluate individual sites is based on the scheduling criteria laid down in Annex 4 of *Planning and Policy Guidance 16: Archaeology and Planning* (PPG16; 1990), issued by the Department of the Environment. These are non-statutory criteria used for assessing the national importance of an ancient monument and considering whether scheduling is appropriate. These eight categories, which are not placed in any order of ranking in PPG16, are as follows:

- **Period**
- **Rarity**
- **Documentation**
- **Group Value**

- **Survival**
- **Fragility/Vulnerability**
- **Diversity**
- **Potential**

In order to grade sites systematically within these categories, a point-scale system is applied. The system adopted here is that employed by English Heritage for the Monuments Protection Programme (*Monument Evaluation Manual* Part II). Descriptions of the eight categories and their related point-scales are set out below.

Period

All types of monument that characterise a category or period should be considered for preservation. Period representativity is gauged on a four-point scale as follows:

Low	>40 monument classes characteristic of the period
Medium	30-40 monument classes characteristic of the period
High	15-30 monument classes characteristic of the period
Very high	<15 monument classes characteristic of the period

Rarity

There are some monument categories which in certain periods are so scarce that all surviving examples which still retain some archaeological potential should be preserved. In general, however, a selection must be made which portrays the typical and commonplace as well as the rare. This process should take account of all aspects of the distribution of a particular class of monument, both in a national and a regional context.
Rarity may be gauged on a four-point scale as follows:

1	Abundant	>2000 recorded examples
2	Common	250-2000 recorded examples
3	Rare	50-250 recorded examples
4	Very rare	<50 recorded examples

Documentation

The significance of a monument may be enhanced by the existence of records of previous investigation or, in the case of more recent monuments, by the supporting evidence of contemporary written records.

Archaeological documentation

The level of archaeological documentation will depend very largely on the extent to which the site and/or its setting has been researched. Such work broadly falls into three kinds:

1 Excavation
2 Field survey/recording
3 Environmental analysis

A key concept is that documentation must represent a net gain in our understanding of the monument as it survives in the field, and/or its setting. Documentation may be graded on a three-point scale:

1	Poor	Little or no archaeological documentation available given the particular class of monument under consideration
2	Medium	Average level of archaeological documentation available given the particular class of monument under consideration
3	Good	Abundant archaeological documentation available given the particular class of monument under consideration

Historical documentation

Only applicable in some cases (mainly medieval and post-medieval). A key concept is that only historical documentation which is 'appropriate' to the discrimination procedure should be taken into account. This means historical records which represent a net gain in our understanding of the

importance of the monument as it survives in the field. Historical documentation may be graded on a three-point scale:

1	Poor	Little or no appropriate historical documentation available given the particular class of monument under consideration
2	Medium	Average level of appropriate historical documentation available given the particular class of monument under consideration
3	Good	Abundant appropriate historical documentation available given the particular class of monument under consideration

Group Value

The value of a single monument (such as a field system) may be greatly enhanced by its association with related contemporary monuments (such as a settlement and cemetery) or with monuments of different periods. In some cases, it is preferable to protect the complete group of monuments, including associated and adjacent land, rather than to protect isolated monuments within the group.

Group value may be grade on a three-point scale as follows

1	Low	Little or no association with other contemporary monuments or classes
2	Medium	Spatial and/or stratigraphic association with expected range of contemporary monuments of other classes
3	High	Spatial and/or stratigraphic association with greater than the expected range of contemporary monuments of other classes

Survival/Condition

The survival of a monument's archaeological potential both above and below ground is a particularly important consideration and should be assessed in relation to its present condition and surviving features.

Survival may be graded on a three-point scale:

1	Poor	Monuments which have lost a significant proportion of their original extent or which are very heavily damaged. <40% of the monument remaining
2	Medium	Monuments in average state of preservation, given their age, original extent, and original form. Approximately 40-70% of the monument remaining.
3	Good	Monuments in an above-average state of preservation given their age, original extent, and original form. >70% of the monument remaining.

Fragility/Vulnerability

Highly important archaeological evidence from some field monuments can be destroyed by a single ploughing or unsympathetic treatment; vulnerable monuments of this nature would particularly benefit from the statutory protection which scheduling offers. There are also existing standing structures of particular form or complexity whose value can again be severely reduced by neglect or careless treatment and which are similarly well suited by scheduled monument protection, even if these structures are already listed historic buildings.

Fragility assessments are not always expressed numerically, but for the purposes of this study, a three-point system is applied:

1 Low
2 Medium

3 High

Diversity

Some monuments may be selected for scheduling because they possess a combination of high quality features, others because of a single important attribute.

Diversity of features may be graded on a three-point scale:

1	Low	Fewer than the average number of expected component features present for the particular class of site under consideration
2	Medium	Average number of expected component features present for the particular class of site under consideration
3	High	Greater than the average number of expected component features present for the particular class of site under consideration

Potential

On occasion, the nature of the evidence cannot be specified precisely but it may still be possible to document reasons anticipating its existence and importance and so to demonstrate the justification for scheduling. This is usually confined to sites rather than upstanding monuments.

Potential may be graded on a three-point scale:

1	Low	Below average circumstances for the preservation of structural, artefactual and ecofactual evidence given the form of the monument class
2	Medium	Average circumstances for the preservation of structural, artefactual and ecofactual evidence given the form of the monument class

3 High Above average circumstances for the preservation of structural, artefactual and ecofactual evidence given the form of the monument class

7.2 EVALUATION TABLE

	PERIOD representivity	RARITY (regional)	DOCUMENTATION A: Arch H: Hist	GROUP VALUE	SURVIVAL	FRAGILITY	DIVERSITY	POTENTIAL	
	1 Low 2 Medium 3 High 4 V High	1 Abundant 2 Common 3 Rare 4 V Rare *=National	1 Poor 2 Medium 3 Good	1 Low 2 Medium 3 High	1 Poor 2 Medium 3 Good	1 Low 2 Medium 3 High	1 Low 2 Medium 3 High	1 Low 2 Medium 3 High	TOTAL
Site No 2	?1	2	2 A/ 0 H	3	3	1	2	3	17
Site No 8	2	1	1 A/ 0 H	1	1	1	1	1	7
Site No 11	1	2	0 A/3 H	1	3	2	1	1	14
Site No. 12	1	1	1 A/ 1 H	1	1	1	1	1	9
Site No 13	2	2	2 A/ 0 H	3	2	2	2	2	17
Site No 15	?	2	0 A/ 2 H	1	3	1	1	2	12
Site No 16	2	3	2 A/ 1 H	3	2	3	2	3	21
Site No 17	2	2	2 A/ 1 H	3	2	2	1	1	16
Site No 18	2	2	2 A/ 1 H	3	2	2	1	1	16
Site No 24	2	2	2 A/ 1 H	3	2	2	1	1	16
Site No 32	2	2	2 A/ 1 H	3	3	2	2	1	18
Site No. 35	?	2	0 A/ 2 H	1	3	1	1	2	12
Site No. 39	1	1	0 A/ 1 H	1	1	1	1	1	8
Site No 40	2	2	2 A/ 0 H	3	2	2	1	1	15
Site No 41a	2	3	0 A/ 2 H	1	1	3	1	2	15
Site No 51	2	2	2 A/ 2 H	3	2	2	2	2	19
Site No 53	2	3	2 A/ 0 H	1	?2	3	1	2	16
Site No 54	?	2	0 A/ 2 H	1	3	1	1	2	12
Site no 55/6	1	3*	3 A/ 2 H	3	2	3	2	3	22

7.2.1 Evaluated sites: total scores

The total scores for the 19 evaluated sites are tabulated below, ranked in order of the scores achieved.

SITE NO	55/6	16	51	32	2	13	17	18	24	53
SCORE	22	21	19	18	17	17	16	16	16	16

SITE NO	40	41a	11	15	35	54	12	39	8
SCORE	15	15	14	12	12	12	9	8	7

The highest-scoring sites (those scoring 15 of more points) are **Site Nos. 55/6, 16, .51, 32, 2, 13, 17, 18, 24, 53, 40** and **41a**. In the following sections (**8.0** Impact and **9.0** Mitigation), sites will be discussed in order of the ranking acheived in the evaluation exercise.

8.0 IMPACT

Of the 57 sites in the **Schedule of Sites (5.0)**, above, 19 would be directly impacted by the construction of the proposed road, or would be adversely affected by the close proximity of the road. Impact on these sites will now be described in fuller detail. **Environmental Impact Tables** are set out in **Appendix. 4**. Mitigation proposals are discussed at **9.0**, below.

8.1 Site No. 55/6

The Fosse Way would be impacted by construction of the proposed interchange at Saxondale roundabout, between the A52 and Lings Farm, to the south of the existing Saxondale roundabout. Although the trajectory of the Roman Road has been considerably disturbed by subsequent road construction, the archaeological potential of the road environs is obviously high.

The former parish boundary, on the alignment of the Fosse Way would be similarly impacted.

8.2 Site No. 16

The multi-period archaeology here (a double ring ditch and associated features, probably of Iron Age or Romano-British date, and medieval ridge and furrow) is as yet poorly defined. The double ring ditch at SK 6370 3780 would not itself be impacted, but the linear extension to the northwest (SK 640 379) would be. This feature may be more recent that the ring ditch, but this is uncertain. It is also important to note that the extent of the ring ditch complex cannot be measured confidently from aerial photographs alone. Given the location of the site on partially alluvium-sealed gravel, it is possible that parts of the complex may be sealed by alluvium. The road could therefore impact upon as yet undocumented associated features. Further evaluation of this site would

be necessary in order to define its overall parameters, and to establish, if possible, the nature and date of the impacted linear feature.

8.3 Site No. 51

As noted above (**6.2.2**), the potential for medieval settlement evidence in the immediate environs of the A52 is high. Vestigial and cropmarked ridge and furrow in this area would be impacted by construction of the proposed interchange at Saxondale roundabout.

8.4 Site No. 32

Extant ridge and furrow to the immediate east of Radcliffe Barn Farm would be impacted by road construction. In addition, the extant portion would be severed from the remainder. This complex of ridge and furrow is the best preserved within the search corridor, and as a well-preserved representative section of the surviving portion of a once extensive medieval agricultural landscape, its group value is considerable.

8.5 Site No. 2

The known archaeology to the north west and west of the proposed road (**Site Nos. 1**, **2** and **4**) would not be impacted by the road, which branches off from the trajectory of the existing A52 at SK 626 381, below **Site No. 2**. However, the proposed road will impact on the gravel/alluvium geology immediately to the south of the A52. As discussed above (**6.2.1**), the alluvium may have masked additional archaeology to that recognised from air photographs. The gravels to the north of the A52 are archaeologically rich, and the presence of sites on the gravel/alluvium interface to the south of the road is likely, but could only be determined by further evaluation.

8.6 Site No. 13

The construction of a proposed grade separated junction to the immediate south east of Holme House would impact severely on the ridge and furrow landscape to the south and east of the house.

In this context, the possible potential for settlement activity to the east of Holme House (**6.2.2**) should be borne in mind.

8.7 Site Nos. 17, 18, 24

A portion of the ridge and furrow recorded at each of these sites would be destroyed during construction of the new road.

Site No. 17
Cropmarked ridge and furrow to the immediate south east of Lamcote Fields Farm
Site No. 18
Cropmarked ridge and furrow (northernmost field of the three)
Site No. 24
Vestigial ridge and furrow in the field to the immediate to north east of Hall Farm.

These ridge and furrow traces are not of particular archaeological importance when considered individually. However, as representative sections of the surviving portion of a once extensive medieval agricultural landscape, their group value is considerable.

8.8 Site No. 53

The area of Late Neolithic or Early Bronze Age worked flints, immediately to the north and south of the Saxondale roundabout (NGR centred SK 685396), would be impacted by the construction of the proposed interchange.

8.9 Site No. 40

Ridge and furrow to the north of Lings Farm would be impacted by construction.

These ridge and furrow traces are not of particular archaeological importance when considered individually. However, as representative sections of the surviving portion of a once extensive medieval agricultural landscape, their group value is considerable.

8.10 Site No. 41a

The location of the possible Anglo Saxon tumulus, illustrated by Stukeley as overlying the Roman Road at its highest point, is uncertain. However, it appears to have been located towards the southern limit of the area which will be impacted by construction of the proposed interchange an Saxondale roundabout.

8.11 Site No. 11

Holme House is a Grade II listed Building, immediately adjacent to the A52. The proposed new road would pass immediately to the south of it, sandwiching Holme House between two main roads, at the point of a proposed grade separated junction. The house and its setting would be detrimentally affected, by both the increase in noise levels and by a loss of visual impact. While the house and its setting may be argued to be already affected by the presence of the existing A52, the present proposals compound an existing problem.

8.12 Site No. 15

Meandering watercourse, also the former Holme Pierrepont/Radcliffe on Trent parish boundary, impacted at NGR SK 638 381. The antiquity of this parish boundary is uncertain, and its nature and date at the point of impact should be investigated.

8.13 Site No. 35

The Cropwell Butler/Radcliffe on Trent parish boundary, formed by a canalised, narrow ditch, is bisected by the proposed road at NGR SK 669 385. The antiquity of this parish boundary is uncertain, and its nature and date at the point of bisection should be investigated.

8.14 Site No. 54

The former parish boundary between Saxondale and Cropwell Butler would be impacted at NGR SK 686 395. The original boundary survives as a low bank with some hedge and tree cover. The antiquity of this parish boundary is uncertain, and its nature and date at the point of bisection should be investigated.

8.15 Site No. 12

Well of uncertain date, in the grounds Holme House (see comments on **Site No. 11 (8.1.11)**, above).

8.16 Site No. 39

Well of uncertain date, not directly impacted.

8.17 Site No. 8

The westernmost part of this area of ground disturbance would be impacted. The disturbance is, however, unlikely to be of archaeological significance.

8.2 CONSTRAINTS

8.2.1 Site No. 2

The known archaeology of **Site No. 2** would not be impacted by the proposed road, but it should be emphasised that this is an area of considerable archaeological potential: any changes to the route should avoid this zone. Mitigation proposals for the southern limit of **Site No. 2**, which may extend into the application area, where it would be impacted by construction, are discussed at **9.0**.

8.2.2 The need for further evaluation

Subject to the mitigation measures set out below (**9.0**), the remaining known archaeological sites in direct conflict with the proposed road need not be regarded as a constraint upon construction. However, in the case of those sites for which further evaluation is recommended, a fully informed assessment of the archaeological value of these sites, and hence of the constraints they may place upon construction, can only be made on the basis of the recommended programmes of field work.
These sites are;

Site No. 2
Site No. 11/13
Site No. 15
Site No. 16
Site No. 32
Site No. 35
Site No. 51
Site No. 54
Fieldwalking corridor

9.0 MITIGATION (STAGE II)

A programme of archaeological field evaluation (AFE) is required to gather further information on those significant (or potentially significant) sites which would be impacted by construction of the proposed bypass. This might typically involve some or all of the following techniques: fieldwalking, earthwork survey, geophysical prospection, and/or machine-assisted trial trenching.

On the basis of this information, the extent, nature, location, quality, and date of archaeological remains can in each case be established. Following this, specific mitigatory measures may be drawn up as necessary, to reduce the impact of the scheme on the archaeological remains. Recommendations for AFE are set out below. An appropriate methodology for **fieldwalking** (specified in a number of cases) is set out in section **9.13**.

9.1 Ongoing archaeological evaluation of the A46 (Newark to Widmerpool)

Both the Fosse Way (**Site No. 55**), and the archaeology in the area of its its interchange with the A52 (**Site Nos. 51, 53**, and **56**: see also site No. **41a**, above) will be impacted by construction of a proposed new interchange, linking the proposed new road to the A46. It is important to note that there is already an ongoing programme of archaeological evaluation of the Fosse Way, in respect of Highways Agency proposals to dual the A46 between Newark and Widermerpool. The Design Organisation for this project is David Tyldesley and Associates. Phase 1 of the Fosse Way evaluation was carried out by T&PAT in 1991/2. Phase 2 is currently being undertaken by John Samuels Archaeological Consultants. Further work is most unlikely to be necessary in respect of the present scheme on those sites for which an evaluation has already been proposed in respect of the A46 scheme. This is the case for **Site Nos. 41a, 53, 55**, and **56**.

9.2 Site No. 16

This is a potentially complex cropmark site, of uncertain extent. The site is regularly ploughed, and is therefore suitable for fieldwalking. Fieldwalking should be followed by geophysical prospection, targeted at the cropmarks and also at apparently sterile areas, in order to test the possibility of alluvial cover. Sample trial trenching is also recommended. Unexcavated portions of the site should be subject to a watching brief during road construction.

The possible linear extension to the cropmark feature, which would be impacted by construction, should be examined by geophysical prospection and trial trenching.

9.3 Site No. 51

The extent of village shrinkage at Saxondale is uncertain. It is therefore impossible to establish the extent to which construction would impact upon settlement and related features. Further documentary research should be undertaken, combined with instrument assisted survey of the extant earthwork features. **Site No. 51** itself should be subject to a watching brief during construction, as the potential for settlement activity in this area is high.

9.4 Site No. 32

The extant ridge and furrow at Radcliffe Barn Farm is well preserved, and its destruction is to be regretted. If destruction of this site is unavoidable, the site should be fully surveyed, and trial trenching should be carried out to establish the presence/absence of archaeological features within or beneath the ridge and furrow. The site should also be subject to a watching brief at the time of construction.

9.5 Site No. 2

Further evaluation will be necessary on the trajectory of the proposed road as it passes through the gravel/alluvium interface to the south of the A52

between Lamcote Field and Bassingfield Lane. It is widely agreed that many cropmark sites of the Trent Valley may be sealed by alluvium (Knight and Howard 1994, 15), and this possibility should be tested in the present instance. Fieldwalking is recommended (much of this area is regularly ploughed), followed, where necessary, by geophysical prospection and trial trenching.

9.6 Site No. 13/11

The nature of the earthworks to the east of me House should be investigated. Fieldwalking is inappropriate here, as the site is under permanent pasture. Instrument-assisted survey is recommended, followed, where necessary, by geophysical prospection and trial trenching. In addition, as the site is on the gravel/alluvium interface, test-pitting should be carried out to test for the presence/absence of alluvium enclosed features in the impacted area.

9.7 Site Nos. 17, 18, 24, and 40

While much of the surviving evidence for the medieval agricultural landscape between Radcliffe upon Trent and Saxondale is cropmarked or vestigial, rather than upstanding, it is particularly unfortunate that construction of the road would contribute so heavily to the destruction of a historically important landscape. Fieldwalking should be carried out over all impacted ridge and furrow (cropmarked, vestigial, and upstanding) which is not under permanent pasture.

9.8 Site No. 53

The flint scatter (**Site No. 53**) to the immediate north and south of the present roundabout will be impacted by construction of the proposed interchange of the A52 and A46. The site therefore also falls within the brief of the ongoing archaeological evaluation of the A46. It is understood from the Phase 2 archaeological consultants that the level of Phase 2 assessment recommended here is a watching brief at the time of

construction (T Sumpter, John Samuels Archaeological Consultants, *pers. comm.*).

9.9 Site No. 41a

Evaluation of this site is already planned, as part of the second phase of evaluation of the Fosse Way in respect of the Highways Agency scheme to improve the A46 between Newark and Widmerpool.

9.10 Site No. 15

The low evaluation score awarded to this feature reflects present uncertainties, rather than the potential archaeological significance of the parish boundary. Further evaluation should be undertaken prior to construction. Geophysical prospection of the boundary and its environs at the point of impact is recommended. Trial trenching may subsequently be necessary. Geophysical prospection should also be supplemented by auguring, for the retrieval of palaeo-environmental evidence.

9.11 Site No. 35

The low evaluation score awarded to this feature reflects present uncertainties, rather than the potential archaeological significance of the parish boundary. Further evaluation should be undertaken prior to construction. Geophysical prospection of the boundary and its environs at the point of impact is recommended. Trial trenching may subsequently be necessary. Geophysical prospection should also be supplemented by auguring, for the retrieval of palaeo-environmental evidence.

9.12 Site No. 54

The former parish boundary between Saxondale and Cropwell Butler (**Site No. 54**) is not impacted by the A46 scheme, and should therefore be investigated. Geophysical prospection of the boundary and its environs at the point of impact is recommended. Trial trenching on and below the bank may be considered, both in order to date the construction, and to determine the presence/absence of features beneath it.

9.13 Impact on potential archaeology: assessing the unknown quantity

As discussed above, the archaeological **potential** of the application area (beyond its known archaeology) cannot be better quantified without further evaluation. Fieldwalking has been recommended in a number of cases above. In addition, a programme of field walking is recommended within an appropriate corridor along the entire trajectory of the proposed road. A corridor 200m to either side of the centre line may be considered an appropriate search area for this programme of work. Intervals between walkers should not exceed 20m, and in view of the potential for worked flint and pre-medieval pottery suggested by the walk-over survey, should preferably not exceed 10m. All artefacts should be retrieved, with the exception of obviously modern material.

Field walking is particularly appropriate in the present case, since a reasonable proportion of the proposed route is regularly ploughed. A land use analysis was carried out in the course of the limited walk-over survey undertaken for this study, and identified land use in the 30 fields or field units on the direct trajectory of the road (**Illustration No. 8**). In January 1995, land use was as follows:

Pasture/improved pasture	11
Rough ground	1
Ploughed	3
Stubble	2
Sown	13
Total	**30**

As this table suggests, approximately one third of the immediate road line is on rough ground or under permanent pasture, and would therefore not be suitable for survey. The remaining two thirds, however, appear to be regularly ploughed (the majority having been sown with a young crop of winter wheat or similar at the time of the walk-over survey), and would therefore be suitable for fieldwalking later in the year, when the crops are removed and the fields re-ploughed. Although the walk-over was very

limited in scope, concentrating only on the immediate trajectory of the road, it does offer an indication of the general land use of the area, and suggests that field-walking would be an appropriate strategy in this instance.

9.14 Palaeo-environmental data

Auguring has been recommended for the watercourses (**Site Nos. 15** and **35,** above). Palaeo-environmental data may also be recovered from boreholes made for engineering purposes. Provision should therefore be made for an archaeologist/geomorphologist to be present at all geotechnical investigations involving coring or test-pitting along the line of the route.