

| INDEX DATA | RPS INFORMATION |
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| Scheme Title | Details |
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A14(M): BAR HILL TO M1-A1 LINK

FINAL DRAFT

Part 2 - Cultural Heritage Stage 2 Report

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Archaeological Constraints

| RPSC/A/1/R | MI-AI Link to Hemingford Abbots Junction part Red Route |
|-------------|--|
| RPSC/A/1/G | M1-A1 Link to Hemingford Abbots Junction part Green Route |
| RPSC/A/I/O | MI-AI Link to Hemingford Abbots Junction part Orange Link |
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| RPSC/A/4/R | MI-AI Link to Hemingford Abbots Junction part Brown Route |
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| RPSC/A/4/BA | MI-AI Link to Hemingford Abbots Junction part Basic Option |
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| RPSC/A/5/GY | M1-A1 Link to Hemingford Abbots Junction part Grey Link |
|--------------|---|
| RPSC/A/5/G | MI-AI Link to Hemingford Abbots Junction part Green Route |
| RPSC/A/6/R | M1-A1 Link to Hemingford Abbots Junction part Red Route |
| RPSC/A/6/G | MI-AI Link to Hemingford Abbots Junction part Green Route |
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| RPSC/A/7/BA | M1-A1 Link to Hemingford Abbots Junction part Basic Option |
| RPSC/A/7/P | M1-A1 Link to Hemingford Abbots Junction part Purple Route |
| RPSC/A/8/B | M1-A1 Link to Hemingford Abbots Junction part Brown Route |
| RPSC/A/8/R | M1-A1 Link to Hemingford Abbots Junction part Red Route |
| RPSC/A/8/G | M1-A1 Link to Hemingford Abbots Junction part Green Route |
| RPSC/A/9/BL | Hemingford Abbots to Trinity Foot Junction part Black Route |
| RPSC/A/10/BL | Hemingford Abbots to Trinity Foot Junction part Black Route |
| RPSC/A/11/BL | Hemingford Abbots to Trinity Foot Junction part Black Route |
| RPSC/A/12 | Railway Option A |
| RPSC/A/I3 | Railway Option B |

RPSC/A/14 Railway Option D

RPSC/A/15 Railway Option F

RPSC/A/16 Railway Option H

- This report is the Stage 2 Cultural Heritage Assessment of the proposed improvements of the A14(M); Bar Hill to M1-A1 Link. It has been prepared using guidance from the Department of Transport's *Design Manual for Roads and Bridges* (DMRB), Volume 11, Section 3, Part 2, Cultural Heritage.
- S2 The Study Area has been divided into two sections:
 - M1-A1 Link to Hemingford Abbots; and
 - Hemingford Abbots to Trinity Foot.
- The assessment consists of a detailed desk top study identifying the known cultural heritage constraints in the study area. These are divided into:
 - an assessment of effects of each route option between the M1-A1 Link and Hemingford Abbots and the Hinchingbrooke interchange and of the proposed route between Hemingford Abbots and Trinity Foot, near Bar Hill; and
 - a comparison of the route options.
- S4 Cultural heritage constraints that would be affected by the schemes include county Sites and Monuments Record entries, sites identified from aerial photographs, Scheduled Monuments, Listed Buildings and Conservation Areas.
- The on-line Huntingdon Bypass between the M1-A1 Link and Hemingford Abbots (Basic, Purple, Grey, and Orange Links) would pass through Huntingdon and north of Godmanchester, and would effect areas of high archaeological potential, Scheduled Monuments, listed buildings and Conservation Areas. Widening options are not recommended.
- The southern bypass off-line Routes (Brown, Red and Green) would have fewer known impacts than the on-line widening alternatives. The revised Brown Route would follow a shorter route which would avoid additional direct impact to a Scheduled Monument north of Brampton. Subsoil archaeology, known and unknown, would form the major type of constraint on this option. The Red and Green Routes have very few known effects. Again, the greatest effect of the options would be known and unknown subsoil archaeology. The Purple Route also has few effects due to this being the option of minimum construction. A summary of effects and recommendations is given in Table S.1.
- The Black Route section between Hemingford Abbots and Trinity Foot would not affect any Scheduled Monument but follows the alignment of a Roman road that has continued in use, and so the surrounding area may be of archaeological potential. Some listed buildings would have their settings affected, as would Fenstanton Conservation Area.
- S8 This report does not include cultural heritage constraints in connection with contractors' compounds and other construction effects, details of which are not yet available.

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Table SI - Summary of Known Effects

| Known | Black Route | - | Mİ-A1 LIN | MI-A1 LINK TO HEMINGFORD ABBOTS | RD ABBOTS | | |
|-----------------------------|--|--|---|--|---|--|---|
| Heritage Constraint | | Basic Option/ Purple Route | Huntingdon Bypass On-line Option with Grey Link | Huntingdon Bypass On-line Option with Orange Link | Brown Route | Red Route | Green Route |
| Sites and Monuments Records | Follows alignment of Roman road, surrounding area is of high archaeological potential. | Passes through Huntingdon and north of Godmanchester, both areas of high archaeological potential. | Passes through areas of known archaeology and areas of high archaeological potential. | Potential for unknown subsoil archaeology and passes through areas of high archaeological potential. | Passes through areas of known archaeology. | Passes through area where there is little known archaeology. | Passes through area where there is little known archæology. |
| Scheduled Monuments | None affected. | Settings of Scheduled Monuments in Huntingdon affected. | Scheduled Monument north of Brampton severely affected and Scheduled Monuments in Huntingdon affected. | Scheduled Monuments in Huntingdon affected. | Moderate effect on Nun's Bridge Scheduled Monument near Brampton. | No Scheduled Monuments affected. | No Scheduled Monuments affected. |

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| | Green Route | Very few impacts |
|---|--|--|
| | Red Route | Very few impacts |
| RD ABBOTS | Brown Route | Impact on listed buildings and Brampton Conservation Area. |
| M1-A1 LINK TO HEMINGFORD ABBOTS | Huntingdon Bypass On-Line Option with Orange Link | Two listed milestones affected. Huntingdon and Godmanchester Conservation Areas and listed buildings affected. |
| MI-A1 LIN | Huntingdon Bypass On-line Option with Grey Link | No listed buildings affected. Huntingdon and Godmanchester Conservation Areas and listed buildings affected. |
| | Basic Option/ Purple Route | Huntingdon and Godmanchester Conservation Areas and listed buildings affected. |
| Black Route | | Some LBs suffering impact on their setting. Effect on setting of Fenstanton Conservation Area |
| Known Cultural Heritage Constraint | • | Listed Buildings and Conservation Areas |

tc739/v2/1875 RPS Clouston Sheet 3 of 3

| Known Cultural Heritage Constraint | Black Route | | MI-AI LIN | MI-AI LINK TO HEMINGFORD ABBOTS | RD ABBOTS | | ` |
|---|--|--|---|---|---|--|--|
| | | Basic Option/ Purple Route | Huntingdon Bypass On-line Option with Grey Link | Huntingdon Bypass On-Line Option with Orange Link | Brown Route | Red Route | Green Route |
| Recommend- ations | Research defining areas of archaeological potential, especially arcund proposed local roads. | Purple Route Recommended as option of minimum construction | Advice from English Heritage should be sought Scheduled Monument north of Brampton. On-line widening not recommended. | If chosen as preferred route on-depth field assessment necessary. Online widening not | if chosen as preferred route in depth field assessment necessary. | If chosen as preferred route, in depth field assessment necessary. | If chosen as preferred route, in depth field assessment necessary. |

tc739/v2/1875 RPS Clouston

- 1.1 RPS Clouston were commissioned by L G Mouchel and Partners Ltd in January 1991 to undertake a preliminary assessment of cultural heritage constraints as part of the assessment of the proposed improvement of the A14 Bar Hill to M1-A1 Link, L G Mouchel and Partners are engineering consultants to the Highways Agency (HA).
- 1.2 The study area has been amended and the options now under consideration lie between the M1-A1 Link and Trinity Foot, near Bar Hill.
- 1.3 A summary of the known cultural heritage information was included in the preliminary appraisals carried out in 1991.
- 1.4 In December 1993, RPS Clouston were commissioned to prepare a Stage 2 Cultural Heritage assessment in accordance with the *Design Manual for Roads and Bridges* (*DMRB*), Volume 11, Section 3, Part 2, Cultural Heritage.
- 1.5 Detailed descriptions of all the route options are given in Section 3.
- 1.6 This report describes and assesses features of cultural heritage value within the study area, defined as an area of 1 kilometre surrounding all the route options. The effects of the proposals on them are analysed in Sections 5 and 6 and recommendations made in Sections 7 and 8.

2.1 Sources of Cultural Heritage Information

This has been a detailed desk-top assessment in line with the recommendations of the *DMRB*, Volume 11, Section 3, Cultural Heritage. It is a Stage 2 study. The various components included in this cultural heritage assessment are all marked on the accompanying figures RPSC/A 1 to 11. Sources used in the assessment include the following:

- Cambridge County Council Sites and Monuments Record (SMR) This
 includes find spots of artefacts, archaeological monuments, earthworks, sites
 of archaeological interest and sites plotted from aerial photograph traces, such
 as cropmarks, soilmarks and ridge and furrow earthworks. No distinction is
 made in the SMR with reference to the importance of sites. The SMR was
 consulted in February 1994 and this information updated in May 1995.
- Cambridge County Council Listed Building Schedule (LB) These are graded, (Grade I, Grade II* and Grade II, decreasing in importance) and are given statutory protection. Cambridge County Council also holds lists of buildings of local interest which have no statutory protection. The latter have not been included in this study due to the profusion of statutorily protected buildings. Many listed buildings also appear on the SMR and these have been cross referenced. Listed Buildings (LBs) are protected by the provisions of the Planning (Listed Buildings and Conservation Areas) Act 1990. Consent is required for any work which would affect a LB, including its curtilage and setting.
- Scheduled Monuments Lists There are 11 Scheduled Monuments within the study area (1km surrounding all the route options) and many others close by, Statutory protection for archaeology is principally enshrined in the Ancient Monuments and Archaeological Areas Act of 1979, amended in 1983 by the National Heritage Act. Nationally important sites are listed in a Schedule which is maintained by the Secretary of State for National Heritage. There are currently some 12,750 Scheduled Monuments in England, but the 10 year Monuments Protection Programme (MPP) review is in progress which could lead to a substantial increase - possibly 5 fold - in the total. Some of the Scheduled Monuments within the study area are currently under review. The works which require the consent of the Secretary of State are any which would have the effect of demolishing, destroying, damaging, removing, repairing, altering, adding to, flooding or covering up the monument. Proposals which would affect Scheduled Monuments must be approved by the Secretary of State and Scheduled Monument consent obtained prior to works commencing. Although work which may affect the setting of a Scheduled Monument does not require Scheduled Monument consent it is a relevant planning consideration. English Heritage (The Historic Buildings and Monuments Commission for England) advises the Secretary of State on scheduling and other archaeological and historic building matters.

- English Heritage Registered Historic Parks and Gardens (HPG) There are no designations within the study area according to English Heritage lists.
- Site inspection and reconnaissance survey. These have provided additional information on potential impacts and have identified some sites which would have not otherwise been recorded. These are archived and will be submitted to Cambridge County Council Sites and Monuments Record in due course. A full walkover survey has not been carried out for any of the route options, but the reconnaissance survey comprised a limited survey, from public access points of fields where potential impact could occur for the Brown Route and parts of the Red and Green Routes. This survey was not complete as some areas could not be visited because of lack of public access. In places high crops made assessment impossible. This survey does not perform the same function as a full walkover survey as defined in the DMRB, but has allowed the identification of some additional constraints, and some potential or possible constraints. The additional information provided has been incorporated into the assessment of effects database, so allowing more informed judgements to be made.
- National Monuments Record Centre Library of Aerial Photographs (Swindon). Aerial photograph traces have been identified in addition to those recorded in the county SMR and are marked on the archaeological constraints maps.
- Engineer's Aerial Photographs. Aerial photographs taken of the study area for engineering purposes during February 1995 by E.S.L. have been used to identify additional aerial photograph traces.
- Local history information. This has been obtained from various sources including Cambridgeshire County Council publications, the Victoria County History of Huntingdonshire and Proceedings of the Cambridgeshire Antiquaries Society.
- Cartographical information. This has been plotted from various Ordnance Survey editions.
- National Trust inalienable land. No land within the study area is owned by the National Trust so, therefore, none has been designated inalienable.
- Consultation with the Cambridgeshire County Archaeologist regarding the proposals will take place on approval of this report.

2.2 Assessment of Effects

The assessment of the EFFECT of a proposal depends upon the interaction of the IMPORTANCE of the features and sites affected, and the degree of IMPACT of the proposal. There are occasions when insufficient data is known to make informed judgements and an assessment of RISK is all that can be offered.

IMPORTANCE: there is no standard scale of importance used in cultural heritage studies, and various systems are used by different agencies.

For archaeology the English Heritage Scheduled Monument designation criteria are used to assess monuments. The features considered here are not necessarily of the quality which would qualify them as Scheduled Monuments but the same criteria are useful guidelines for assessing the significance of any site using professional judgement. The English Heritage criteria are:

- i) Period: all types of monuments that characterise a category or period should be considered for preservation.
- ii) 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 regional context.
- iii) 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.
- iv) Group Value: the value of a single monument (such as a field system) may be greatly enhanced by its association with related contemporary monuments of the same period. 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.
- v) Survival/Condition: the survival of a monument's archaeological potential both above and below ground is a particularly important consideration and should be reassessed in relation to its present condition and surviving features.
- vi) 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 confers. There are also 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 to protection by Scheduled Monument legislation, even if these structures are already listed historic buildings.
- vii) Diversity: some monuments may be selected for scheduling because they possess a combination of high quality features, others because of a single important attribute.

viii) 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.

The assessment of importance of built structures is taken from the Listed Building criteria and grading.

To avoid the official implications of such terms as "National", "County" and "Local" in this report the following categories are used to indicate relative importance:

Major: the highest status of site eg. Scheduled Monuments, Listed

Buildings Grade I and II*, using the DoE criteria to assist in

the judgement.

Average: the bulk of sites with reasonable evidence of occupation,

ritual, industry, etc. Listed Buildings Grade II.

Minor; sites with some evidence of human activity, but in a

fragmentary or poor state, buildings of local importance.

Unimportant: destroyed, non-antiquities, random stray finds, buildings of no

merit.

Uncertain: insufficient evidence available to judge importance.

IMPACT: as with importance there is no agreed terminology or definition concerning the degree of impact. It cannot be a simple percentage calculation of the proportion of a feature etc. which would be destroyed because some parts of a site may be more important than others, or partial destruction may lead to the loss of all significance.

The impact of the proposals on cultural heritage could be from four principal sources:

- i) physical damage through soil disturbance in the course of construction;
- ii) temporary noise and vibration in the period of construction; and
- iii) increased noise and vibration generated by the proposed improvements once in use.
- iv) visual intrusion on setting.

The assessment of the degree of impact must be as qualitative as the judgement of importance. The following terms are used in this report:

High;

loss of all or majority of significant features, such that the site or

building is effectively destroyed or scriously damaged.

Medium:

loss of sufficient part of sites or encroachment on their setting such that their integrity is compromised, or enough damage to buildings' fabric or ambience to impair their enjoyment, understanding or

academic potential.

Low:

slight damage or encroachment, such that sites or buildings and their

settings are largely retained.

None:

no discernable impact.

Unknown:

there is insufficient information regarding the design of the proposal

or the extent/location/ or layout of the feature to be able to make a

judgement.

EFFECT: the effect of a proposal is a combination of the previous two judgements. The effect of a high impact on a minor site is obviously different to that of a high impact on a major site.

The effects of the impacts would be different in each case. The physical destruction of archaeological features would result in permanent loss of material, noise could result in temporary or permanent loss of amenity, and vibration could cause structural damage. The differing effects would be experienced by different categories of cultural heritage features. Below ground features and standing structures may be affected by earthmoving, whereas standing structures could be affected by vibration. Noise and visual intrusion may adversely affect the experience of observers of cultural heritage features.

Again there is no standardised terminology to categorise these judgements; this report uses the following:

Maximum;

high impact on a major site.

Very Severe:

medium impact on major site, or high impact on an average site.

Severe:

low to medium impact on a major site, medium impact on an average

site, or high to medium impact on a minor/average site.

Moderate:

low impact on a major site ranging to high impact on a minor site.

Minimal:

low impact on average site to minor impact on medium site.

None:

no impact or non-site,

RISK: this is an assessment of the likelihood, and/or the likely severity, of an effect in situations where either the importance of the site or the degree of impact is unknown. If both are unknown no judgement can be offered, but there may be other evidence which suggests potential risk. The risk refers to the probability that the proposal would cause a significant effect, where significant means sufficient to warrant mitigation measures. The following terms are used in this report:

Very Probable: high impact on a site where the importance is uncertain or a major site where the impact is unknown.

Probable:

medium impact on a site where the importance is uncertain, or an

average site where the impact is unknown.

Possible:

low/medium impact on a site where the importance is uncertain, or an

average/ minor site where the impact is unknown.

Unlikely:

low/no impact on a site of uncertain importance, or an unknown

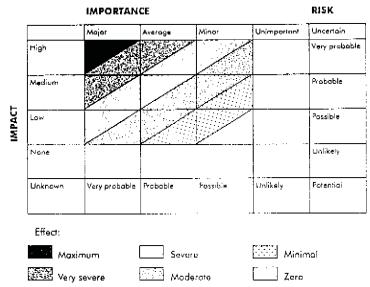
impact on a site of minor/no importance.

Potential:

used when evidence from surrounding areas or similar situations

would suggest that features might exist.

Table 1. Matrix of Effects



2.3 Scoring: In order to draw conclusions using the methodology outlined above, numerical values are given to the known degrees of effect as follows:

| Degree of effec | Numerical Value |
|-----------------|-----------------|
| Maximum | 5 |
| Very severe | 4 |
| Severe | 3 |
| Moderate | 2 |
| Minimal | 1 |
| Zero | 0 |

2.4 This allows the total value of known effects for each route option to be scored. As far as cultural heritage is concerned a high total value of known effects for a given route option would be a more damaging route option than a route option with a low total value of known effects.

2.5 This methodology has been used when comparing alternative route options, in order to assess the relative degree to which each route option would effect cultural heritage. This is set out in table 6.10 in this report.

Lighting Proposals

2.6 There would be some additional impacts to cultural heritage features with the introduction of lighting. This would increase the potential impact on the settings of listed buildings and Scheduled Monuments, Although direct impact is not anticipated, impact on the settings of listed buildings and Scheduled Monuments is a planning consideration that should be taken into account. These additional impacts have not been included in any comparative calculations due to the general nature of the current proposals.

3 THE HIGHWAY IMPROVEMENT PROPOSALS

3.1 Introduction

The following descriptions of the proposals have been provided by L G Mouchel and Partners Ltd.

The highway improvement proposals presented at public consultation consist of:

<u>The On-line Section</u> (see 3.2 below), and a choice between <u>The Southern Bypass</u> (Off-line Section) (see 3.3 below), and <u>The Huntingdon Bypass Controlled Motorway Option</u> (see 3.5 (g) below).

3.2 The On-line Section (Black Route) Hemingford Abbots to Bar Hill

The On-line Section is an upgrading of the existing A14 to 3-lane motorway standard between Godmanchester and Junction 14 of the M11 motorway. This upgrading includes a 2-lane local road running mostly along the north side of the new motorway to carry non-motorway traffic and traffic accessing side roads not directly connected to the new motorway. This option would incorporate 15 metre lighting columns with high pressure sodium luminare and full cut off lanterns.

3.3 The Southern Bypass (Off-line Section)

The Southern Bypass is a new 3-lane motorway bypassing Huntingdon and Godmanchester to the south, to provide a free flow connection between the M1-A1 Link near Ellington and the A14 near Hemingford Abbots. These routes would incorporate 10 or 12 metre lighting columns with high pressure sodium luminares and full cut off lanterns. The following three options for this "off-line" section of the highway improvement have been considered:

3.3.1 Brown Route

The west limit of this route is a grade separated interchange joining the proposed M1-A1 Link road and the proposed A1(M) motorway in the vicinity of Brampton Interchange. The route shares a common corridor with the M1-A1 Link to the north of Brampton. Further east it skirts the recreational lakes forming part of the Hinchingbrooke Country Park. By passing beneath the railway the vertical alignment is as low as possible above flood levels thereby minimising the need for imported fill material.

The route passes beneath the B1043 Godmanchester to Offord Road, beneath Silver Street which runs due south from Godmanchester and beneath the A1198 "Ermine Street". A grade separated dumb-bell connection is provided at "Ermine Street" for westbound "off" and eastbound "on" traffic only. The Brown Route runs into the existing A14 corridor at its east limit in the vicinity of the existing Hemingford Abbots Junction.

As part of the Brown Route scheme, the existing A14 is confined to local traffic only between Godmanchester Interchange and Hemingford Abbots Junction in order to discourage use of the Huntingdon Bypass by through traffic.

3.3.2 Red Route

The west limit of this route connects to the M1-A1 Link Road at a grade separated junction situated about 2km west of the A1 Great North Road.

The Red Route crosses the proposed A1(M) motorway at a grade separated junction. It passes at natural ground level beneath the A141 which is elevated above its existing level.

Immediately east of the B1514 it crosses a landfill site where tipping operations are currently in progress.

Continuing east from the landfill site, the route rises above the River Great Ouse to clear the railway, which is in cutting. East of the railway the Red Route falls steadily from above the B1043 to meet natural ground level beneath an elevated Silver Street. Continuing east from here to join the existing A14 the Red Route is similar to the Brown Route.

In common with the Brown Route, the existing A14 is confined to local traffic only between Cow Lane junction and Hemingford Abbots.

3.3.3 Green Route

This route is similar to the Red Route but it deviates further south. It is therefore longer and more expensive.

West of the village of Brampton, the Green Route passes above Park Road and intersects the existing A1 Great North Road alignment at its junction with the B1514. At approximately this location, the Green Route is proposed to connect to the A1(M) motorway at a grade separated junction. To the east of this junction the Green Route takes a due easterly course to rise on 9m embankment across the River Great Ouse and the railway. East of the railway it cuts through the highest ground along its profile to pass beneath the B1043. From here the Green Route curves left to follow the line of the other off-line route options, but at a generally higher elevation passing above Silver Street. Continuing east from here to join the existing A14, the Green Route is similar to the Brown and Red Routes.

In common with the Brown and Red Routes, the existing A14 is confined to local traffic only between Cow Lane junction and Hemingford Abbots.

3.4 The Huntingdon Bypass On-line Options

3.4.1 As an alternative to the off-line southern bypass solution, an upgrading of the existing A14 Huntingdon Bypass between Alconbury and Hemingford Abbots to 3-lane motorway with lighting and connections to the A14 (M1-A1 Link) was considered.

Six upgrading options were investigated, each varying in level and alignment at the railway crossing and across Mill Common:

| a) | Railway Option A | using a widened existing railway viaduct |
|----|------------------|---|
| b) | Railway Option B | using the existing Railway Viaduct for northbound traffic and a new bridge for southbound traffic |
| c) | Railway Option D | passing a tunnel beneath the railway |
| d) | Railway Option F | passing on a new structure above railway and B1514 Brampton Road |
| c) | Railway Option H | passing on a new structure above railway at existing B1514 Brampton Road level with the B1514 Brampton Road diverted to the north |

3.4.2 Each of the Railway Options combines with one of the following connections to the M1-A1 Link Road. These would incorporate 10 or 12 metre lighting columns with high pressure sodium luminares and full cut of lanterns.

Orange Link

The Orange Link diverges from the A14 (M1-A1 Link) at the west limit of the study area, near Ellington. It carries the main west-east traffic flow over the proposed A1(M) and its non-motorway route, without connection, about Ikm north of the existing A1(M)/A14 (M1-A1 Link) junction at Brampton Hut. East of the proposed A1(M) it curves sharply to the east, on minimum permitted radius, to skirt in cutting the north side of the gravel pits and Huntingdon racecourse. It passes beneath the A14 (M1-A1 Link) to merge into the A14 Huntingdon Bypass at Views Common, situated to the east of the existing Hinchingbrooke Interchange. The existing interchange is replaced by an off-line "dumb-bell" type junction relocated approximately 150m to the north.

Grey Link

The Grey Link makes maximum use of the A14 (M1-A1 Link) and is considered the least complicated scheme providing free flow from the M1-A1 Link to the A14 (M1-A1 Link) to the A14 Huntingdon Bypass. The Grey

Link has generally minimum permitted radii to allow west-east traffic to bypass the Hinchingbrooke Junction which is relocated to the north by approximately 100m to accommodate the link roads.

3.5 Three further links were eliminated in earlier studies on economic and environmental grounds

All the above full width Huntingdon Bypass upgrading options (a) to (e) and their associated Orange and Grey Links would require landtake in environmentally sensitive areas and would be uneconomic. They have now been eliminated as viable options for Public Consultation.

In order to reduce the environmental impact and to improve the economics of the Huntingdon Bypass widening solution, the following two further options were investigated:

f) Basic Option sub-standard alignment using existing structures and existing connections to A14 (M1-A1 Link) at Hinchingbrooke, but requiring some landtake

Purple Route (Controlled

Motorway Option)

g)

narrow lanes using existing structures and existing highway boundaries, ie no landtake, with some hardshoulder omission and 50 mph speed limit with signal control between Hinchingbrooke and Godmanchester Interchanges.

The Purple Route was more recently selected for presentation at Public Consultation as a viable alternative to the Southern Bypass solution.

A plan showing all of the route options is at Figures RPSC/A/A and B.

Geological Background

- 4.1 The solid geology of the study area is primarily Oxford Clay, which consists of grey mudstones with infrequent stone bands. The south-eastern part of the Study Area is made up of Kimmeridge Clay, Corallian Beds, Lower Greensand and Gault Clay. These are partially overlain by the drift geology which consists here of glacial till, river gravels and alluvium. The archaeological information available for each of these areas of different geology may vary with the differing human exploitation of them. In addition, there will be variations in the ease with which archaeological remains can be detected on different geologies. Subsequent land uses (such as medieval ridge and furrow earthworks) may also mask earlier archaeological remains.
- 4.2 The topography of the area is dominated by the effect of the valleys of the River Great Ouse and the Ellington/Alconbury brook. These water courses meet at Huntingdon, producing a wide flat floodplain made up of alluvium surrounded by a broad area of river gravels on both sides of the river, on which Huntingdon (to the north) and Godmanchester (to the south) are built. The slightly higher ground to the south and east of Godmanchester is on Oxford Clay and glacial till. Further east lie more river gravels associated with the Great Ouse, all forming a naturally flat, regular landscape.
- 4.3 Crop marks detected on aerial photographs are generally absent from the Oxford Clay. This may be due to the nature of the soil rather than from the lack of archaeological features. Glacial till has recently been shown to have been more intensively occupied in the prehistoric period than was previously thought. River gravels may also contain palacolithic material and the well drained soils which develop on them have attracted human activity from then onwards. On flood plains the periodic deposition of alluvium may have buried archaeological features, making their detection by conventional extensive methods difficult.

Archaeological and Historical Evidence

4.4 Palaeolithic (pre-8,000 BC)

Palaeolithic stone tools have been found in the Cambridgeshire river gravels, which have been exploited for quarrying. Whilst many of the sites marked on the SMR are now destroyed, areas of similar geology are likely to have a high potential for the discovery of such artefacts. There is very little evidence from this period other than single finds or clusters of stone tools in river gravel.

4.5 Mesolithic (c.8,000 BC-c.4,000 BC)

A mesolithic site (with later neolithic activity) was excavated just east of Godmanchester close to the A14/A1198 junction (formerly the A14/A604 junction) in 1990. It was concluded from the finds that this site was visited and perhaps used as an encampment during the mesolithic period. Most evidence of mesolithic activity

in the region, however, comprises isolated finds of flint tools.

4.6 Neolithic (c.4,000 BC-c.2,000 BC)

Much work has been carried out recently on an extensive complex of features of neolithic date, north of Godmanchester. The exact nature of the large enclosure and the cursus discovered there has yet to be ascertained, but their importance is undoubtedly major. A cursus is a very long narrow enclosure thought to be of ritual or religious significance. The locations of posts erected around 3800 BC correspond to solstice or equinoctial positions of the sun and moon. There may be associated features over a wide area. Worked flint tools of this date have been recorded on the SMR as isolated finds and neolithic ditches and other features have shown up as cropmarks. Although part of this site was protected as a nationally important scheduled monument, large scale gravel extraction has taken place and the monument survives only as records made during the archaeological excavation that took place beforehand.

It has been suggested that during excavations on Scheduled Monument CB 121 (prehistoric cropmarks north of Brampton) in advance of construction of the M1-A1 link road that the double ditches found may represent those of another cursus monument.

4.7 Bronze age (c.2,000 BC-c.700 BC)

Late Neolithic/Early Bronze Age flintwork was recovered from the excavation at the A14/A1198 junction. During this period that area is thought to have been part of a farmstead, although no structural remains were recovered. Many ring ditches which can be identified from aerial photographs date from the bronze age and are probably the ploughed out remnants of barrows. Aerial photographs taken in mid to late summer over cultivated river gravels are particularly informative when it comes to the identification of such crop marks.

4.8 Iron age (c.700 BC-AD 43)

Iron age pottery survives much better than earlier types and it may be for this reason that a greater number of sites of this period have been identified through pottery finds in the region. In addition, some sites have been identified from cropmarks seen on aerial photographs, and several such sites have been excavated. An iron age settlement was excavated during the 1960's north of Brampton (forming the southern portion of SM CB 121, now built over).

4.9 The Romano-British period (AD 43-c.AD 410)

Remains from the Roman occupation are profuse in this area. Godmanchester was a major fortified Roman town, having good links with the river and Roman road system. Existing streets seem to preserve the planned layout of the Roman period. The alignments of many Roman roads are still preserved as modern routes and the section of the present A14 between Godmanchester and Trinity Foot, the proposed on-line section, follows the alignment of a major Roman road which converged with the Roman road known as Emine Street at Godmanchester. Remnants of a Roman field

system have been identified around Godmanchester, and remains of corn drying and granary structures have been identified within the town. The Roman town went through periods of prosperity such as during the late 3rd century AD when Godmanchester had a large *mansio* (a Roman post house or inn) with a bath house complex, and a wall surrounding the town was constructed. There was a marked decline in prosperity during the 4th century AD.

A Roman round barrow at Emmanuel Knoll was excavated in 1914, and an inhumation and grave goods recovered. A further mound on which the so-called Emmanuel Knoll Tree formerly stood was excavated in 1971, in advance of the proposal by the Eastern Road Construction Unit of the Department of Transport to improve the A604 (now the A14) east of Godmanchester in 1972-3. This mound had been considered to be another tumulus and was protected as a Scheduled Monument, but it turned out to be formed by 19th century ditching around the tree and was descheduled.

4.10 Early to Late Medieval (410 AD - 1500 AD)

There is documentation in the form of charters relating to the Anglo-Saxon period in this area, and stray finds from this period are included on the SMR. During the late 9th century raids and eventual occupation of the Huntingdonshire area by Danish armies took place. Huntingdon and Godmanchester were later recaptured by the Saxons by 917 and refortified. Godmanchester appears in the Domesday survey of 1086 as land belonging to the crown, containing three water mills.

During the medieval period, Huntingdon formed a market centre and town. Parts of the road network laid out during the Roman period were maintained and utilised. Huntingdon Castle held a defensive position at an important crossing point of the River Great Ouse. The study area contains villages with churches of medieval origin and remains of characteristic ridge and furrow field systems. Many medieval field and parish boundaries have remained in various states of preservation until the present day.

Place names can give information on former functions and topography. Hemingford is derived from the old English for "Hemma's people's ford", with Hemma probably being a local leader or chieftain. The suffix of Hemingford Abbots indicates a manor belonging to an Abbot and the "Grey" of Hemingford Grey is a family name of French origin, indicating the ownership of that manor after the Norman conquest.

The Roman town of Dvrovigvtvm was re-named as Godmanchester during the early medieval period. Godmund is an Old English personal name, presumably that of an Anglo-Saxon Chieftain who was associated with the town, "Chester" refers to the Roman camp.

The black death was apparently very severe in Huntingdon. The town became one-quarter uninhabited by 1363. In 1364 three parish churches became derelict due to a lack of parishioners, to be joined by a further eight churches at a later date.

Hunting was a popular pastime of royalty and it is recorded that the banks of the River Great Ouse were fine hawking country. In 1155/6 monies were allotted to feed the King's (Henry II) birds at Brampton.

In 1461 the Lancastrian Army under Queen Margaret sacked Huntingdon on its way to St Albans where it defeated the Yorkist Army during the Wars of the Roses.

Other Royal visits to the area are also recorded. During his first royal progress in 1486 Henry VII went on to Huntingdon after visiting Cambridge. He returned to Huntingdon the following year, and later in 1498, accompanied by Elizabeth of York.

4.11 Post medieval (AD 1500 - AD 1800)

Some of the buildings included on the SMR date from this period. The towns of Huntingdon and Godmanchester together provided a central place that included markets, schools, churches and administrative and judicial functions. Besides agriculture, the carriage of coal on the River Great Ouse was a local industry.

In 1644 there was a gathering of the Association Army at Huntingdon, when the "Ironside Heroes" of Marston Moor were used to stimulate local recruiting. In July 1645 there was a fear that Royalists would capture Huntingdon, which was a rendezvous point for troops. In August 1645 the King attacked Huntingdon with an army of 2,400 men under the Earl of Northampton who marched from Stanford and defeated a force of 500 horse from Huntingdon at a battle near Stilton. After that there was only light resistance to the King who moved into the George Inn in Huntingdon.

The medieval tradition about witches lingered in Huntingdon. In 1593 John Samuel, his wife and his daughter were executed for witchcraft. In 1646 eight people were condemned.

4.12 Industrial or modern (since AD 1800)

Few monuments or finds from this period are included on the SMR. One is the disused railway line (SMR 2600) that ran from Huntingdon to nearby St Ives. Part of the present A14 is built on the corridor of this disused line across Mill Common through Huntingdon. During the 19th century Godmanchester boasted a tan yard, jute factory, iron foundry and brickworks.

New field patterns have evolved since the medieval period, generally comprising of larger fields.

4.13 Historical Connections

Queen Catherine of Aragon was imprisoned at Buckden Palace, near Huntingdon, by Henry VIII and was subsequently moved to Kimbolton Castle where she died in 1536.

The Cromwell family were connected with the Huntingdon area. They were important local landowners at Oliver Cromwell's birth in 1599. His father, Robert, was the second son of Sir Henry Cromwell, "The Golden Knight", who had inherited his estates from his father, Richard. Richard was a nephew and supporter of Thomas

Cromwell, chief minister of Henry VIII in the 1530's. The wealth of the family came from monastic estates given to the family by Henry VIII at the dissolution. Sir Oliver Cromwell (the Lord Protector's uncle) inherited Hinchingbrooke, near Huntingdon, but was forced to sell it to pay debts incurred by his lavish lifestyle. Robert Cromwell, Oliver Cromwell's father, was MP for Huntingdon in 1593 with a house and property in the town.

Oliver Cromwell was a pupil at Huntingdon Grammar school, now a Scheduled Monument housing the Cromwell Museum.

Hinchingbrooke House was originally a medieval nunnery which passed to the Cromwell family at the dissolution and subsequently belonged to the Earls of Sandwich. It is now a school.

Adjoining St Mary's Church in Huntingdon is a seventeenth century timber framed house that was formerly the Bull Inn. This Bull Inn is said to have been the haunt of the notorious highwayman Dick Turpin.

In 1640 the diarist, Samuel Pepys, became a pupil at Huntingdon Grammar School where Cromwell had been earlier. He lived his childhood in Brampton at 44 Huntingdon Road, now known as Pepys House, and some of Pepys' diary entries were written there.

'Capability' Brown, the 18th century landscape designer was a native of Fenstanton, where he owned property and is buried.

William Cowper, the poet, lived in Huntingdon from 1765-1767.

RAF Alconbury lies about 3 miles north of Huntingdon and was used as a wartime airfield. In early 1941, the first British plane to fly over Berlin during the War was a reconnaissance Spitfire from Alconbury. The US Air Force, after 1942, conducted bomber raids from Alconbury. A Norseman transport plane from Alconbury was used by Glenn Miller on his last fatal flight. Alconbury was used by the RAF until 1951, but remains a military base and is occasionally open to the public.

5 ASSESSMENT OF EFFECTS - M1-A1 LINK TO HEMINGFORD ABBOTS

The Route Options

5.1 General

The route options are shown on key plans RPSC/A/A and B. Detailed descriptions of these route options are given in the A14(M): Bar Hill to M1-A1 Link Landscape Effects report.

Known archaeological sites, including SMRs and Scheduled Monuments

5.2 There are 11 Scheduled Monuments within this part of the study area. Eight of these are shown on Figure RPSC/A/7, and these include:

Scheduled Monument CB 133, a site detected by aerial photograph cropmarks, which has been archaeologically excavated in advance of gravel extraction, which has now taken place. English Heritage are now to give consideration to a descheduling recommendation to the Department of National Heritage.

Scheduled Monument CB 107, a moated site in Godmanchester approximately 300 metres from the present A14, which would suffer minimal impact on its setting.

Scheduled Monument CB 209, Huntingdon Bridge. This medieval stone bridge is still in use as a route between Huntingdon and Godmanchester, at least by local traffic. The present A14 runs very close, causing an effect on its setting.

Scheduled Monument CB 151, Castle Hills, Huntingdon is bisected by the A14. The scheduled area is currently under review under the Monuments Protection Programme (MPP). It is likely that the portion south of the A14 will be de-scheduled and the area north of the A14 extended to include Moat Road. Changes to the scheduled area are likely to occur by the end of 1995.

Scheduled Monuments CB 139 and 189, the Cromwell Museum and Town Hall respectively, are neither directly or indirectly affected by the present A14 or the widening proposals. This also applies to Scheduled Monument CB 187, a civil war earthwork.

<u>Scheduled Monument CB 188</u> is an earthwork on Mill Common which has been partly buried or destroyed.

Other Scheduled Monuments in the locality are shown on Figure RPSC/A/5. These include Scheduled Monument CB 206, the Nuns Bridge and Scheduled Monument CB 183, an obelisk in the centre of the Huntingdon Road, Brampton.

The section of Scheduled Monument CB 121 south of the Thrapston Road, Brampton has been excavated and developed and this area may be de-scheduled under the MPP review. The section of Scheduled Monument CB 121 north of the A14 has been partially excavated. According to English Heritage, there are no intentions to recommend de-scheduling of the undisturbed remainder.

SMR entries are profuse in the region of Huntingdon and Godmanchester, but less densely distributed to the south west of the area.

Listed Buildings and Conservation Areas

5.3 Most of the listed buildings within the study area are concentrated within the designated Conservation Areas. Huntingdon and Godmanchester each have two Conservation Areas and Brampton and Little Stukeley are also have designated Conservation Areas containing listed buildings.

Roman Roads

5.4 Shown on Figure RPSC/A/8 are the conjectured alignments of three Roman roads leading to the Roman Station of Dyrovigytym (now modern Godmanchester), these being "Ermine Street", "Roman Way" (as named on the first edition Ordnance Survey map of 1835) and an alignment of a Roman road identified on modern Ordnance Survey maps.

Archaeological Potential

- 5.5 Much of the study area for this scheme lies on river gravel which is known to be of high archaeological potential, especially regarding prehistoric archaeology. Many settlements have continued in use, but others were abandoned for one reason or another. Acrial photography analysis has aided the detection of many such sites, but others may remain undetected due to the masking effects of subsequent land uses.
- As with most construction proposals there is an element of risk of discovery previously unknown archaeological sites. It can be difficult to evaluate this risk due to the nature of the available information.
- 5.7 Although assessments of the effects of each route option are made in this report these only take into consideration the *known* archaeological sites, as unknown sites, by their very nature, cannot be quantified.

Comparison of the Routes

5.8 Tables showing the assessment of effects for each route are shown in Appendix I(a). The route options have been assessed to show the effects of a whole route, incorporating each option, to enable a meaningful comparison to be made. The major cultural heritage constraints associated with each route option are summarised below:

The Southern Bypass

The Brown Route

- 5.9 This route consists of a dual 3 lane motorway with lighting connecting the M1-A1 Link to A14 Hemingford Abbots bypassing Huntingdon and Godmanchester. It lies on an embankment north of Brampton and in cutting south of Godmanchester.
- 5.10 This route has been revised to diverge from the existing A14 north of Brampton, so avoiding impacts to the west of the Brampton Interchange. The route would pass through former ridge and furrow field systems (SMRs 9262, 0962 and 9260) and close to Scheduled Monument CB 206, the Nuns Bridge. Continuing through open farmland the route passes close to areas where Roman finds have been recorded (SMRs 2312, 2313, 2315 and 2316). It seems likely that these SMR entries, although individually of minor importance, may together represent an area of more intensive Romano-British activity. There would be direct impact on SMR 2528, ridge and furrow and join the line of the existing A14 at Hemingford Abbots junction.

Brown Route (Table 5.1)

| Degree of Effect | Number of Known Sites | Score |
|------------------|--------------------------|-------|
| Maximum | 0 | 0 |
| Very severe | i | 8 |
| Severe | 5 | 15 |
| Moderate | 18 | 36 |
| Minimal | 6 | 6 |
| Zero | 96 | |
| Risk | 7 | |
| TOTAL | 133 | 65 |

The Red Route

- 5.11 The Red Route also consists of a dual 3 lane motorway with lighting connecting the M1-A1 Link to the A14 at Hemingford Abbots, bypassing Huntingdon and Godmanchester in a series of deep cuttings and embankments.
- 5.12 This route runs from Ellington on the M1-A1 Link to the A14 at Hemingford Abbots, bypassing to the south of Brampton, Huntingdon and Godmanchester. Initially the proposed Red and Green Routes follow the same alignment, but they diverge south of Brampton Lodge. The proposed Red Route passes through an area of undated cropmarks (SMR 5765), an area of ridge and furrow field systems and runs further south than the Brown Route through an area of possible Roman activity around SMRs 2512, 513, 2514, 2515 and 2516. The route then crosses the alignment of Ermine Street Roman road, converges with the A14 and then converges with the A14 at Hemingford Abbots, near Emmanuel Knoll.

Red Route (Table 5.2)

| Degree of Effect | Number of Known Si | Sgor e es |
|------------------|-----------------------|-------------------------|
| Maximum | 0 | 0 |
| Very severe | 2 | 8 |
| Severe | 1 | 3 |
| Moderate | 12 | 24 |
| Minimal | 4 | 4 |
| Zero | 92 | |
| Risk | 6 | |
| TOTAL | 117 | 39 |

The Green Route

- 5.13 The Green Route forms the southernmost off-line option—comprising a dual 3 lane motorway with lighting between Ellington and Hemingford Abbots.
- 5.14 This route follows the same alignment as the Red Route as far as Brampton Lodge. The Green Route then proceeds further south than other routes and at Ermine Street it would have direct impact on a site where mesolithic flintwork was found (SMR 2530), this being one of the few known sites directly on the route. There would be impact on SMR 2528, a ridge and furrow field system, as it converges with the proposed Brown and Red Routes and joins the A14 at Hemingford Abbots.

Green Route (Table 5.3)

| Degree of Effect | Number of Known Siles | |
|------------------|--------------------------|----|
| Maximum | 0 | 0 |
| Very severe | 0 | 0 |
| Severe | 3 | 9 |
| Moderate | 9 | 18 |
| Minimal | 4 | 4 |
| Zero | 100 | |
| Risk | 4 | |
| TOTAL | 120 | 31 |

Huntingdon Bypass On-Line Options

Purple Route, Basic Option, Orange and Grey Links, plus Railway Options

- 5.15 Between the Hinchingbrooke Interchange and Hemingford Abbots Junction the Basic Option and Purple Route follow the same corridor as the existing A14.
- 5.16 Impacts could be expected to be more severe on the wider of these routes, the Black and Orange, where widening to dual three lanes is proposed.
- 5.17 The Grey and Orange Off-line Links and the various Railway Options through Huntingdon, have been assessed.
- 5.18 From the Alconbury Interchange the common route of the A604 runs along a relatively new alignment, avoiding settlements at Great and Little Stukeley, to the Hinchingbrooke Interchange. Only two SMR entries lie close to this part of the route corridor, these being the site of a medieval/post-medieval windmill (SMR 2552) and a medieval effigy (SMR 2554). This may indicate other medieval activity in the vicinity, so there is probable impact.
- 5.19 From the Hinchingbrooke Interchange the common route corridor passes adjacent to Views Common, where earthwork ridge and furrow is recorded (SMR 8751) and then passes over the railway line to Mill Common. The existing A14 here utilizes the corridor of the disused Huntingdon Branch Railway. The Orange and Grey Links would here incorporate one of the five Railway Options.
- 5.20 Scheduled Monument CB 188, an earthwork on Mill Common, was severely affected by either the construction of the railway or the existing A14, when the southern portion of this earthwork was buried or destroyed.
- 5.21 There is considerable effect by the existing A14 on the settings of listed buildings of Huntingdon's historic core, both within and outside the two Conservation Areas.
- 5.22 Likewise Scheduled Monument CB 151, Castle Hills, is affected by the existing A14 and Scheduled Monument CB 209 lies just over 100 metres from the present A14 River Great Ouse Bridge. The setting of the monument is thus already affected.
- 5.23 On passing to the south-east over the River Great Ouse the route corridor passes north of Godmanchester Roman town where finds and features of this period are concentrated. Roman coins and pottery of Roman date have been found on the line of the present road.
- 5.24 Scheduled Monument CB 107, a medieval moated manor site, lies about 200 metres to the south of the present A14. Godmanchester Conservation Area (including many listed buildings) together with listed buildings outside the Conservation Area lie very close to the present road and are already affected by it.

- 5.25 Around the Godmanchester Interchange many archaeological discoveries are recorded. The river gravel geology has been especially archaeologically productive to the north of the A14, around Scheduled Monument CB 133. Here a major neolithic ritual complex has recently been excavated with bronze age, iron age and Roman features also discovered.
- 5.26 From the Godmanchester Interchange this route corridor follows the alignment of a Roman road to the Hemingford Abbots Junction.
- 5.27 Clusters of Roman material are well documented elsewhere on this Roman Road alignment. Close to Harcourt Farm a Roman round barrow with associated material is shown on the county SMR (SMR 2478), together with neolithic flint artefacts (SMR 1753) and post-medieval pottery (SMR 2477).

Purple Route

5.28 This option would entail minimum earth moving activity and would, therefore, produce few additional effects. There would be some widening within the highway boundary, but less than proposed in the Basic Option.

Purple Route (Table 5.4)

| Degree of Effect | Number of Known Sites Assessed | Score |
|------------------|--------------------------------------|-------|
| Maximum | 0 | 0 |
| Very severe | 0 | 0 |
| Severe | 0 | 0 |
| Moderate | 3 | 6 |
| Minimal | 2 | 2 |
| Zero | 321 | |
| Risk | 3 | |
| TOTAL | 329 | 8 |

The Basic Option

5.29 The Basic Option northwest of the Hinchingbrooke interchange is mostly at grade, but is in cutting further north, so reducing impacts on the setting of Little Stukeley Conservation Area.

Basic Option (Table 5.5)

| Degree of Effect | Number of Known Sites Assessed | Score |
|------------------|--------------------------------------|-------|
| Maximum | 0 | 0 |
| Very severe | 0 | 0 |
| Severe | 2 | 6 |
| Moderate | 6 | 12 |
| Minimal | 6 | 6 |
| Zero | 308 | |
| Risk | 21 | |
| TOTAL | 343 | 24 |

The Orange Link

- 5.30 In addition to the Huntingdon Bypass the proposed Orange Link runs from the A1 at the Alconbury interchange to join the on-line options at Views Common, Huntingdon. This route would have direct impact on SMR 822, the site of an iron age/Romano-British midden, the presence of which may imply a likelihood of further archaeological features nearby.
- 5.31 This link combines with railway options near Huntingdon railway station.

Orange Link including Railway Option A (Table 5.6)

| Degree of Effect | Number of Known Sites | Score |
|------------------|--------------------------|-------|
| Maximum | 1 | 5 |
| Very severe | 4 | 16 |
| Severe | 5 | 15 |
| Moderate | 8 | 16 |
| Minimal | 12 | 12 |
| Zero | 315 | |
| Risk | 20 | |
| TOTAL | 365 | 64 |

Orange Link including Railway Option B, D, F or H (Table 5.7)

| Degree of Effect | Number of Known Siles | Score |
|------------------|--------------------------|-------|
| Maximum | 2 | 10 |
| Very severe | 3 | 12 |
| Severe | 6 | 18 |
| Moderate | 8 | 16 |
| Minimal | 19 | 19 |
| Zero | 307 | |
| Risk | 20 | |
| TOTAL | 365 | 75 |

Railway Options

- 5.32 Six railway options were considered in conjunction with off-line Orange and Grey Links. These are minor variations of the proposed road layout through Huntingdon over the railway bridge and across Mill Common to the River Great Ouse bridge.
 - All six of these Railway Options have effects on the settings of Huntingdon's Conservation Areas and Listed Buildings. Direct effects on the nationally important Scheduled Monuments could also be incurred.
- 5.33 Of all the Railway Options, Railway Option A would cause the least effect to cultural heritage. This is due to little additional construction being required.
- 5.34 Railway Options B, D, F and H all would have approximately the same overall effect on cultural heritage due to the widening of the road towards Huntingdon town centre, increasing the impact on listed buildings, Conservation Areas and Scheduled Monuments. Direct impact on the earthwork on Mill Common (Scheduled Monument CB188) would produce a maximum effect.
- 5.35 The proposed layout of the railway options can be seen in RPSC/A/12 to 16.

The Grey Link

5.36 It is at present dual carriageway, but with widening proposed, follows the corridor of the present A14 until just north of Brampton, where it cuts a comer to meet the A14 M1-A1 Link. In doing so it would have direct impact on Scheduled Monument CB 121. The status of this cropmark site is currently under review. It has recently been partially excavated and, south of the A14, destroyed.

From here the route would run northeast to the Hinchingbrooke interchange and combines with the Huntingdon Bypass

Grey Link including railway Option A (Table 5.8)

| Degree of Effect | Number of Known Site | |
|------------------|-------------------------|----|
| Maximum | 2 | 10 |
| Very severe | 4 | 16 |
| Severe | 4 | 12 |
| Moderate | 8 | 16 |
| Minimal | 10 | 10 |
| Zero | 313 | |
| Risk | 26 | |
| TOTAL | 367 | 64 |

Grey Link including railway Option B, D, F or H (Table 5.9)

| Degree of Effect | Number of Known Sites | Score |
|------------------|-----------------------|-------|
| Maximum | 3 | 15 |
| Very severe | 3 | 12 |
| Severe | 5 | 15 |
| Moderate | 8 | 16 |
| Minimal | 17 | 17 |
| Zero | 305 | |
| Risk | 26 | |
| TOTAL | 367 | 75 |

Comparisons of Route Options

5.37 With reference to the summary tables (tables 5.1 to 5.9) the total value of the effects can be calculated. This information is summarised for all route options in Table 5.10.

Impacts of Lighting

Southern Bypass

5.38 The Brown Route

Additional night time impacts on setting could be anticipated on the setting of Scheduled Monument CB 206, The Nuns Bridge and on the complex of listed buildings at Hinchingbrooke.

5.39 Red and Green Routes

The setting of Brampton grade II listed building 53, a milestone, would suffer additional night time impact from the lighting of either the Red Route or the Green Route.

Huntingdon Bypass On-line Options

5.40 Grey and Orange Links

Night time lighting on the Orange Link would have additional effect on the settings of two listed buildings, both grade II milestones, Alconbury LB 12 and Ellington LB 122.

There are no listed buildings close to the Grey Link, but the setting of Scheduled Monument CB 121 would be affected.

5.41 Additional night time impacts which would result from the introduction of night time lighting include the settings of Huntingdon listed building 152, (the main building of the county hospital) and other listed buildings within Huntingdon's Conservation Areas. The settings of Scheduled Monuments CB 151 (Castle Hills) and CB 188 (Earthwork on Mill Common) would also be affected by night time lighting. North of Huntingdon, additional light would be visible from Alconbury listed building 22, originally a late sixteenth century farmhouse.

Huntingdon Bypass On-line Options

| EFFECT | PURPLE | (r) | BASIC | () | GREY + A | (+A | GREY + BADÆH | ЮÆЯ | ORA | ORANGE + A | ORANGE + BADÆÆI | • В :Д: |
|-------------|--------|-------|-------|-------|----------|-------|--------------|-------|-----|------------|-----------------|----------------|
| | Nos | Score | N.OS | Score | Nos | Score | Nos | Score | Nos | Score | Nos | Ѕсоте |
| MAXIMUM | 0 | 0 | 0 | 0 | 2 | 10 | 3 | 15 | 1 | 5 | 2 | 10 |
| VERY SEVERE | 0 | 0 | 0 | 0 | 4 | 16 | 3 | . 71 | 4 | 91 | 3 | 12 |
| SEVERE | 0 | 0 | 2 | 9 | 4 | 12 | 5 | 15 | ξ. | 15 | 6 | 18 |
| MODERATE | ٦. | 9 | 9 | 12 | 8 | 16 | 8 | 16 | 80 | 91 | 8 | 16 |
| MINIMAL | 7 | 2 | 9 | 9 | 10 | 10 | 17 | 17 | 12 | 12 | ō. | 19 |
| ZERO | 321 | | 308 | | 313 | | 305 | | 315 | | 307 | |
| | 3 | | 21 | | 3.6 | | 26 | | 92 | | 20 | |
| TOTALS | 329 | 90 | 343 | 24 | 367 | Z | 367 | 7.5 | 365 | 3 | 365 | 75 |

Southern Bypass

| EPPECT | BROWN | W.S. | RED | G) | GREEN | ien |
|-------------|-------|-------|-----|-------|-------|-------|
| | Nos | Score | Nos | Score | Nos | Score |
| MAXIMUM | 0 | 0 | 0 | 0 | 0 | 0 |
| VERY SEVERE | 1 | 8 | 2 | 8 | 0 | 0 |
| SEVERE | 5 | 15 | 1 | 8 | 3 | 6 |
| MODERATE | 18 | 36 | 12 | 24 | 6 | 81 |
| MINIMAL | 9 | 9 | 4 | \$ | *7 | ন |
| ZERO | * | | 26 | | 901 | |
| RISK | | | 9 | | 4 | |
| TOTALS | 133 | 65 | 117 | 39 | 120 | 31 |
| | | | | | | |

tc739/v2/1875 RPS Clouston

6 ASSESSMENT OF EFFECTS HEMINGFORD ABBOTS TO TRINITY FOOT

This section considers the effects on cultural heritage of the Black Route proposals between Hemingford Abbots and Trinity Foot. The option considered is the widening of the A14 to three lanes with local roads. The impacts of the route options on cultural heritage are discussed below.

Known Archaeological Sites, including SMRs and Scheduled Monuments

- 6.1 There are no Scheduled Monuments in the study area of this part of the scheme.
- 6.2 The A14 follows the alignment of a major Roman road along this section, making the area of high archaeological potential, especially as far as Romano-British remains are concerned. The alignment of the Roman road has intermittently been respected and utilised as both a boundary between parishes and as a thoroughfare and there are associated concentrations of SMR entries from subsequent periods. The Roman road itself has already been much disturbed by various road repairs, improvements and widening over the centuries, but evidence of some of the concentrations of activity served by the road have remained, and some undiscovered remains may survive.
- Assessment of effects for all known archaeological sites within the study area is presented in Appendix I(b). Some sites within the study area would not be affected by the proposals at all.

Listed Buildings and Conservation Areas

- 6.4 The only Conservation Areas affected along this section are at Fenstanton and the Hemingfords. Fenstanton Conservation Area lies adjacent to the present A14 and environmental barriers are currently being used in order to protect the settings of listed buildings. The increased flow of traffic may have an increased impact on the settings of statutorily protected listed buildings within this Conservation Area. The Hemingfords Conservation Area lies 200m from the nearest proposal and there may be a minor affect on its setting.
- Other listed buildings are affected to various degrees by the proposals. A grade II milepost (Swavesey 107) would be severely affected. With structures such as this it may be possible to relocate it nearby with minimal damage to the monument itself.
- 6.6 Listed buildings in Fen Drayton numbers 62 (grade II*), 63 (grade II), 64 (grade II)) lie some distance from the proposals and are not affected.
- 6.7 Fenstanton listed building numbers 47, 48, 49 and 50 form another cluster of buildings outside Fenstanton Conservation Area, all of grade II status. These are not affected by the proposals.
- 6.8 Fenstanton listed buildings numbers 1, 2, 3, 4, 5 and 6 cluster around Manor Farm. Listed building 6 is of grade II* status and would suffer moderate effect due to changes to its setting, including increased noise and vibration. The others are grade II.
- 6.9 Hemingford Abbots listed building number 1, Rectory Farm, (grade II) would be severely affected by the proposals. Listed building number 17 in the Hemingfords Conservation Area would not be directly affected, but the proposed local road north of the present road could have impact on the setting of this grade II listed building, and this would produce a minimal effect.

Areas of Archaeological Potential

- 6.10 It is likely that more, as yet unidentified, archaeological sites exist within the study area. Blank areas may occur in the Sites and Monuments Record because of limitations in the methods used for locating archaeological sites, especially where ground breaking activities have not taken place within recent years, and archaeological remains have not been recorded.
- 6.11 Much ridge and furrow identified lies in the area surrounding the Roman Road alignment between Hemingford Abbots and Trinity Foot, in addition to other cropmarks.
- 6.12 Medieval ridge and furrow can act to mask underlying archaeology. Given the profusion of ridge and furrow in this landscape, it is likely that at least some unknown archaeological sites have evaded detection during the analysis of aerial photographs.
- 6.13 Where intensive ground breaking activities such as gravel extraction have taken place, the County SMR has been enhanced. One gravel pit in Fenstanton parish has produced palaeolithic flintwork, neolithic flintwork and Iron Age and Roman pottery. It is conceivable that such archaeologically rich areas remain undetected, perhaps beneath ridge and furrow, but could form significant constraints once discovered.

Table 6.1

This table shows the total number and value known effects for the Black Route between Hemingford Abbots and Trinity Foot section of the scheme.

| Degree of Effect | Number of K Sites | пожн Ѕсоте |
|------------------|----------------------|------------|
| maximum | 0 | 0 |
| very severe | 3 | 12 |
| severe | 2 | 6 |
| moderate | 9 | 18 |
| minimal | 12 | 12 |
| zero | 137 | |
| risk | 16 | |
| TOTAL | 179 | 48 |

Lighting Proposals

6.14 The introduction of lighting will have additional impacts on the settings of listed buildings and Conservation Areas. The most significant effects will be to the settings of listed buildings within Fenstanton Conservation Area, and other listed buildings south of the A14 (Fenstanton 47, 48, 49, 50). North of the A14 a grade II* eighteenth century farmhouse, formerly owned by Capability Brown, would be affected by night time lighting along with five other nearby grade II listed properties.

7 RECOMMENDATIONS - M1-A1 LINK TO HEMINGFORD ABBOTS

General

Reference should be made to table 5.10, comparison of route options.

- 7.1 The comparison of the route options has shown that the on-line Huntingdon Bypass Options and Brown Route have more impact on known archaeological sites than the Red and Green Routes, but this may well be due to the general lack of information for rural areas where less archaeological research has been carried out. This is particularly significant as far as earlier period archaeological sites are concerned.
- 7.2 Godmanchester and Huntingdon have been central places in the surrounding landscape since at least the Roman period, and both towns were prosperous medieval and post-medieval towns, producing much of the built heritage which has been assessed. The On-line Option passing through or close to these two towns would therefore be more likely to disturb multi-period remains, whereas unknown rural sites are more likely to be of a single period. The Purple and Basic Options involve little land take or disturbance and their scores are accordingly low.
- 7.3 In order to complete a Stage 2 evaluation following the guidelines given in the *DMRB* Volume 11, it is recommended that English Heritage should be consulted and invited to produce a statement of their in-confidence views of the implications of the route options.

The Southern Bypass Routes (off-line) Options

- Although additional work to identify potential constraints has been carried out it must be stressed that although the Southern Bypass Route Options produce relatively low assessment of effects scores, this is due to the rural nature of the proposed routes. The additional work carried out identified some constraints visible above ground, but undisturbed subsoil archaeology is likely to exist, still undetected at this stage. Should either the Red or Green Route (12.4km and 12.9km long, respectively) be selected, more intensive archaeological assessment, including a walkover with full access, could identify additional constraints. Subsoil archaeology of the Southern Bypass Routes (Brown, Red and Green) might not be detected without geophysical survey, systematic archaeological fieldwalking of ploughed fields or trial trenching.
- 7.5 A Southern Bypass Route would have no excessive impact on any known constraint and could improve the existing conditions through Huntingdon by reducing traffic flow and therefore reducing the impact on the settings of Listed Buildings, Conservation Areas and Scheduled Monuments.

The Huntingdon Bypass On-line Options

7.6 Of the four options which utilise the existing A14 corridor, the Purple Route is the preferred route as far as cultural heritage is concerned, as this is the option of minimum construction. This would of course incur effects on the built heritage and

Scheduled Monuments in Huntingdon. For the Basic Option, sub-soil archaeology could be protected on Mill Common as widened embankments could cover sites, so preserving them *in situ*, but this would depend on appropriate construction methods being used.

- 7.7 The Railway Options, when compared, have varying degrees of effect on protected sites. Railway Option A would cause the least effect of the six options.
- 7.8 There are some aspects of the cultural heritage of the Huntingdon and Godmanchester area that would benefit from the diversion of traffic along a new route. The settings of Scheduled Monuments CB 188 (earthwork on Huntingdon Mill Common), CB 151 (Huntingdon Castle Hills), CB 209 (Huntingdon Bridge) and CB 107, (Godmanchester moated site) could be enhanced by a lessening of the traffic on the present A14. Many listed buildings and the Conservation Areas could also have improved settings. At Brampton the diversion of traffic away from the Thrapston road could improve the settings of Scheduled Monument 183 (obelisk in centre of Thrapston Road), and Scheduled Monument 206 (Nun's Bridge).
- 7.9 The Orange and Grey Links with Railway Options produce relatively high scores. An assessment of effects for the Purple Route unsurprisingly produces the lower score, as this option requires the least construction. Similarly Railway Option A produces a lower score for the same reason. The Basic Option also produces a relatively low score, but triple that of the Purple Route.
- 7.10 The number of known cultural heritage effects are greater for the on-line widening options, and the scores are high.
- 7.11 A major concern regarding the Huntingdon Bypass options is the additional potential impact to the environs of Castle Hills and Mill Common in Huntingdon. The settings of many listed buildings and the Conservation Areas are already affected by the present dual carriageway. Scheduled Monuments CB151 (Castle Hills) and CB188 (earthwork on Mill Common) have been directly impinged upon by previous construction. An increase of traffic using the on-line option will impose additional impacts to these statutorily protected features.

8 RECOMMENDATIONS -HEMINGFORD ABBOTS TO TRINITY FOOT

General

- 8.1 The whole of this stretch of road is of reasonably high archaeological potential, the alignment being that of a Roman road the line of which has continued to be used intermittently, most recently as a parish boundary. Many of the SMR entries close to the road are of Roman and later date with some sites or finds of a type specific to such locations. For example, the placing of gallows at crossroads, especially at parish boundaries, is well documented, and the burial of felons' remains nearby seems likely. Medieval ridge and furrow earthworks have been recorded on the SMR and acrial photographs.
- 8.2 In order to complete a Stage II assessment of this scheme English Heritage should be consulted and invited to produce a statement of their 'in confidence' views regarding the route and link options. The Cambridgeshire County Archaeologist should also be consulted in due course.

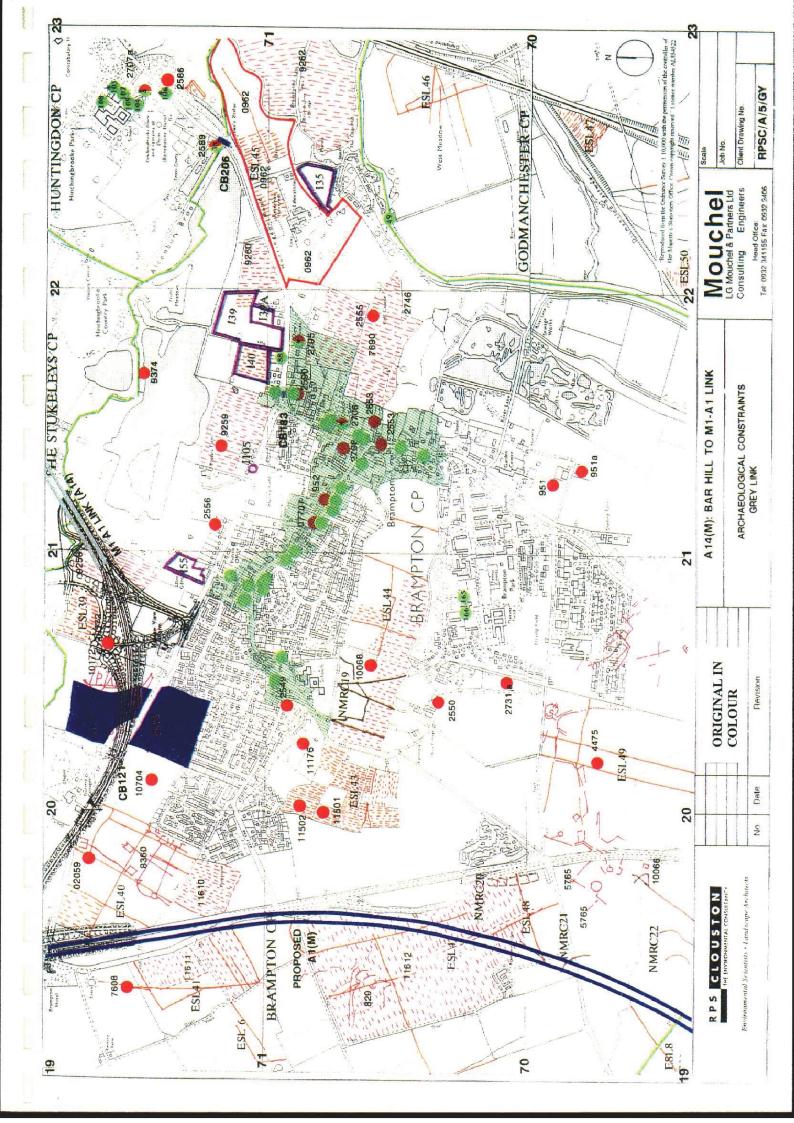
Further Evaluation (Stage 3) Surveys Strategy

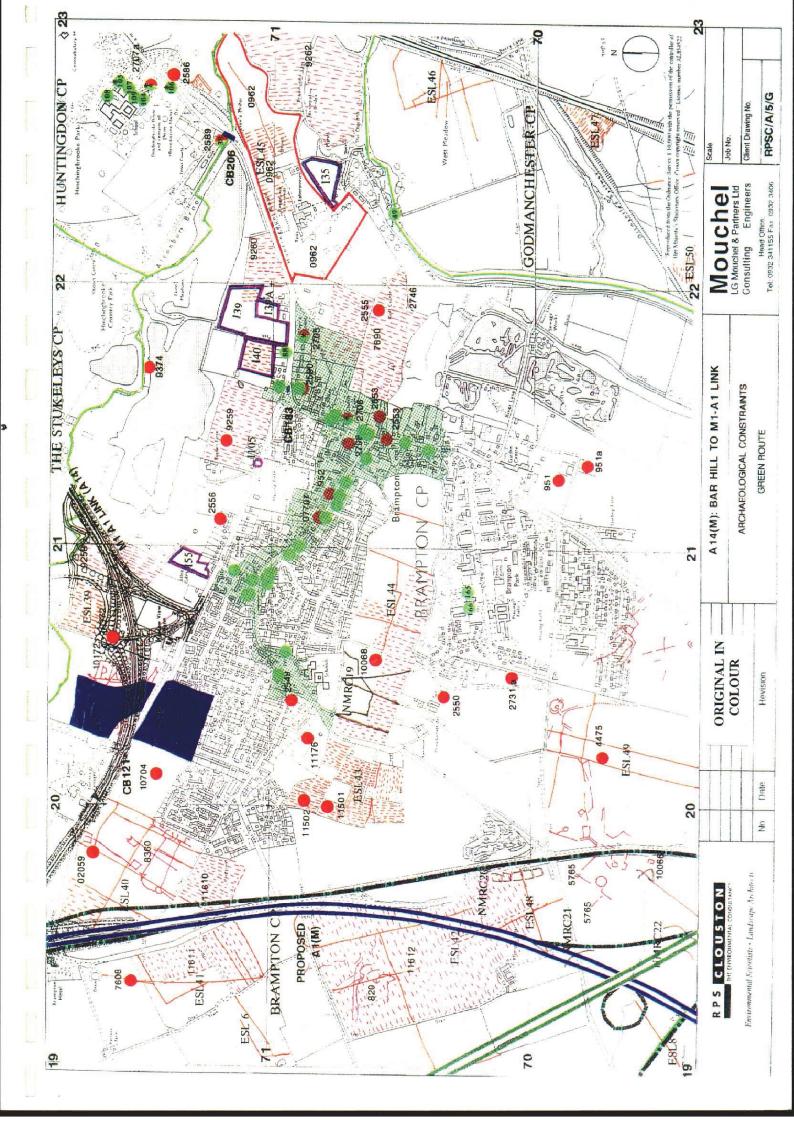
- 8.3 Due to the high archaeological potential of the areas surrounding the Roman road, it is suggested that non-intrusive methods of archaeological research are used, such as intensive walkover surveys, systematic archaeological fieldwalking on ploughed fields and magnetic susceptibility surveys. This should enable possible sites as yet unknown to be identified. Where fields are not ploughed a thorough walkover survey is suggested in order to identify additional features of cultural heritage value that may not appear on the SMR.
- 8.4 Once known and potential archaeological sites have been identified it may be necessary to define their limits by using a non-intrusive method such as magnetometery. Intrusive methods such as test pitting, the monitoring of geotechnical trial pits and trial trenching may also be necessary.
- 8.5 Together the further evaluation work would form a Stage 3 survey, as described in the DOT's *DMRB* Volume 11, Section 3, Part 2, Cultural Heritage.

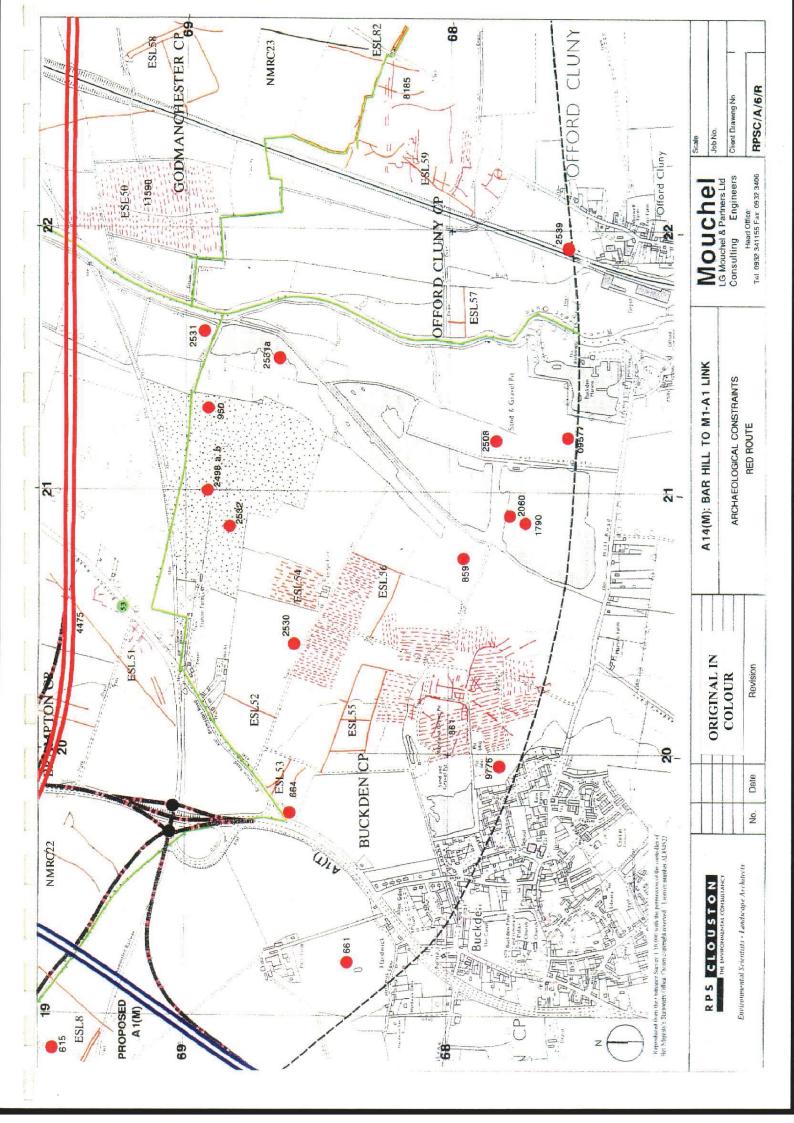
- 9.1 Stage 2 assessment has been carried out using detailed information gathered from records and supplemented by limited fieldwork.
- 9.2 The potential impacts of the Black Route between Hemingford Abbots and Trinity Foot have been assessed and constraints have been identified. A programme of work for Stage 3 is recommended.
- 9.3 The route and link options between the M1-A1 Link and Hemingford Abbots have been assessed and cultural heritage constraints identified. Comparisons have been made between route options and the Purple Route, Basic Option and the Southern Bypass Red and Green Routes are recommended as causing least effect to known cultural heritage.
- 9.4 The Cultural Heritage Stage 2 report concludes that there are no *overriding* cultural heritage constraints to rule out any option, although the Red and Green Routes have fewer known constraints than the Brown Route and are, therefore, to be recommended for a Southern Bypass. However, all three off-line routes present uncertainties regarding the presence or absence of subsoil archaeology, in addition to the known constraints. If a Southern Bypass Route were to be selected as preferred route a thorough programme of archaeological assessment would be required to identify additional archaeological constraints and allow for excavation and recording prior to construction.
- 9.5 If the Southern Bypass option is rejected, the lowest scoring option of all complete routes assessed was the Purple Route as this is the option of minimum construction. This route also takes advantage of an existing road corridor so would involve less additional impact on the historic landscape.

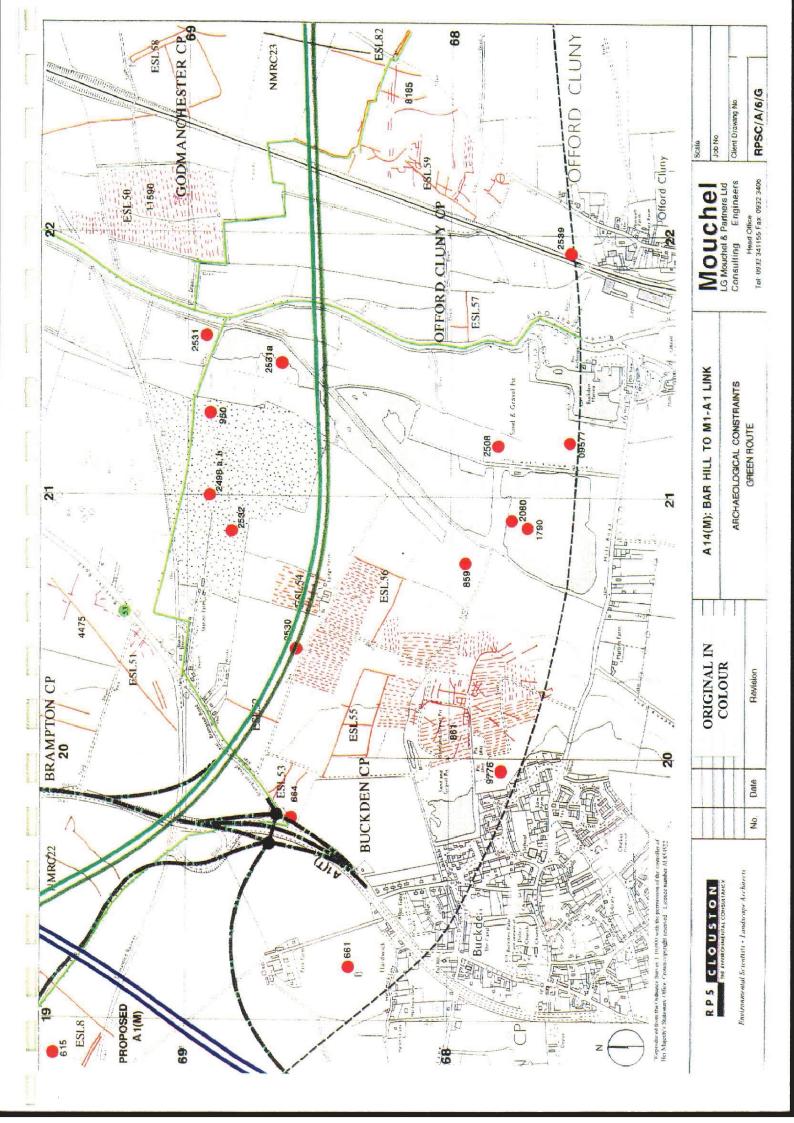
A14(M): BAR HILL TO M1-A1 LINK

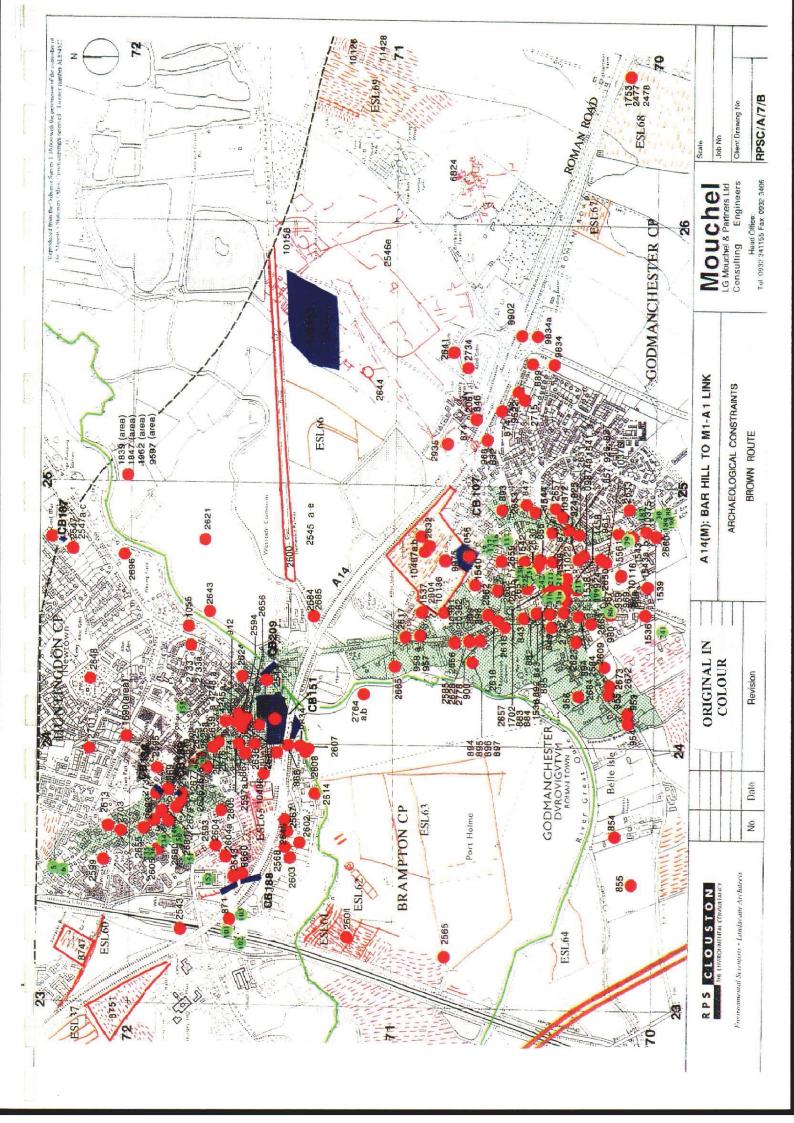
Figures

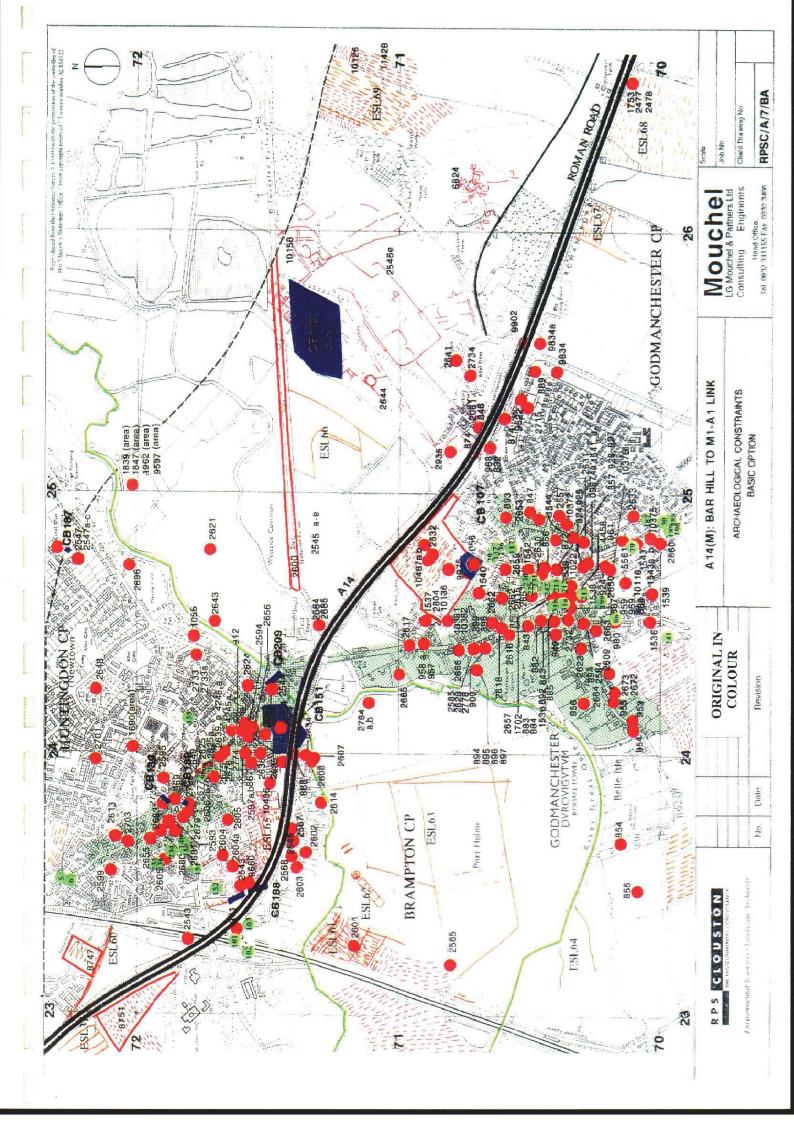


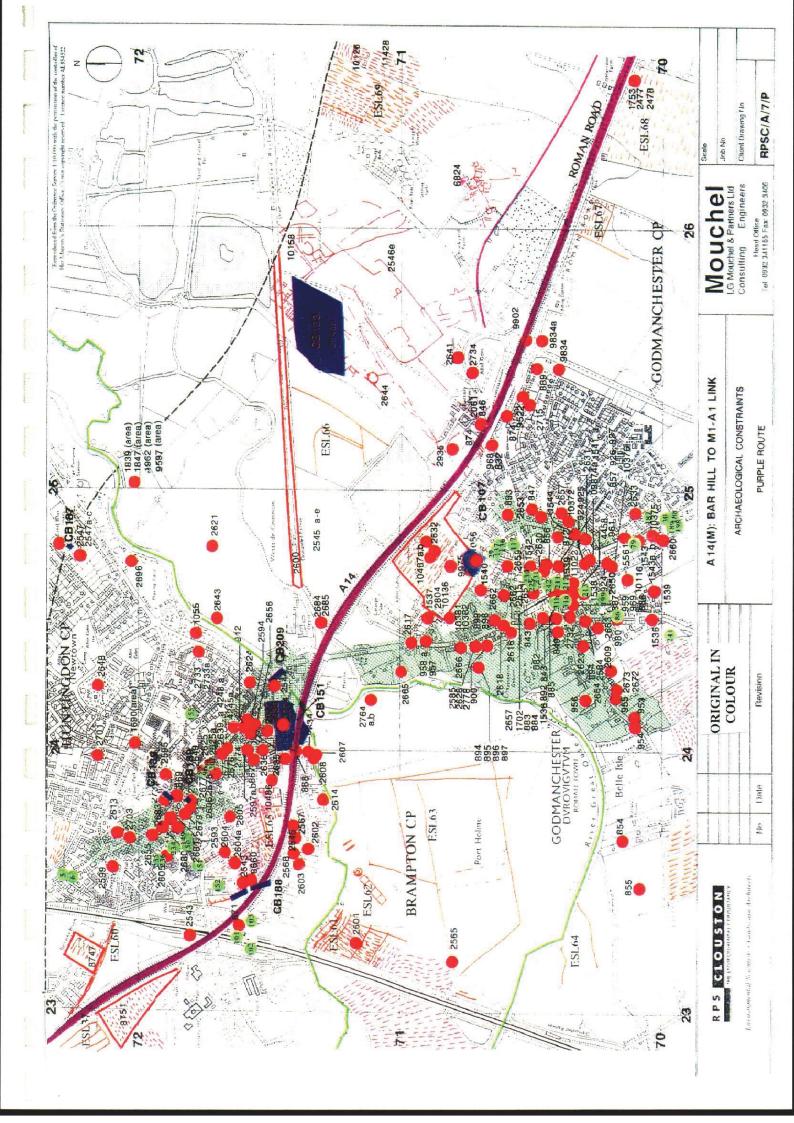


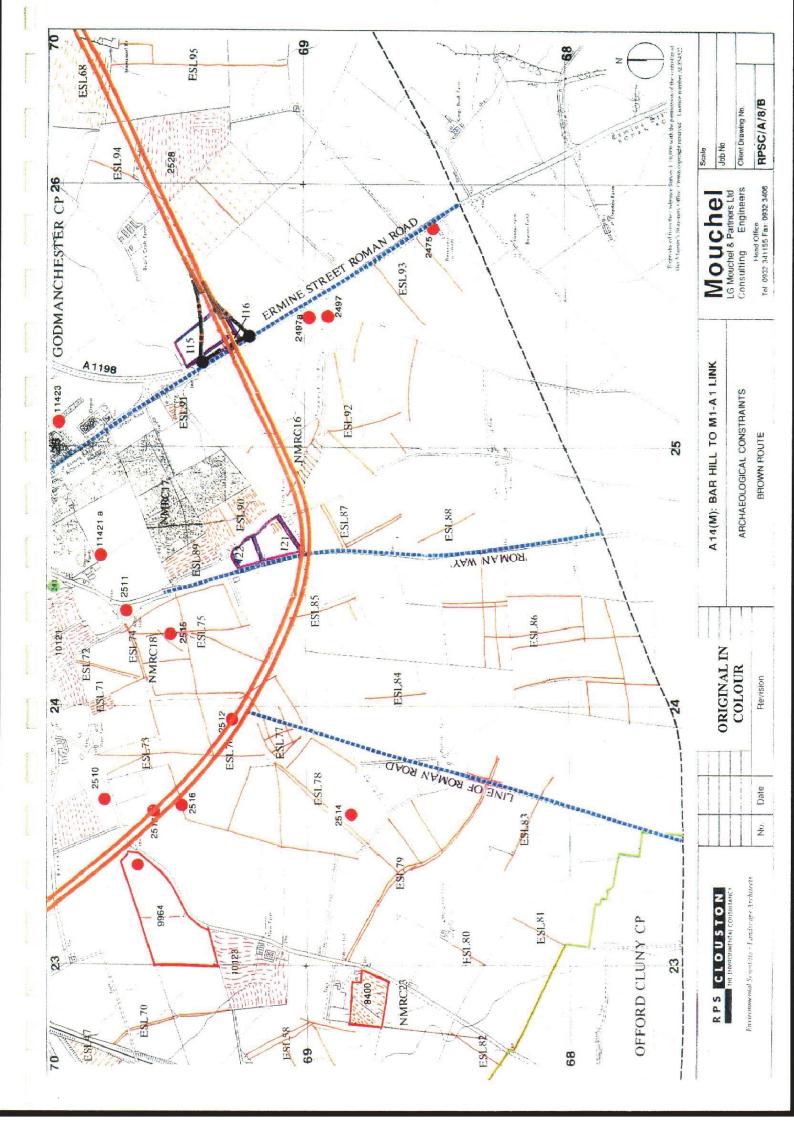


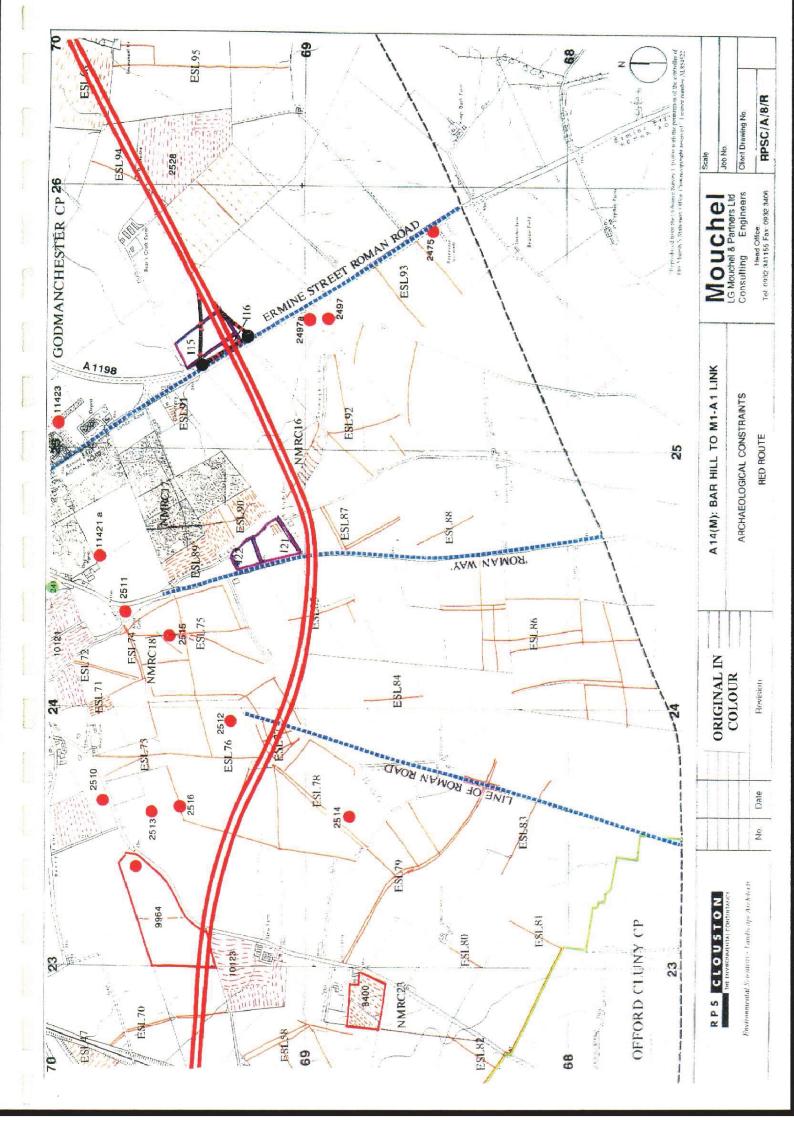


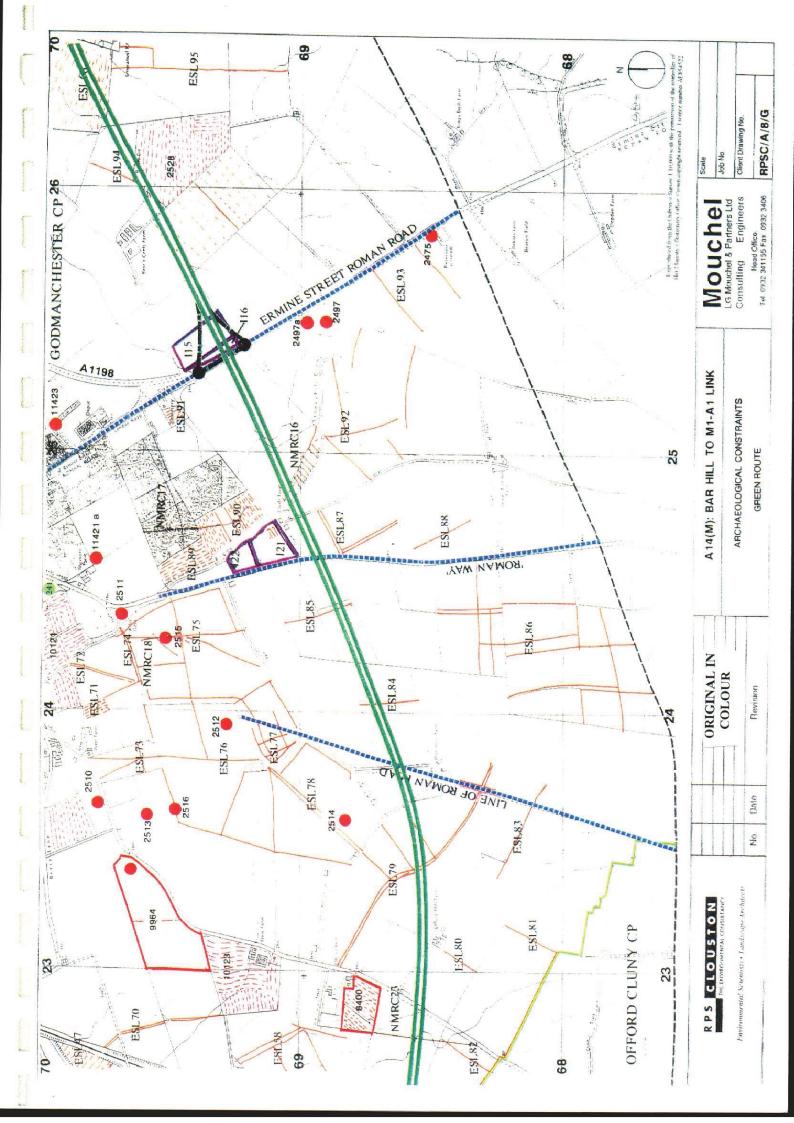


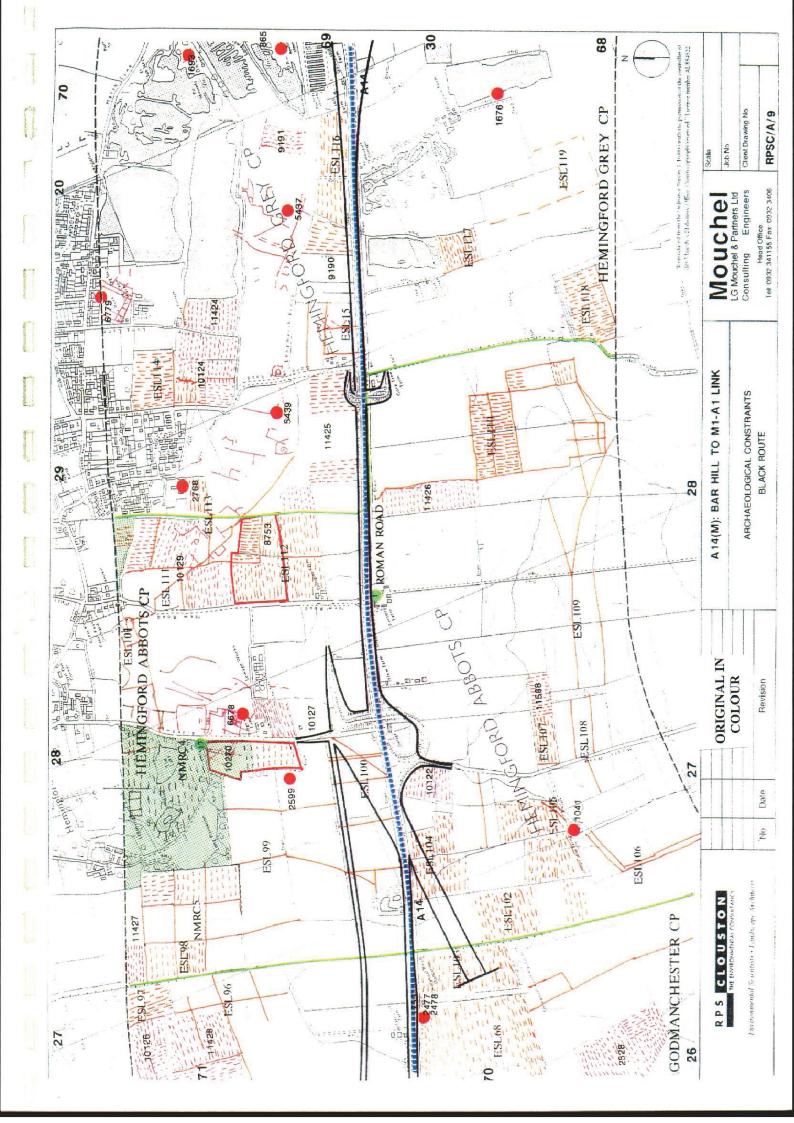


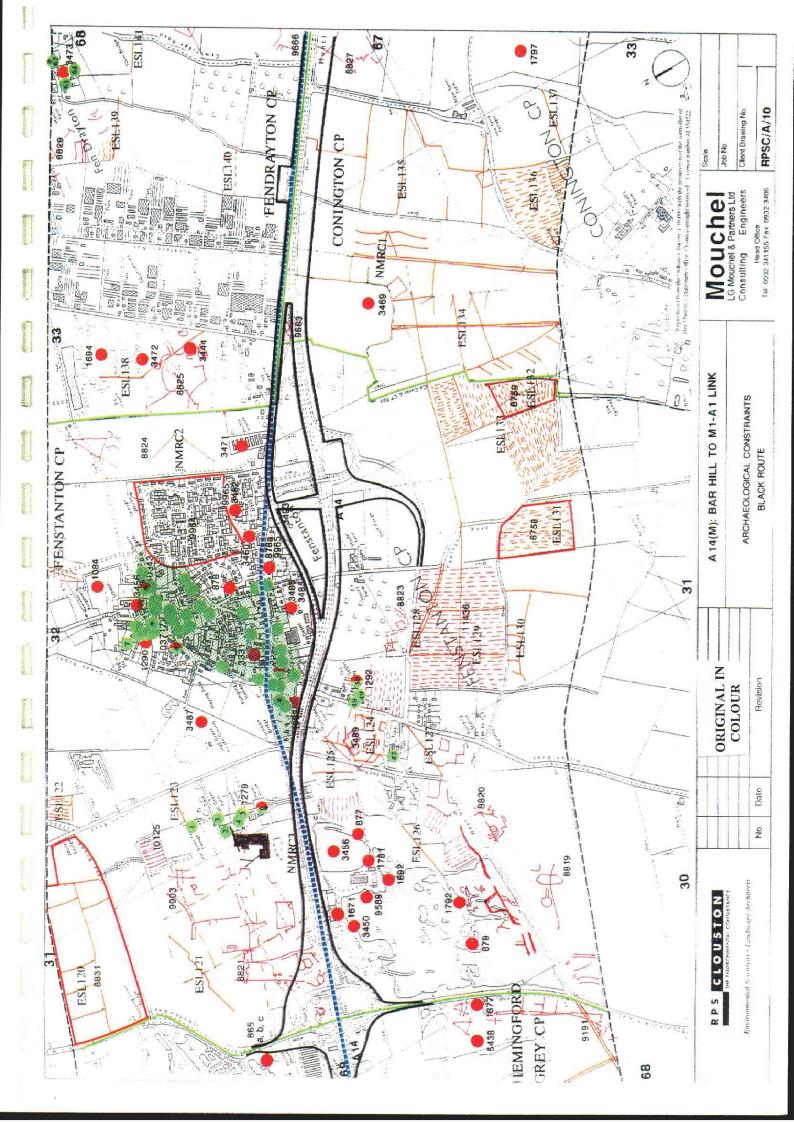


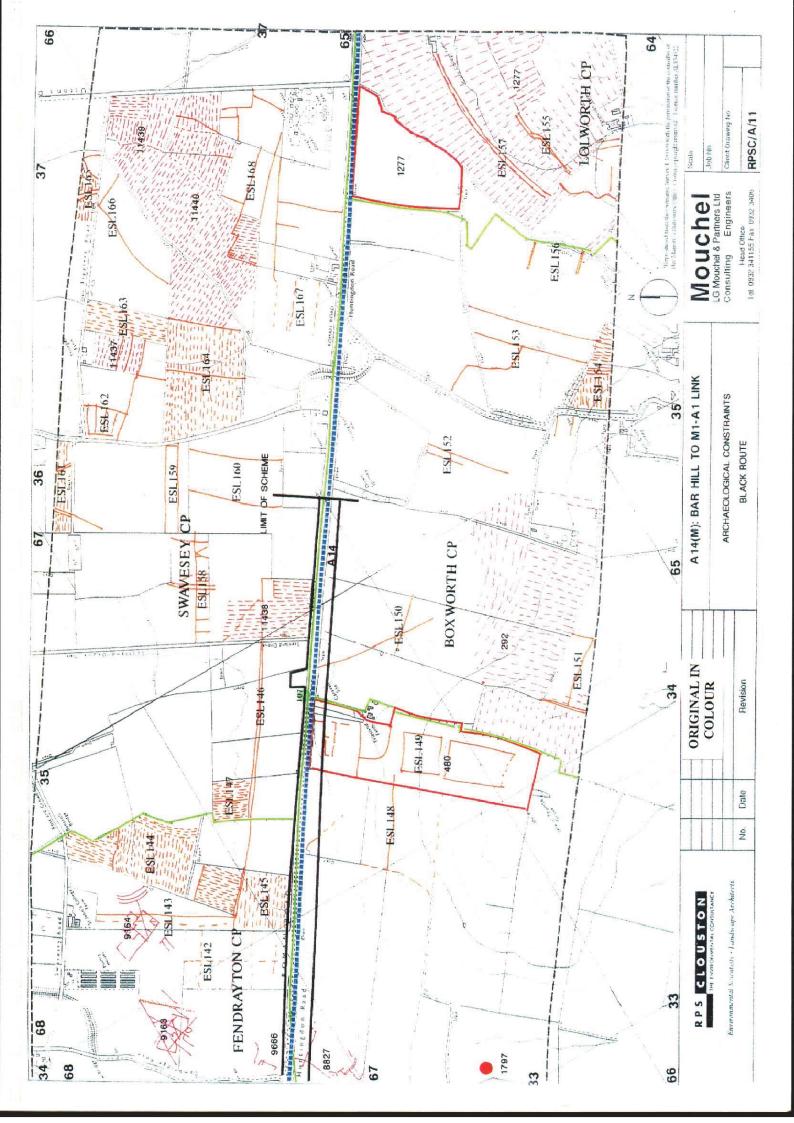


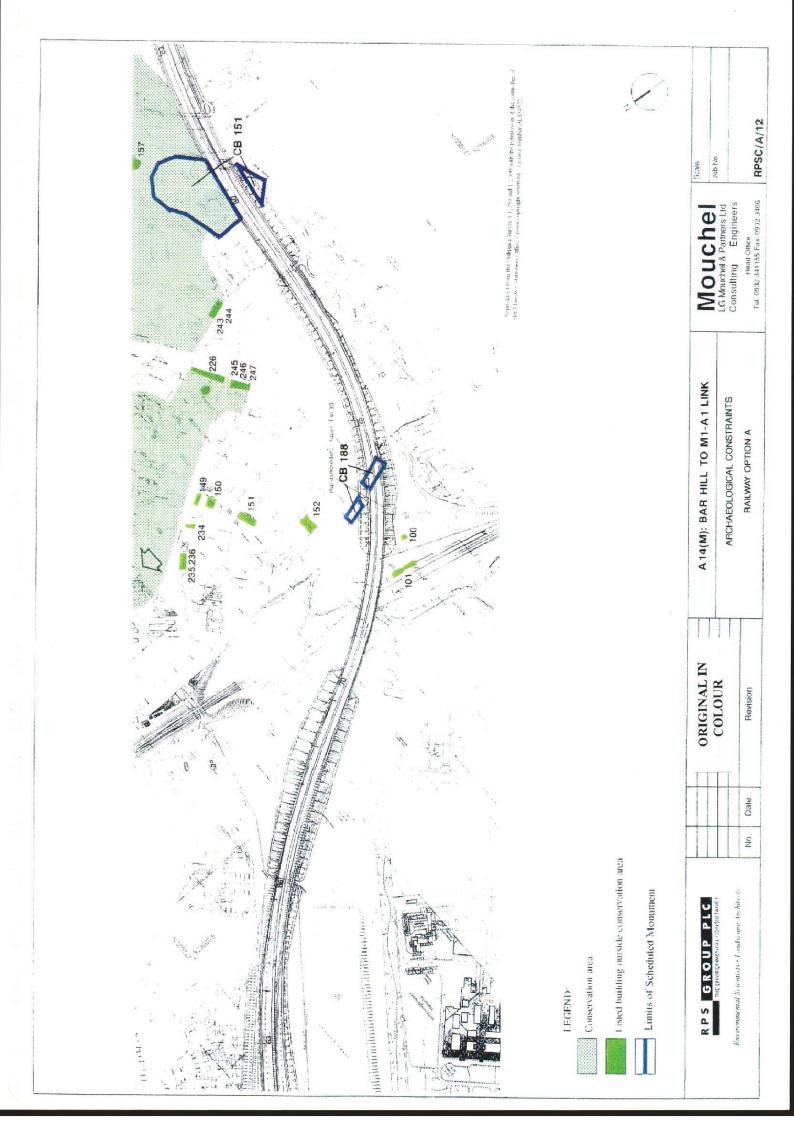


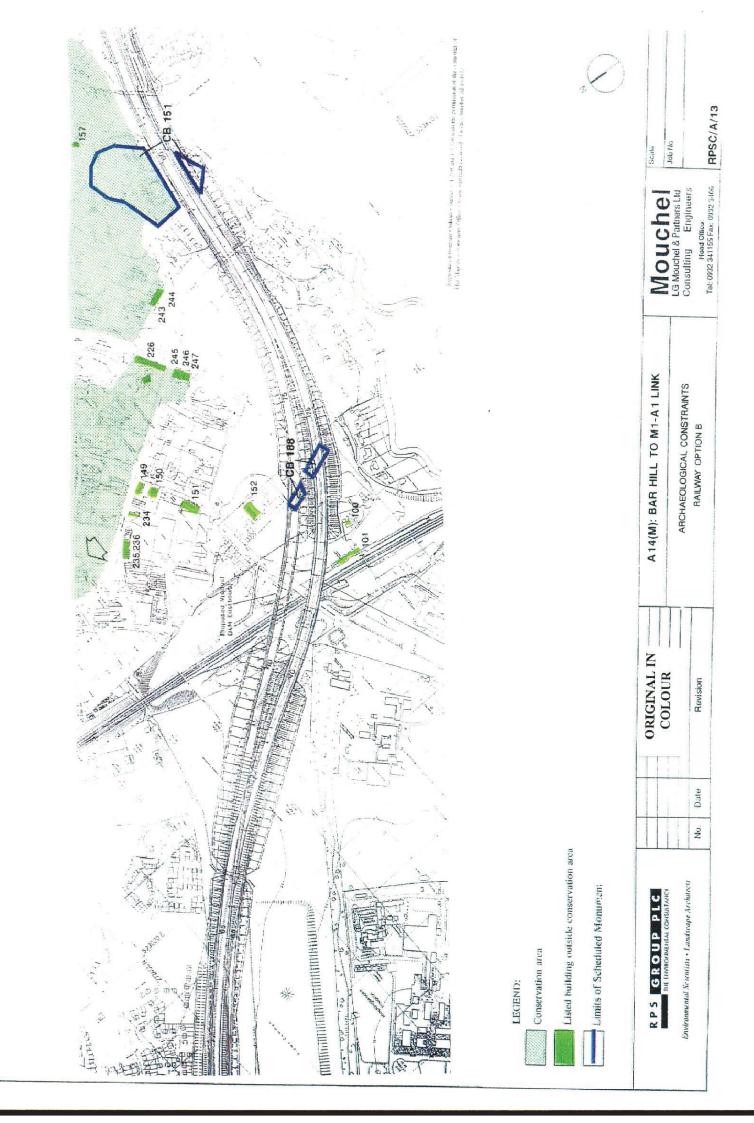


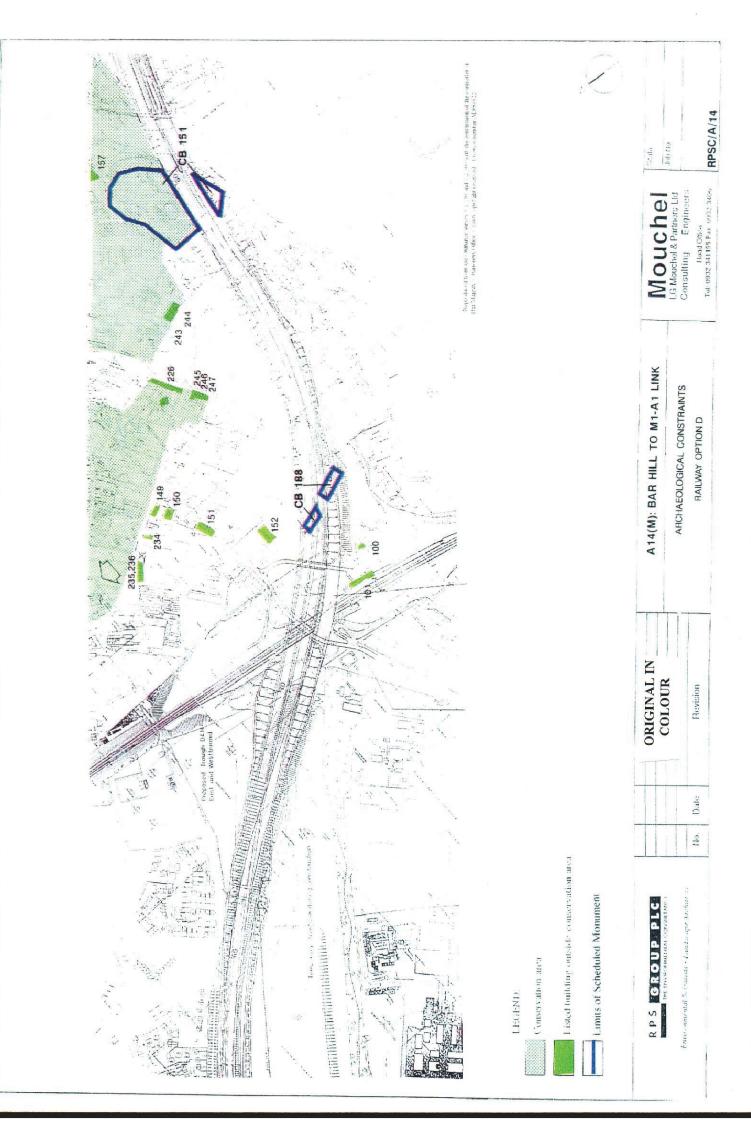


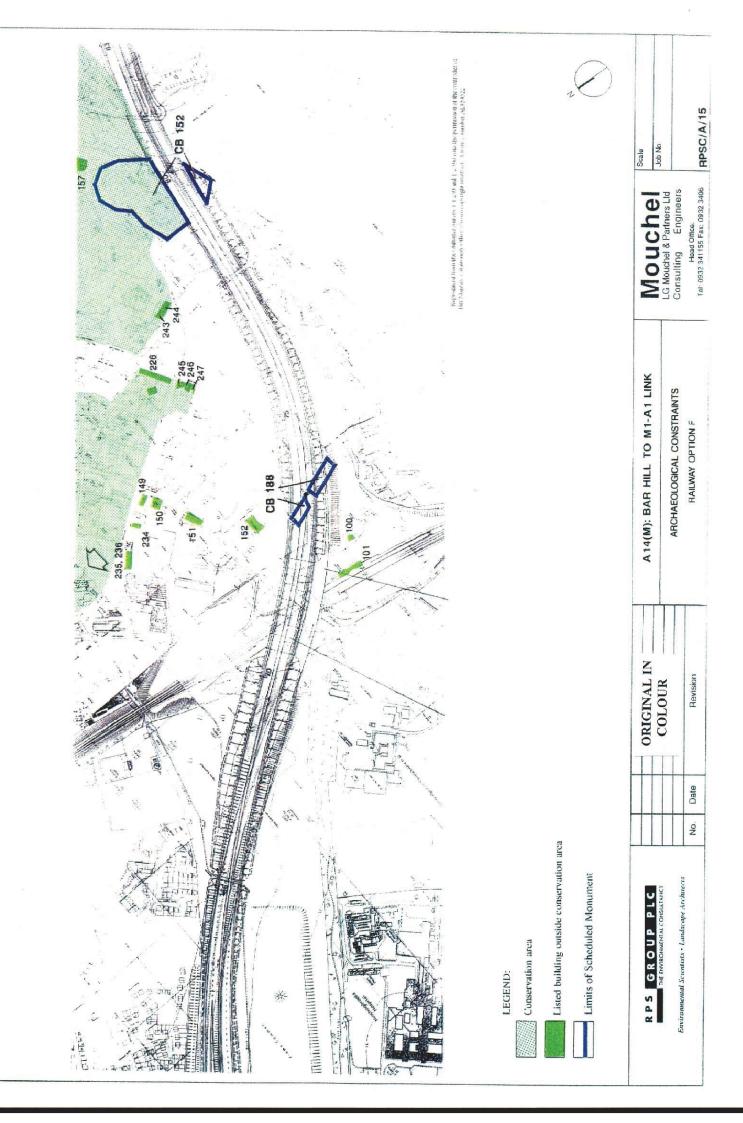


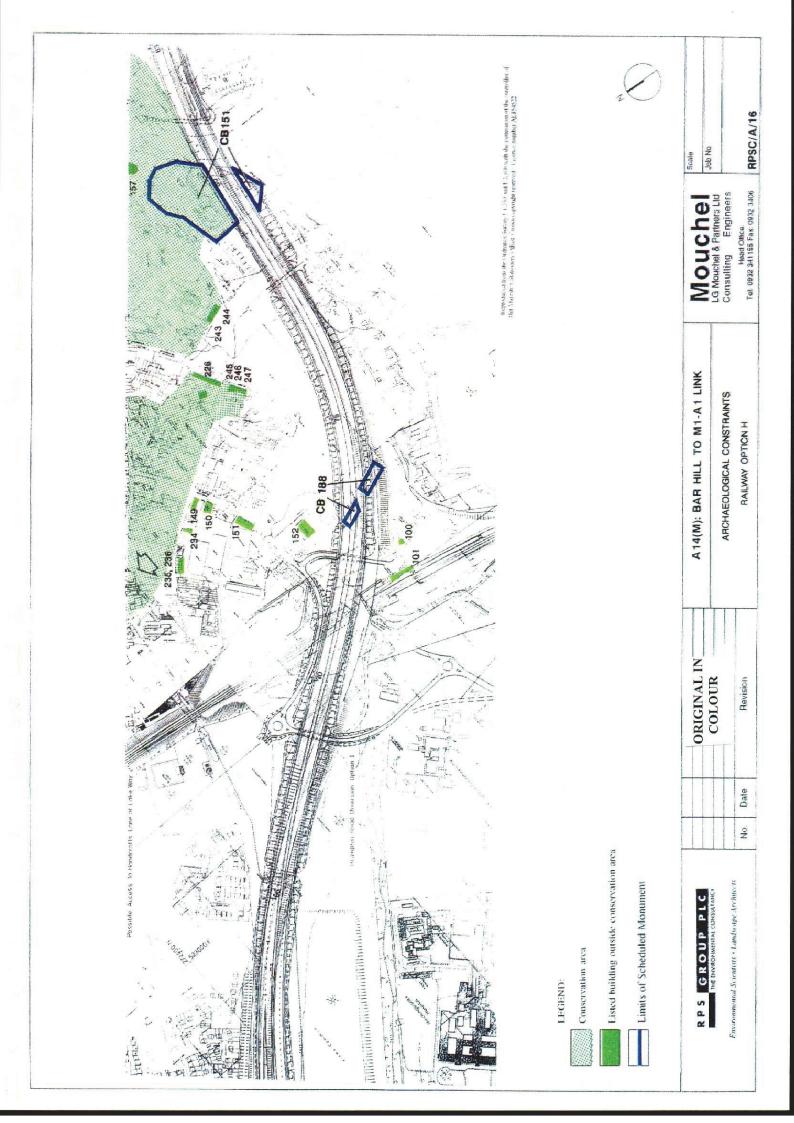












A14 BAR HILL TO M1-A1 LINK ARCHAEOLOGICAL CONSTRAINTS

LEGEND

| | Listed Building | |
|---|--|-----------------------|
| | Cambridge County Council Sites and Monument Record (SMR) | |
| | Conservation Area | |
| | Scheduled Monument | |
| | Listed Building and SMR | |
| 96% ===== | Aerial photograph trace on SMR Soilmark/cropmark Ridge and furrow on SMR Earthworks/soilmark | |
| me | Aerial photograph trace Soilmark/cropmark identified at NMRC | |
| ~~~~ | Ridge and furrow Earthworks/soilmark identified at NMR(| |
| | Area containing site or monument | |
| | Parish boundary | |
| | Limit of study area | 187 |
| 43 | Grid reference (TL) | |
| * | Grade I or II* listed building | |
| [155] | Site identified during inspection as containing possible additional constraint | |
| | Basic Option/Purple Route | |
| | Grey Link | |
| : MERCHANNE | Orange Link | |
| | Brown Route | |
|) years | Red Route | |
| CONTRACTOR OF THE PARTY OF THE | Green Route | |
| | MI/AI Link | |
| | Conjectured line of Roman Road | |
| Zi. | Aerial Photograph trace identified from ESL photographs | ORIGINAL IN COLOUR |

