

Desk Top Evaluation
of the
Lincolnshire Section
of the Deepings Bypass
by
Heritage Lincolnshire

on behalf of
the County Archaeologist
July 1992

CONTENTS

PAGE

| | | |
|---|--|----|
| Introduction | Desk Top Evaluation of the Lincolnshire Section of the Deepings Bypass by Heritage Lincolnshire | 1 |
| Methods | | 1 |
| Location | | 1 |
| Location Plan | on behalf of the County Archaeologist July 1992 | 2 |
| The Archaeology | | 3 |
| Archaeological features on the proposed route and immediately adjacent | | 3 |
| Archaeological features in the vicinity of the bypass route | | 5 |
| Fieldwalking Results | | 5 |
| Plan of route and areas fieldwalked | | 11 |
| Discussion | | 11 |
| Conclusions | | 12 |
| Recommendations | | 14 |
| Preservation of Evaluation Results | | 15 |
| Acknowledgements | | 17 |
| Bibliography | | 18 |

INTRODUCTION

CONTENTS

PAGE

| | |
|--|-----|
| Heritage Lincolnshire has been commissioned by Lincolnshire County Council, through the County Archaeologist, Mr. Steve Cussey, to undertake a preliminary | |
| Introduction | 1. |
| of the | |
| AlVA to Market Deeping Bypass through Lincolnshire (ref. Lincolnshire County | |
| Methods | 1. |
| of drawings A3122/63 and A3122/64, May 1982 | |
| Location | 1. |
| Location Plan | 2. |
| The Archaeology | 3. |
| Archaeological features on the proposed route, and immediately adjacent | 3. |
| Archaeological features in the vicinity of the bypass route | 8. |
| Fieldwalking Results | 9. |
| Plan of route and areas fieldwalked | 10. |
| Discussion | 11. |
| Conclusions | 13. |
| Recommendations | 14. |
| Presentation of Evaluation Results | 16. |
| Acknowledgements | 17. |
| Bibliography | 18. |

INTRODUCTION

Heritage Lincolnshire has been commissioned by Lincolnshire County Council, through the County Archaeologist, Mr. Steve Catney, to undertake a preliminary documentary assessment of the archaeological impact of the proposed route of the A15/A16 Market Deeping Bypass through Lincolnshire (ref. Lincolnshire County Council drawings A3322/63 and A3322/64, May 1992).

Methods

Information on archaeological sites lying on, or close to, the proposed route of the bypass has been obtained in the following ways: fieldwalking survey; field visits; consultation with local Heritage Societies; a search of the records of Heritage Lincolnshire; analysis of aerial photographs; research in the Peterborough and Market Deeping libraries and consultation with the Lincolnshire County Archaeologist. Additional information has been kindly provided by Mr. Tony Hurley, the Community Archaeologist for South Kesteven and Roger Palmer of the Cambridge Air Photo Service.

Location

The proposed route runs from the river Welland, west of Market Deeping, (TF131098), approximately northwards and then eastwards, crossing the A15 north of Market Deeping. The bypass route continues in a north easterly direction utilising most of the route of Northfield Road and part of Sharpe's Road to join the A16 (TF174129). From the Welland to the A15 the road will be dual carriageway, and from the A15 to the A16 it will be a single carriageway.

The topography traversed by the proposed route is virtually flat and mostly under arable cultivation. The underlying river and fen-edge gravels are overlain by alluvium close to the Welland and by thin fen deposits at the northern end of the route, the Deeping Common/Fen area, where extinct ancient watercourses are present.

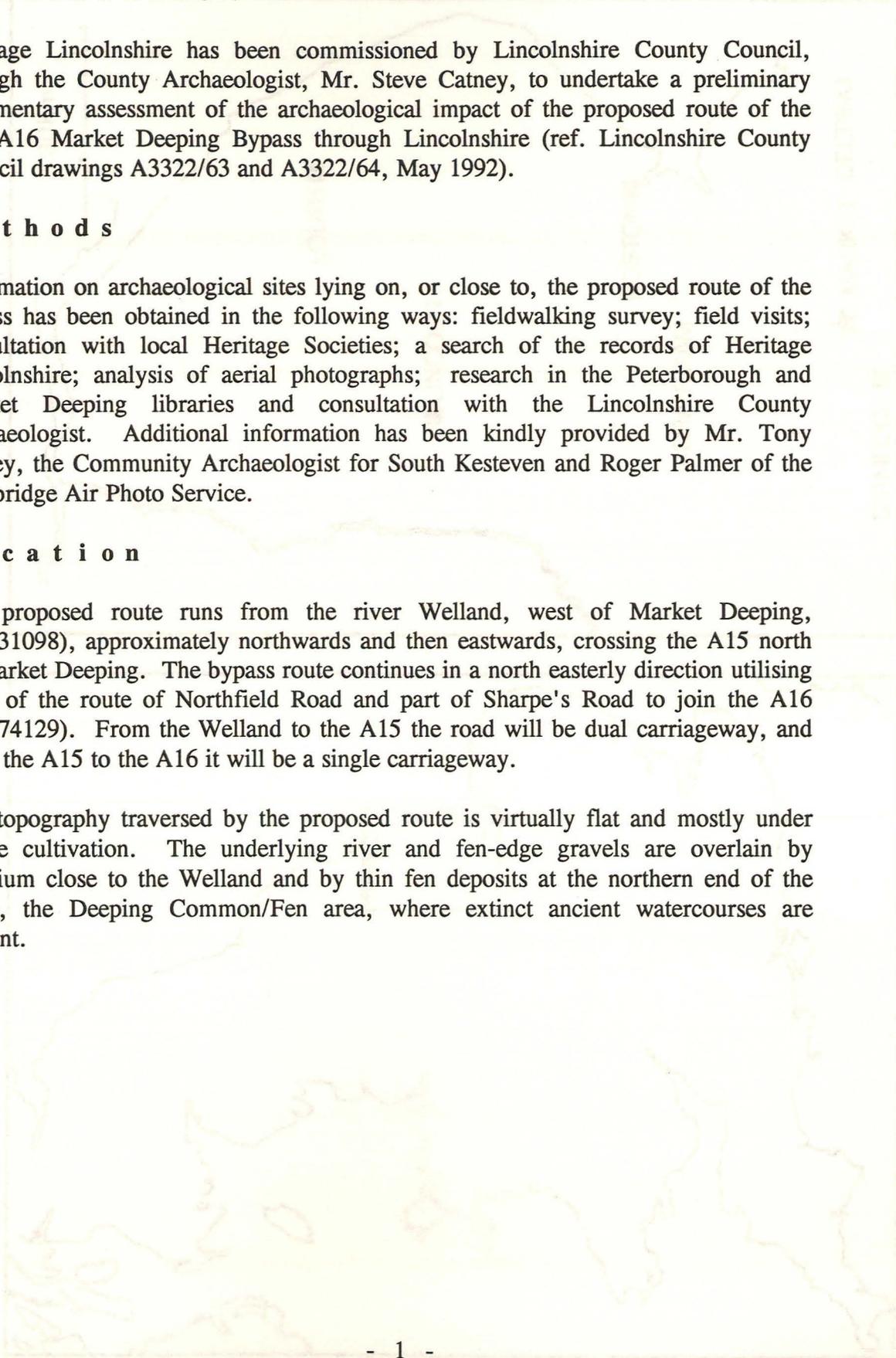
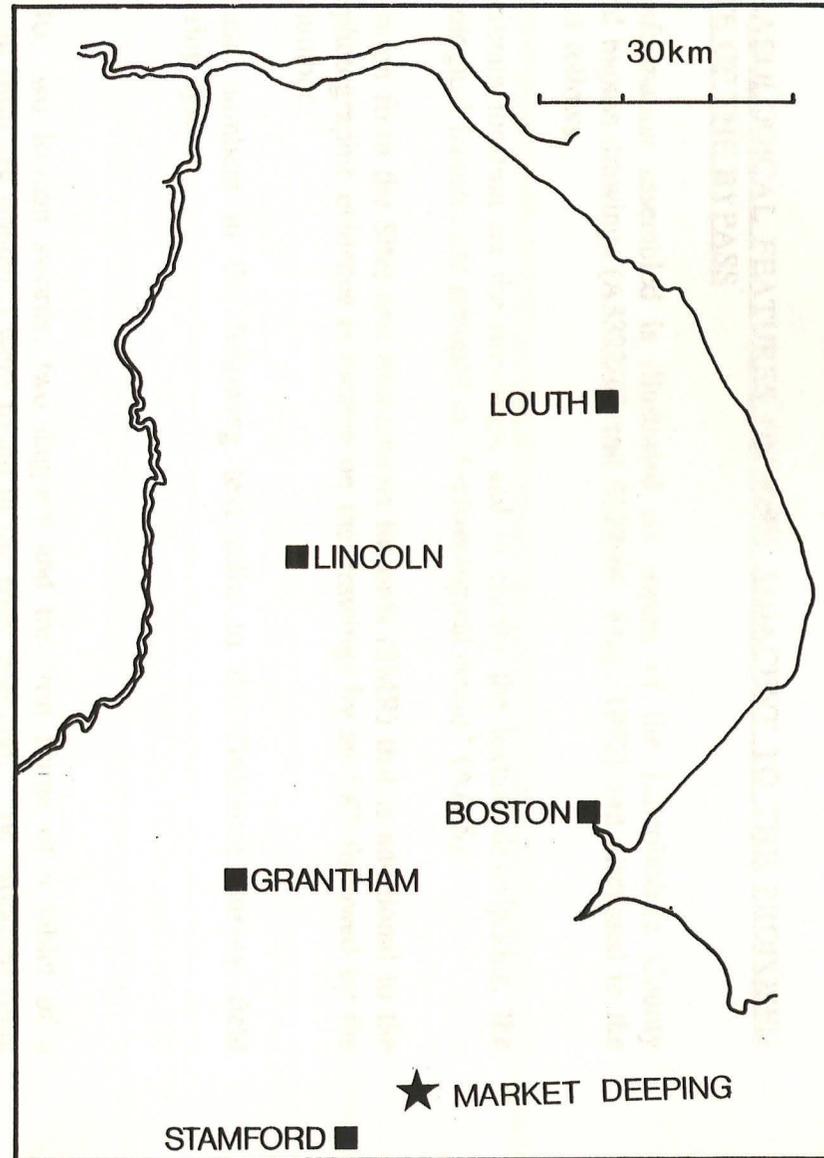
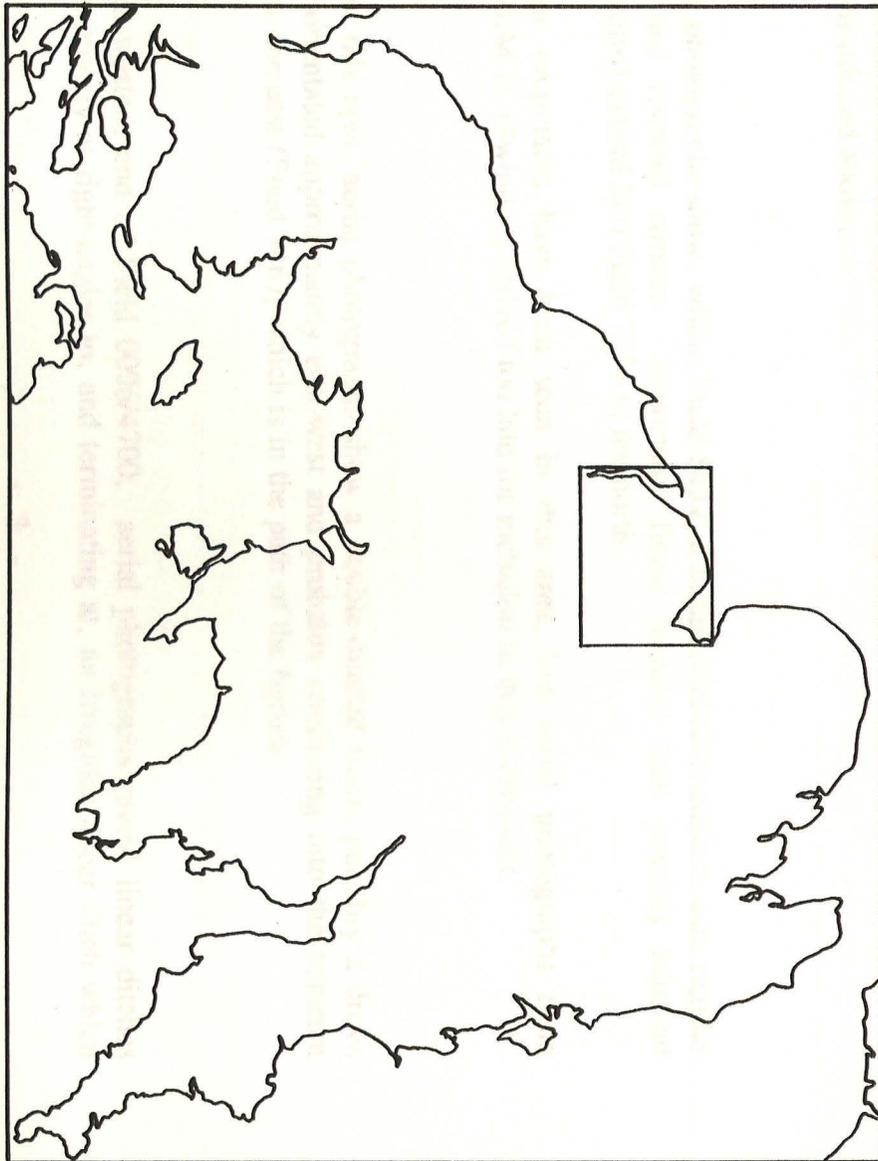


Fig.1
Location

Fig.1
Location



THE ARCHAEOLOGY

ARCHAEOLOGICAL FEATURES ON AND ADJACENT TO THE PROPOSED ROUTE OF THE BYPASS

The information assembled is illustrated on copies of the Lincolnshire County Council bypass drawings (A3322/63 and 3322/64, May, 1992) and discussed in the text that follows.

To facilitate location on the drawings, and to clarify the textual descriptions, the archaeological features are grouped in "Archaeological Areas" (AA'S).

Information from the Sites and Monuments Records (SMR) that is additional to the aerial photographic evidence is located on the drawings by an "X" followed by the SMR number.

The field numbers in the following text refer to the Ordnance Survey field numbering system.

AA1

In 1740, two Roman swords, two daggers and the iron frame of a tablet of a vexillum (military standard) were found in the river Welland. The proposed route crosses the river at the approximate location (given on the SMR as TF 1310) of the finds mentioned above.

AA2

Aerial photographs show, within Field 8434, a broad ditched enclosure with regular sides and rounded corners. Associated linear features (and possibly adjacent enclosures) extend into Field 7754 to the north.

Further cropmarks have been seen in this area, but aerial photographs from R.C.H.M.E. (Swindon) arrived too late for inclusion in this assessment.

AA3

Within this area, aerial photographs show a double-ditched track, possibly a drove way, orientated approximately east-west and probably continuing into the adjacent field to the east (Field 7467) which is in the path of the bypass.

AA4

At the western end of Field 0006/4700, aerial photographs reveal linear ditches approximately at right-angles to, and terminating at, an irregular linear ditch which

runs north-east/south-west. Parallel to the irregular ditch, to the south, is a possible droveway and enclosure with apparent corner entrances. Close to the southern terminal of the droveway is an apparent large circular pit or possible remnant of an upstanding mound. Further linear ditches lie south-east of the droveway, maintaining a similar orientation.

Slightly to the north of centre, in the eastern area of Field 0006, is a large, approximately 35m diameter ring-ditch. Further to the north lies a second ring-ditch of approximately 12m diameter. To the east, a series of pits appear to form an "L" shape and, further to the east, form a horseshoe shape. East of those features, and on the edge of the field, are the remnants of a ring-ditch, cut by road improvements to the A15. Close to the drain that traverses Field 0006 in a north-south direction, is a double ring ditch, possibly indicating the remains of a Neolithic or Early Bronze Age ovoid barrow.

The whole of the eastern part of Field 0006 is traversed by interlinking irregular ditches. In the south they form a sub-rectangular enclosure with an apparent entrance in the south-east. Within this enclosure are a number of pits forming a horseshoe arrangement. It is possible that the "ditches" forming this enclosure, and the similar, almost circular, enclosure immediately to the north, are geological in origin, being formed by ice wedge polygons.

In the south-east corner of the field is a probable field system complex of several short linear ditches, some intersecting at right-angles. There also appears to be evidence of medieval quarrying.

SMR 33431 gives the following information relevant to area (AA4):

- | | |
|-----------------------|--|
| (1) NGR TF132114 | Circular Cropmark seen from the road. |
| (2) NGR TF133113 | Intersecting straight and curved ditch lines - to an irregular enclosure with one rectangular corner attached. A circle in the area. |
| (3) NGR TF131114 | Circular Cropmark seen from the road. |
| (4 & 5) NGR TF 130114 | Ring-ditches. |

AA5

Aerial photographs show that one of the irregular ditches in the east of AA4 appears to continue into Field 1947, on the east of the A15. Approximately parallel, and at right-angles to, are further interlinking irregular linear ditches, some extending into Field 2828 to the south and into Field 4445 to the east.

In the south-west corner of Field 1947, is a "T" shaped ditch, the length of the axis E-W being approximately 10m.

Aerial photographs also clearly show a ring-ditch, approximately 15 m diameter, close to the centre of the western boundary of Field 2828.

A possible double ring-ditch, within an enclosure with corner entrances and a double ditch (droveway?) on its south-east and north-east sides, straddles the boundary of Fields 2828 and 4445. A rectangular pit in the centre of the south-eastern side may be of geological origin. The outer of the two north-eastern ditches of the enclosure continues south-east. Parallel to the outer ditch described above is a single ditch running from the centre of the eastern side of the enclosure.

In the south-west corner of Field 2828 there are at least 6 large (approx. 6m x 4m) pits - date and function unknown.

AA6

The Car Dyke bounds Field 4445 on its eastern side. Parchmarks revealed on aerial photographs show the remains of the gravel banks running north from Northfield Road. Adjacent to the northern side of Langtoft Drain, joining the eastern side of the Car Dyke, are further parchmarks probably indicating a contemporary adjoining dyke. The proposed bypass route traverses the Car Dyke.

AA7

Aerial photographs show several ditches in Fields 9364 and 8752 defining, what appears to be, an irregular semi-circular enclosure with two radial ditches.

The Sites and Monuments Record (Number 33432) notes that an Early Bronze Age axe-hammer was found in Field 8752.

Within Field 8313, aerial photographs show a circular feature. However, this may be of modern origin.

AA8

Within the eastern part of Field 3467 aerial reconnaissance reveals a series of interconnecting linear ditches. Towards the south-eastern corner of this part of the field, these form three sides of an enclosure. A possible entrance is also discernible close to the south-eastern corner and a large pit is visible adjacent to the south-west corner of this enclosure.

Further cropmarks have been seen in this area, but aerial photographs from R.C.H.M.E. (Swindon) arrived too late for inclusion in this assessment.

AA9

A ploughed down mound of approximately 40 m diameter has been recorded in Field 5197 (behind Oat Sheaf House). Geophysical survey indicates that this is a barrow, and numerous worked flints have been discovered in close proximity. Oat Sheaf House is also built on a barrow. The ring-ditch in Field 4100 is a multi-phase barrow excavated by Heritage Lincolnshire in 1991. A second barrow in this field was destroyed when the farmer excavated a small lake. During the work a third ring ditch, with a cremation, was recorded.

DEN 3 and SK56.03 (Field 6760) both denote scatters of worked flints, some burnt and some probably of Bronze Age date.

An extinct watercourse appears to skirt the gravel ridge on which at least five barrows are known.

To the west of Oat Sheaf House, in Field 3100, part of the original causeway between Market Deeping and Spalding may survive. The outline of a bend, bypassed and indicated as a bank, appears on the first edition Ordnance Survey map surveyed in c. 1820. The parish boundary between Market Deeping and Deeping St. Nicholas appears to follow the line of the bank.

The proposed route crosses the probable causeway and the extinct watercourse.

Close to the north eastern end of the proposed route (AA/9), two barrows, at Oat Sheaf House and Little Lake Farm (French, 1991; Wainwright, 1981, p. 21-25) lie on a low gravel ridge. These latter barrows are known to be Neolithic. Scatters of worked flint, (some burnt) of probable Bronze Age date, were also found nearby. Such flint, especially in the region of ancient watercourses, can be indicative of settlements.

Immediately west of the barrows (AA/9), and close to the end of the proposed route and just within the area surveyed by the Ordnance Survey, (between O/S grid references TF1015 1340E and TF1015 1340N), several other barrows and numerous flint scatters were recorded during the Peabody Survey. Within the same area, linear ditches, an enclosure and a ring ditch can be seen on aerial photographs. Detailed plans, sections and cross-sections are known to exist in the archives of the area.

ARCHAEOLOGICAL FEATURES IN THE VICINITY OF THE BYPASS ROUTE.

The easily-worked and well-drained soils overlying the gravels are known to have been densely populated in the past. Aerial survey from the 1960's onwards, has revealed abundant evidence of human presence on the river and fen-edge gravels of the Welland Valley in the area east of Stamford, to the north, west and south of Market Deeping, at Langtoft, West Deeping and Maxey respectively.

Close to the north eastern end of the proposed route (AA9), two barrows, at Oat Sheaf House and Little Duke Farm (French, 1991; Wainwright, 1991, p 22-25), lie on a low gravel ridge. Three other barrows are known in this vicinity. Scatters of worked flints, (some burnt) of probable Bronze Age date, have been found nearby. Burnt flints, especially in the region of ancient watercourses, can be indicative of settlements.

Immediately west of the barrows (AA9), and thus to the north of the proposed route and not within the area covered by the drawings for the project, (between O.S. grid references TF1615-1749E and TF1304-1390N), several other barrows and numerous flint scatters were recorded during the Fenland Survey. Within the same area, linear ditches, an enclosure and a ring ditch can be seen on aerial photographs. Isolated flint scatters, barrows and enclosures are known to exist to the south of the route.

FIELDWALKING RESULTS

Those areas of the proposed route of the bypass which were available for fieldwalking were examined. The total width of the proposed easement was examined and surface finds were recovered and recorded by reference to a system of 10 m grids which was established over the area under examination.

The conditions for fieldwalking were, in the case of many fields, not ideal, with partial crop cover in many places. In other instances it was not possible to survey the fields due to total coverage of the ground by crops or the fields being under pasture. Approximately two thirds of the proposed route was examined.

The quantity of surface finds recovered from the fieldwalking survey was small for an area of such intense archaeological activity. The finds ranged, in date, from Roman to medieval and were predominately recovered from the eastern end of the route. The reasons for the paucity of finds may be explained by the poor conditions for fieldwalking and the extensive areas of alluviation on the northern and eastern parts of the route. The alluvium seals the archaeological deposits and prevents disturbance by ploughing. This very fact suggests that those deposits present will be in an excellent state of preservation.

FIG 2

MARKET DEERING

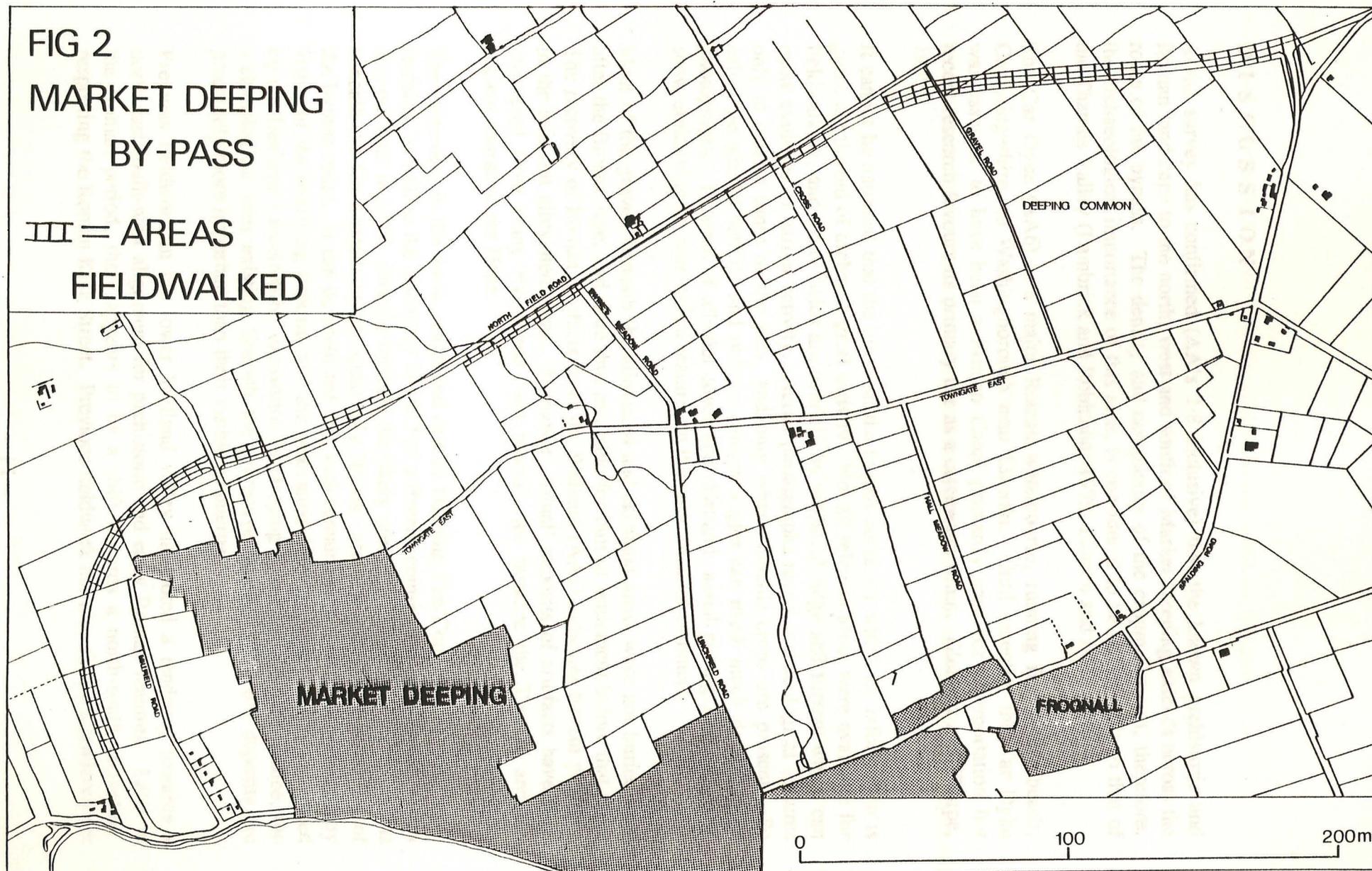
BY-PASS

III - AREAS

FIELDWALKED

FIG 2
MARKET DEEPING
BY-PASS

III = AREAS
FIELDWALKED



DISCUSSION

Aerial survey has confirmed (AA's 2-8 inclusive) that the known prehistoric and Roman landscape to the north, west and south of Market Deeping extends across the route of the bypass. The density and complexity of the cropmarks and, therefore, the archaeological importance of this area, is considered to be second only to that of the Thames Valley (Lambrick and Robinson, 1979; Benson and Miles, 1974).

The Car Dyke (AA6) is a major Roman watercourse, running from Waterbeach, Cambridgeshire, to Washingborough near Lincoln. Until recently, the Car Dyke was assumed to have been a Roman Canal primarily used for transportation but recent research favours its primary use as a catchwater drain. (Zeffertt and Thorpe, 1989)

It cannot be assumed that the areas on the bypass route for which no information is given are devoid of archaeological activity. Not all relevant areas were available for fieldwalking, and many fields are overlain by medieval ridge and furrow which can mask evidence of earlier activity. Aerial photographs reveal archaeological features only at certain times of the year, and only where suitable crops are present. So called periglacial activity and oblique camera angles can mask much detail on the photographs. In areas of alluvial cover and skirtland, aerial photographs will only show underlying archaeological features in the very driest of summers.

Most of the gravels beneath the alluviated and skirtland areas were not buried until after the Bronze Age, and were thus available for human settlement before that time. The recovery of Roman artefacts from the Welland (AA1) indicates human presence in the adjacent alluviated areas. Moreover, 'ritual' deposits of artefacts have been recovered from many rivers and 'wet places', for instance the Thames and the ancient course of the Nene.

The existence, in the north, south and east of Deeping Fen/Common, of prehistoric remains, as well as the discovery in 1807 of a Roman coin-hoard and skeleton, and a dug-out boat in 1839, strongly indicate the likely presence of archaeological remains beneath the fen deposits in the apparently "blank" areas at the north eastern end of the bypass route. It can be predicted that such remains would be well-preserved by virtue of the overlying deposits and the associated waterlogging - as was evidenced by the Heritage Lincolnshire, excavation in Deeping Common in 1992. Hence, the archaeological sites existing beneath the protective alluvium and fen deposits are potentially more important than their visible counterparts.

Previous fieldwork in the lower Welland valley has noted a tendency towards a north-east/south-west alignment for prehistoric and early Roman features. Later in the Roman period, there appears to be a shift towards a north-south alignment, respecting the Roman King Street. Previous fieldwork has also shown a tendency for

'ritual' prehistoric sites to be concentrated in the south of Welland valley, and for settlement sites to be concentrated in the north.

In the light of recent knowledge (Ref. French and Pryor - authoring), there is
The apparent paucity of evidence from the Saxon and later periods can perhaps be partially explained by the gradual concentration of settlement on the higher ground in response to the rising watertable during those periods. The town of Market Deeping is known to have been established in Saxon times. The cropmarks revealed by aerial photography are heavily biased in favour of the ditches and walls of the prehistoric and Roman periods. The remains of the less substantial wooden structures of Saxon and later periods may exist but may not be visible as cropmarks.

The recommendations given in the next section of this assessment will necessarily apply to the archaeology on the northern route of the bypass, in Lincolnshire. Similar consideration should be given to the proposed southern route that falls within Cambridgeshire.

3. The details and complexity of the prehistoric and Saxon heritage features in the lower Welland valley suggest that any changes to the natural river channel in order to avoid archaeological features would be complex. In avoiding specific features, any new route for the Market Deeping Bypass would involve a direct, but equally important, archaeological exercise.

4. A coordinated programme of archaeological survey and evaluation should be carried out to enable the full archaeological implications of the proposed construction works to be assessed. An appropriate mitigation strategy can then be developed and implemented prior to the start of construction works.

CONCLUSIONS

1. In the light of recent knowledge (Ref. French and Pryor - forthcoming), there is a need to take a landscape perspective in assessing the important and complex areas of early human activity in the lower Welland Valley.

2. It is essential that reasonable efforts are made to locate archaeological features masked by alluvial and fen deposits.

3. Allowance should be made for adequate archaeological examination of the Car Dyke, the Saxon causeway and the extinct watercourse.

4. In order to maximise the interpretation and understanding of the ancient landscapes of the lower Welland valley, the archaeological research and fieldwalking undertaken for the northern route of the bypass should be correlated with that undertaken for the southern route.

5. The density and complexity of the prehistoric and Roman landscape features in the lower Welland valley suggests that any changes to the planned route effected in order to avoid archaeological features would be pointless. In avoiding specific features, any new route for the Market Deeping Bypass would traverse different, but equally important, archaeological remains.

6. A co-ordinated programme of archaeological survey and evaluation should be carried out to enable the full archaeological implications of the proposed construction works to be assessed. An appropriate mitigation strategy can then be drawn up and implemented prior to the start of construction works.

RECOMMENDATIONS

For the purpose of discussion and recommendation, the study area has been zoned as follows:

- Zone 1** Areas which contain known archaeological features forming a continuing part of the lower Welland valley prehistoric and Roman landscape. These areas fall within the following "Archaeological Areas" - AA's 2, 4, 5 and 8.
- Zone 2** Apparent "blank" areas - within which archaeological features may be masked by fen and alluvium deposits.
- Zone 3** Specific archaeological features:
- a) AA6 The Car Dyke
 - b) AA9 I) The causeway
II) The extinct watercourse

It is recommended that the following survey and evaluation work be undertaken in order to produce a detailed schedule of the archaeological fieldwork required prior to construction of the bypass.

- Zone 1**
- 1) Geophysical survey to verify location and amplify detail and extent of the major cropmark features, and to aid differentiation of geological and archaeological features (the latter particularly in AA4).
 - A) Fluxgate gradiometer survey within the areas affected by the road and in limited adjacent areas.
 - B) Resistivity survey, if necessary and dependent on the results from survey A above, to amplify structural details of specific features.

PRESERVATION EVALUATION RESULTS

2) Completion of fieldwalking.

3) Sample machine trenching of the areas defined in (1) and features located by magnetic survey, to determine the nature of preservation and date of selected features

Zone 2

1) Completion of fieldwalking.

2) Random machine trenching to check for the existence of archaeological remains in the apparent blank areas. A 2% sample is generally accepted to be adequate.

Zone 3

Fluxgate magnetometer survey to determine the precise location and extent of the three specific archaeological features noted.

As a general recommendation, whilst carrying out the trenching procedures recommended for Zones 1 and 2, the opportunity should be taken to gain information on the extent of the alluvial cover by taking soil samples and recording soil profiles.

PRESENTATION OF EVALUATION RESULTS

- a] A report detailing the findings of the survey and evaluation should be drawn up. This report should include the results of the evaluation including text, geophysical survey plots and interpretations, location plan of trenches, plans and sections.
- b] The report should indicate the predicted location, extent and depth of significant archaeological deposits within the study area.
- c] All records from the project should be archived to the level outlined in the Management of Archaeological Projects, Appendix 3, English Heritage, 1991.
- d] The landowners should be encouraged to deposit the artefacts and project archive at the Lincolnshire City and County Museum in accordance with the Museum's Criteria for the Acceptance of Archaeological Material.
- e] The report should be supported by a separate document outlining a strategy for mitigating the effects of the proposed works upon any significant archaeological remains including details of resources required and timescale.

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