



Planning, Transport  
and Environment

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Scheme Title Widening of M3 Junctions 3+4	Details Archaeological Assessment
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Contractor Surrey C Archaeological Unit	
County Surrey	
OS Reference SU85	
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**AN ARCHAEOLOGICAL ASSESSMENT  
OF THE WIDENING OF THE M3  
BETWEEN JUNCTIONS 3 AND 4**

SURREY  
COUNTY  
ARCHAEOLOGICAL  
UNIT

**SCAU**

## **M3 WIDENING. JUNCTIONS 3-4 : ARCHAEOLOGICAL ASSESSMENT**

The following report defines the likely archaeological impact of the proposed widening of the M3 between junctions 3 and 4 on the basis of a desk-top study and a walk through of the area. It is divided into three sections:

1. Detailed presentation of the results of the desk-top study.
2. Analysis of the information gleaned from the walk through.
3. Assessment of the nature, areas and quantity of archaeological field evaluation required prior to construction work.

Section 1 has been largely prepared by Dinah Saich (Sites and Monuments Record Officer), Section 2 by Steve Dyer (Archaeological Survey Officer) and the report has been collated and Section 3 prepared by Rob Poulton (Archaeological Unit Manager) with the assistance of Jane Robertson (Archaeological Assistant).

## **1. DESK-TOP ASSESSMENT**

### **1.1 ORDNANCE SURVEY MAPS**

Ordnance Survey maps at a scale of 1:2500 were examined in various editions from the late-19th century first edition onwards. The attached sketch plan (fig 1) indicates the relationship between the maps and the motorway.

#### **X, 13 (Editions of 1885, 1915 and 1934)**

The area is shown as fields and woodland with an area of rough grassland to the south-west.

On all editions a pond named as "Black Pond" is present to the west of Hammond's Pond. A tracing of this overlain on the M3 maps appears to show this located on the line of the M3. However, the area is now very built up and Hammond's Pond is a slightly different shape so this may not be very accurate (fig 2).

#### **XV, 4 (Editions of 1871, 1915 and 1934)**

The area is shown as large houses and grounds very different from the area today which is heavily built up. It is therefore difficult to establish if any of these houses are on the line of the M3.

#### **XV, 8 (Editions of 1897, 1915 and 1934)**

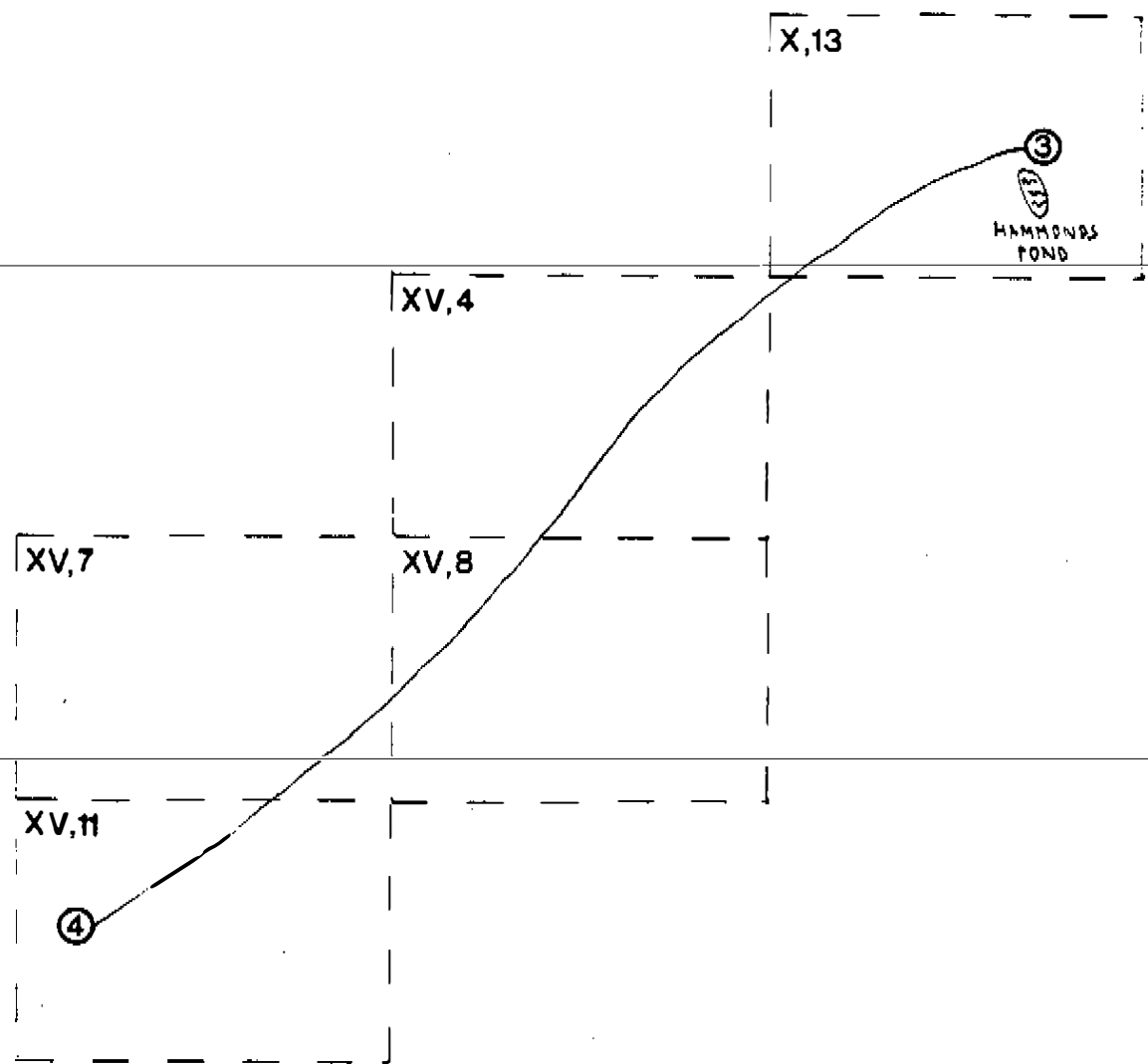
The area is shown as woodland and ?parkland.

#### **XV, 7 (Editions of 1879, 1912 and 1934)**

The area is shown as fields and woodland.

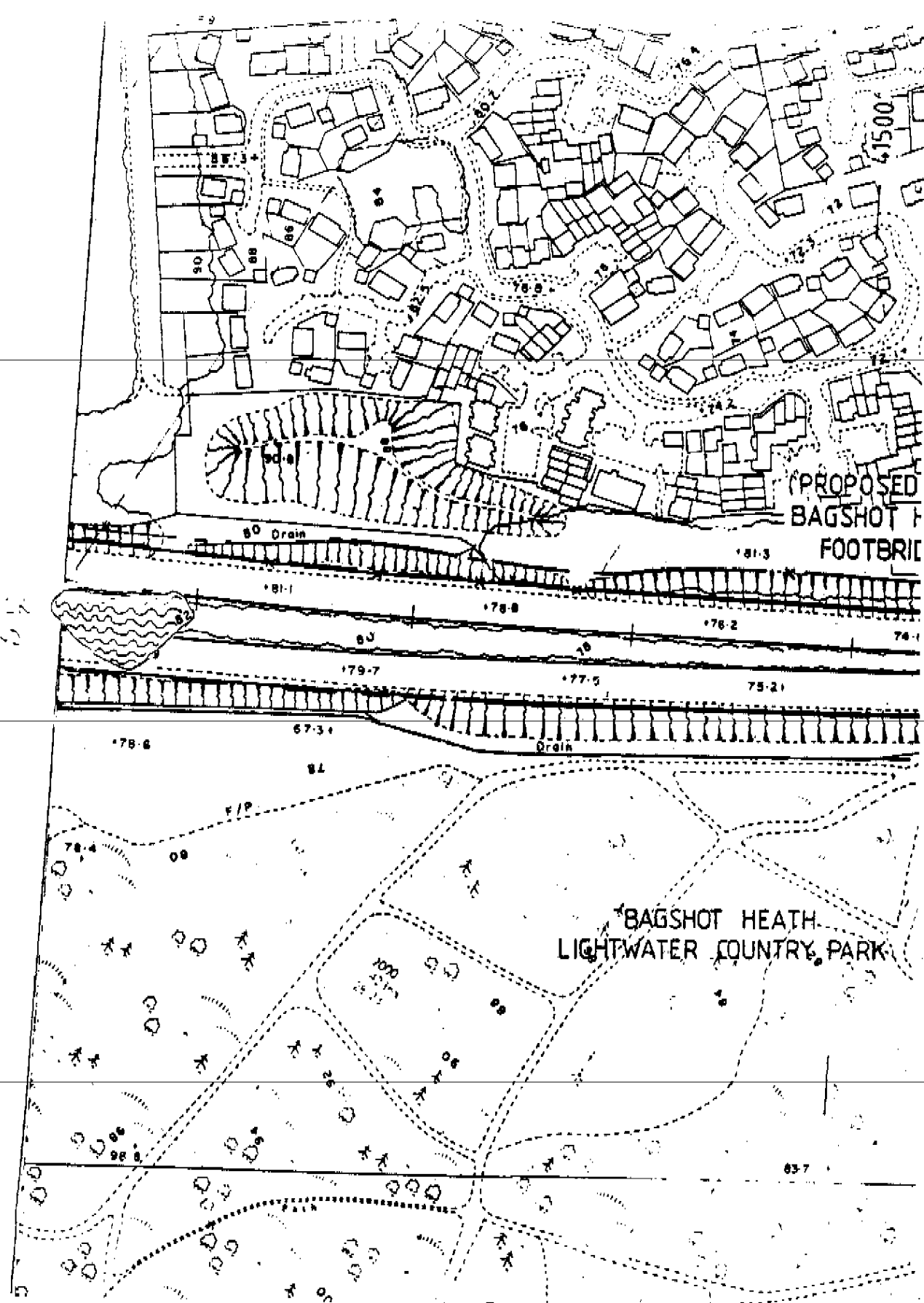
#### **XV, 11 (Editions of 1888, 1915 and 1934)**

The area is shown as fields and woodland. There is possibly a terrace of houses on Frimley Road on the line of the M3 but it is very difficult to compare the maps.



**FIG 1.** Sketch plan to show the relationship between the early Ordnance Survey 1:2500 maps examined and the M3

BLACK  
POND



**FIG 2**

Extract from drawing no. 1464/C1/108/01/5 with the possible site of 'Black Pond' indicated as derived from the first and later editions of the Ordnance Survey map.

## **1.2 TITHE MAPS**

Tithe maps were consulted for the parishes of:

Windlesham  
Frimley

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### **1.2.1 Windlesham (map dated 1841)**

The south-west part of the parish is not shown, probably because it was "waste". As a result there is no sign of Hammond Pond or Black Pond.

### **1.2.2 Frimley (map dated 1842)**

Most of the area is shown as fields with large areas of "waste". There are no features of obvious archaeological interest.

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### **1.3 SITES AND MONUMENTS RECORD INFORMATION**

Sites and Monuments Record information is shown on two sheets: (a) and (b). (See fig 3).

Other information shown: parish boundary and geology.

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**a) 3238 - Stone quarry . SU 912 616**

**b) 3188 - Two mid-Acheulian hand axes. SU 8844 6031**

**3245 - Medieval and post-Medieval ditch. The lower fill contained Surrey White Ware. SU 876 581**

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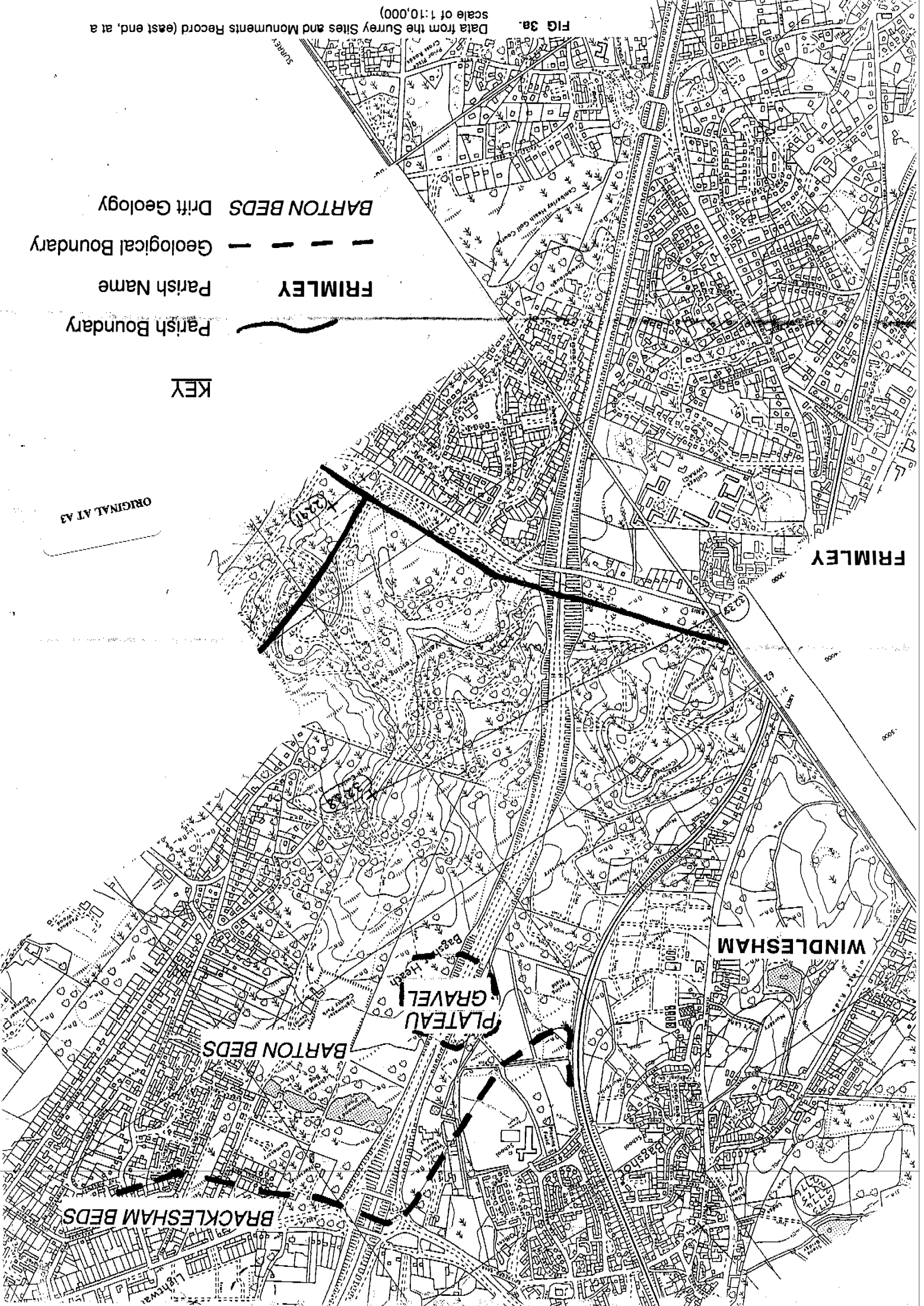


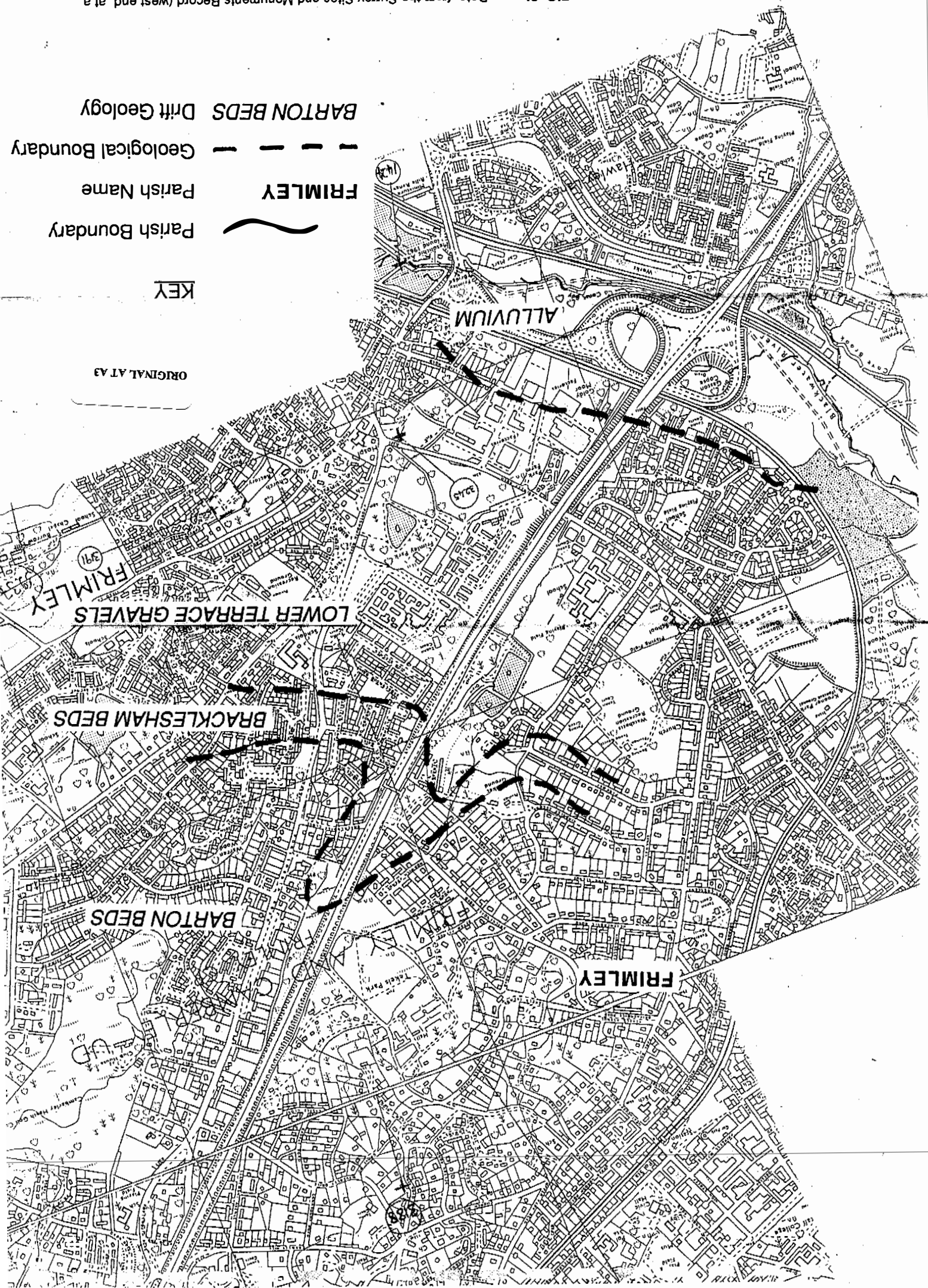
FIG 3a.  
Data from the Surrey Sites and Monuments Record (east end, at a scale of 1:10,000)

FRIMLEY  
Parish Boundary  
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Geological Boundary  
BARTON BEDS Drift Geology

KEY

ORIGINAL AT A3





#### 1.4 EARLY MAPS

The only map of older date than the tithe which is of a large enough scale to be useful for these purposes is that of Rocque (1768). It reveals that the area was entirely heathland and there is no information of archaeological significance.

## **1.5 AERIAL PHOTOGRAPHS**

Aerial photographs held by Surrey County Council, taken in 1988 by JASAIR, were examined without result. Earlier aerial photographic coverage of the county has been extensively examined for the SMR without positive results in this area.

## **2. REPORT ON THE WALK-OVER SURVEY**

A walk-over survey of the areas affected by the proposed widening of the M3 between junctions 3 to 4 was carried out by Steve Dyer of the Surrey County Archaeological Unit on July 13th and 14th 1992. This work entailed viewing the land affected by these proposals from the existing hard shoulder of the motorway, and where access was available off public highways and footpaths investigating the land from outside the curtilage of the motorway.

Much of the widening proposals between these junctions takes place within land already much disturbed, from an archaeological viewpoint, either by construction of the existing carriageway or from the creation of the industrial and housing estates alongside the motorway. Some areas, however, seem worthy of further evaluation, in the form of trial trenches where the ground is due to be disturbed. Such areas are shown on the attached plans, Drawing Numbers: 1464/C1/108/01/1 to 1464/C1/108/01/5, together with an outline of the necessary work in each case.

### **3. THE NEED FOR FURTHER EVALUATION**

#### **3.1 Implications of the desk-top study**

The desk-top assessment has revealed a remarkably small amount of information relevant to the study area. The specific elements noted are a pond (Black Pond) shown on fig 2 and three entries from the Sites and Monuments Record. None of these latter are nearer than 450m distant from the M3, and their direct relevance is doubtful. In the eighteenth century (section 1.4) the whole area was heathland, and much of it still forms Bagshot Heath. The sterility of this heathland has become almost infamous in modern times, and this may have been the case from the Roman period onwards, although the subject is not well studied (see chapter 2 of *The Archaeology of Surrey to 1540*, ed J and DG Bird (1987)). There are some indications, such as the presence of the possibly Iron Age earthwork known as the Bee Garden (SMR No. 1853 - beyond the present study area), that they may have formed a less hostile environment in the prehistoric period. This means that, even in the absence of direct indications of ancient activity, the archaeological potential of previously undisturbed ground should be regarded as low, rather than negligible.

#### **3.2 Implications of the walk through**

The walk through the area has demonstrated that there is only one area (shown on two separate maps) where the proposed works will have an impact on undisturbed ground sufficient to justify archaeological intervention. This area is a long narrow strip, without visible indications of archaeological interest. It does not bear any specific relationship to discoveries identified in the desk-top study.

#### **3.3 The need for further evaluation**

The evidence presented earlier and the discussion above have made it clear that the sites of new disturbance have no site-specific archaeological constraints, but do fall within an area where there is low, but ill defined, potential for the discovery of buried evidence of past activity. There will therefore be a limited need for further archaeological involvement with the scheme and its nature is discussed below.

#### **3.4 The methodology of further work**

**3.4.1** The further evaluation should aim to gather sufficient information to establish the presence/absence, extent, character, quality and date of any threatened deposits within the site.

**3.4.2** The following field methodologies have been considered:

- a) Fieldwalking - The area is not ploughed so the method is inappropriate.
- b) Test pitting - The technique may be a valid one where the problem is more defined, but not in this case.
- c) Augering - Given the anticipated character of potential archaeological deposits (lithic and pottery scatters generally at near-surface levels),

augering is not considered an appropriate technique as the same information can also be obtained by machine trenching, often in a more cost-effective manner.

d) Geophysical techniques - The narrow corridors available for testing will make such methods difficult to apply and interpret. They are more suited to broader areas but a modified targeted, sampling strategy is proposed if initial results from other techniques suggest this approach is applicable.

e) Geochemical techniques - Such techniques, particularly phosphate sampling, are appropriate at the site definition and examination stage rather than the search and locate stage.

f) Machine trenching - Probably the most commonly used field evaluation technique; it has much to commend it since it provides rapid, cost-effective answers to presence/absence and extent, and enables manual excavation to establish character, date and quality of deposits. The quantity of trial trenching to be undertaken is in need of discussion. A convention seems to be developing that the appropriate level of trenching is a 2% sample. However, this would not seem to provide an adequate level of testing when applied to narrow bands of disturbance, as here, and something nearer 10% may be needed. This is also sensible in practical terms in the present instance as a JCB would probably need to be hired for a day in either case, so that reduction to a lower percentage would not only drastically reduce the effectiveness of the archaeological evaluation, but would result in very little saving in time and cost.

In sum it is recommended that for the stretch of motorway between junctions 3 and 4 an archaeological evaluation is undertaken by means of controlled machine trial trenching in two areas (nos 1 and 2). A 1.2m wide bucket to excavate a total length of 150m of trench divided into c.25m lengths so as to provide a balanced sample of the areas will be required. An additional 25m of trench may be dug at the discretion of the archaeologist in charge in order to help elucidate any positive indications of archaeological interest which are encountered.

g) Manual excavation - The machine trenching is to be taken down to the top of 'natural' or the top of any significant archaeological level, whichever is the higher. In the event of archaeological deposits being encountered further hand excavation will be undertaken to clarify the nature, character and date of the archaeological deposits, but the primary object is to establish the presence/absence of archaeological deposits, their depth and extent. Archaeological features will generally only be sampled sufficiently to characterise and date them. Full excavation of features need not be undertaken at this stage. Care will be taken not to damage archaeological deposits through excessive use of mechanical excavation.

#### **3.4.3 Recording should be undertaken as follows:**

- a) All structures, deposits and finds are to be recorded according to accepted professional standards.
- b) Plans indicating the location of the excavated trenches and the location of all archaeological features are to be drawn at an appropriate scale. Plans at an appropriate scale should be related to the National Grid. All plans and

sections are to be drawn on polyester based drafting film and clearly labelled.

c) All archaeological contexts are to be recorded individually on record context sheets. A further more general record of the work comprising a description and discussion of the archaeology is to be maintained as appropriate.

d) A full black and white and colour (35mm transparency) photographic record of the work is to be kept. The photographic record is to be regarded as part of the site archive.

e) All artefacts recovered during the excavations on the site are to be suitably bagged, boxed and marked in accordance with the United Kingdom Institute for Conservation, Conservation Guidelines No. 2.

**3.4.4 A report is to be produced as follows:**

a) Within four weeks of completion of the work copies of a report are to be provided to the Motorway Widening Unit, the County Archaeological Officer and English Heritage.

b) The report is to include:

- 1) a copy of the trench location plan at an appropriate scale together with a plan of the main archaeological features together more detailed plans as appropriate and relevant section drawings;
- 2) a plan or plans showing the results of other investigative techniques;
- 3) a descriptive summary and Interpretation of the archaeology of the site;
- 4) a consideration of methodology used, including a confidence rating;
- 5) brief recommendations for a preservation strategy.

**3.5 Evaluation logistics**

The practicalities of undertaking the trial trenching also need to be considered. Once the area has been fenced off and taken into DoT ownership then the trial trenching could be rapidly and economically undertaken. If, however, the archaeological evaluation has to take place before that stage then it may be very difficult to obtain permission to undertake trial trenching.

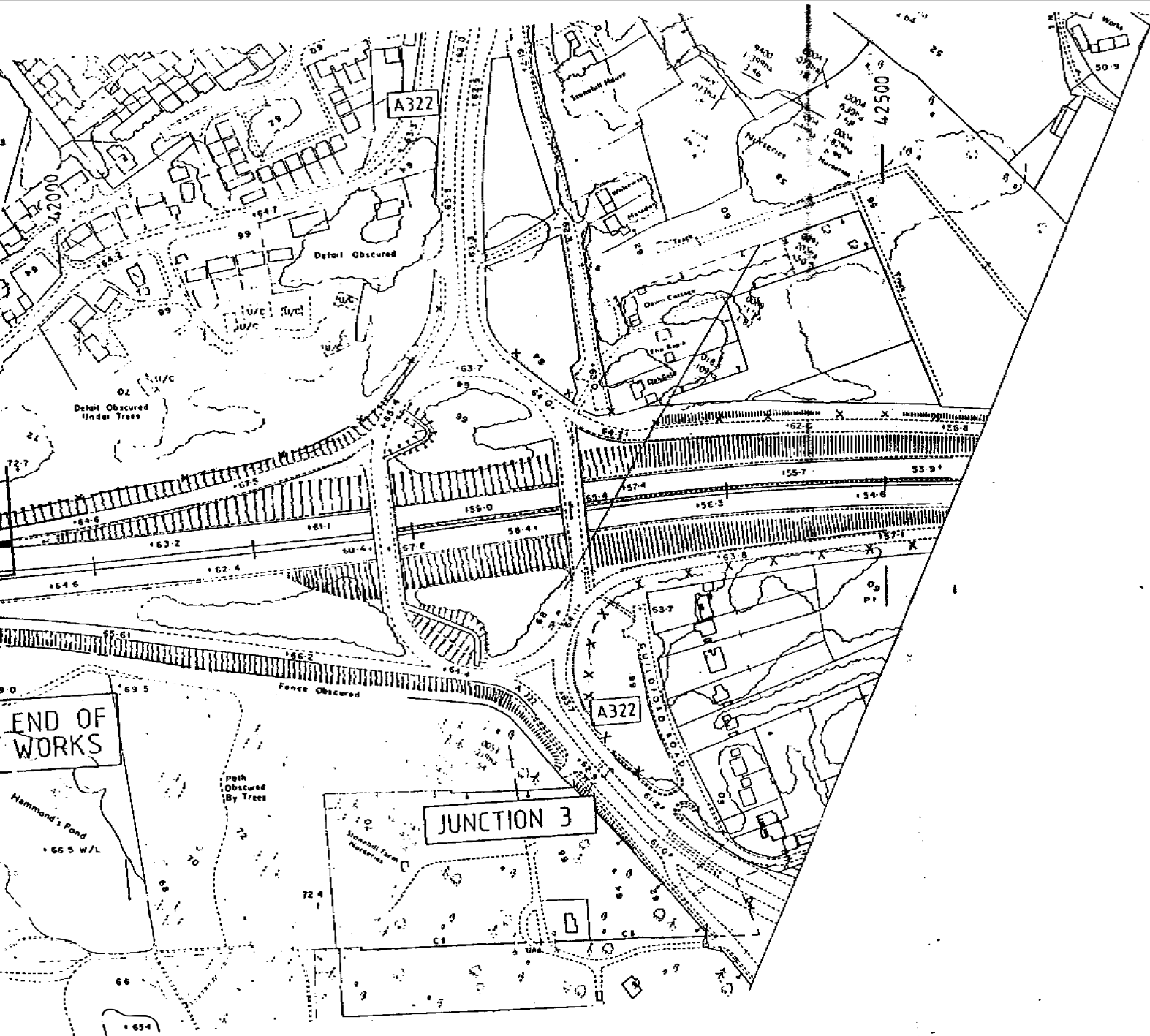
In whatever way the problem is resolved there will need to be a suitable allowance of time for the implementation of a preservation strategy (preservation *in-situ* or preservation by record) before the commencement of construction work.



DRAWING NUMBER 1464/C1/108/01/5.

This is a detailed topographic map of a residential area. The map features a north arrow pointing towards the upper left. Elevation points are marked throughout the terrain, including 68.4, 67.2, 66.3, 69.6, 68.5, 69.1, 68.3, 67.2, 69.6, 67.4, 68.8, 66.8, 65.5, 64.6, 65.8, 69.0, 66.5, and 66.5 W/L. A 'Pond (Dry)' is shown with a circular pattern of radiating lines and an elevation of 64.0. 'Hammond's Pond' is located in the lower right corner. A 'County School' is indicated in the upper right. A 'Playing Field' is labeled in the lower left. A box labeled 'END OF WORKS' is situated near Hammond's Pond. The map also shows a 'Fence Obscured' and a 'Detail Und' label. The terrain is depicted with contour lines and building footprints.

**ORIGINAL AT A3**



ORIGINAL AT A3

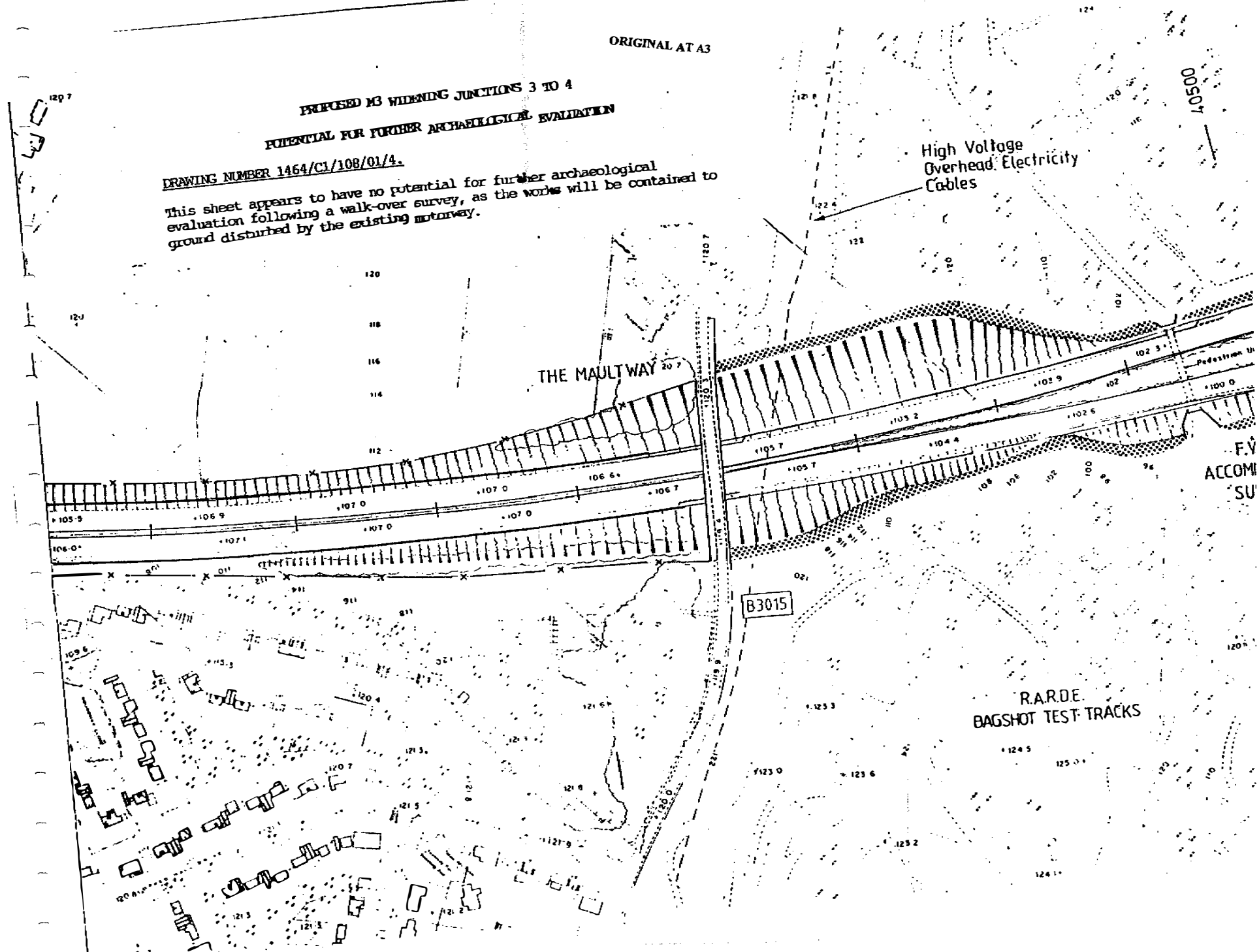
MAP 1464/C1/108/01/5

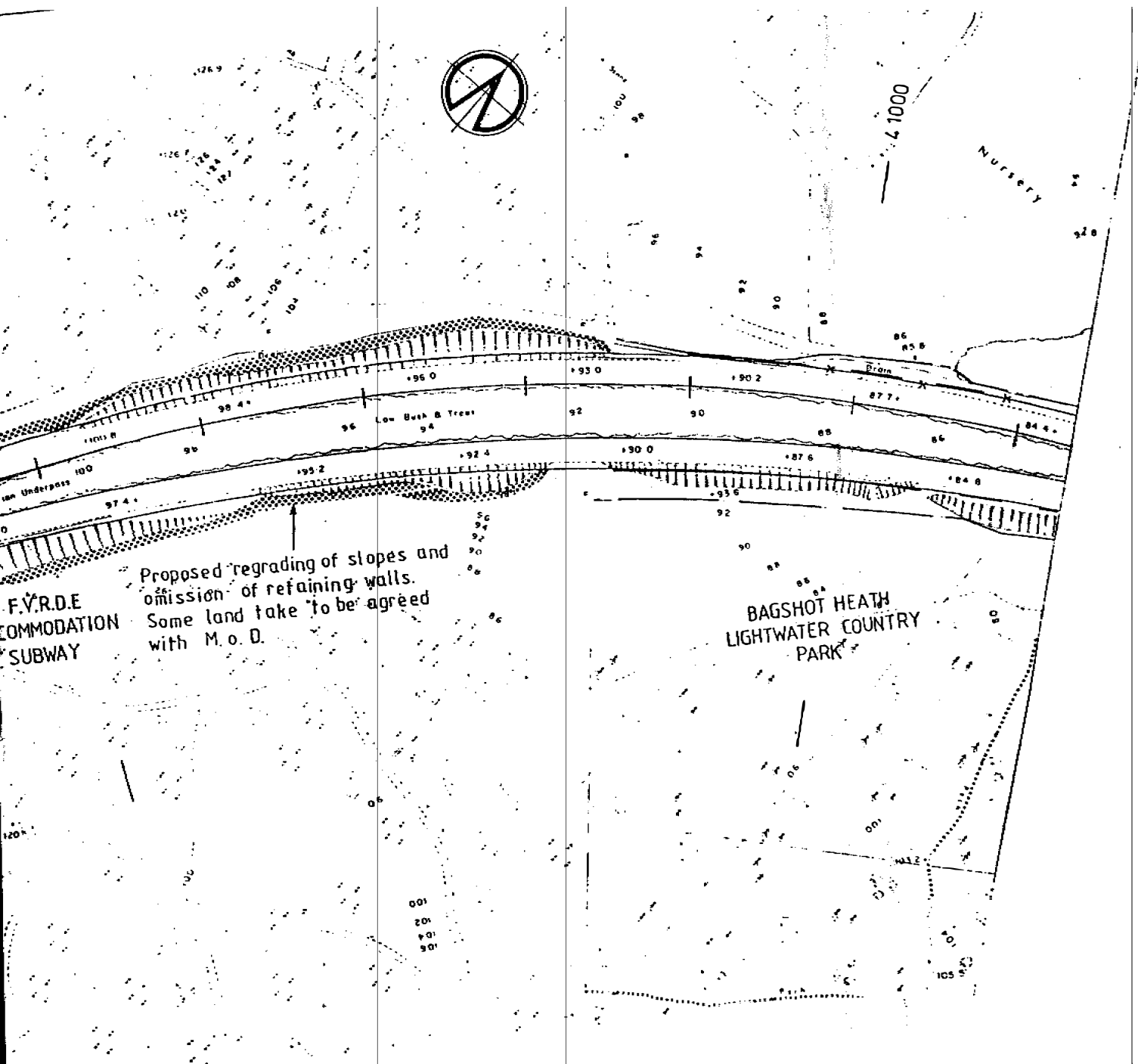
ORIGINAL AT A3

PROPOSED M3 WIDENING JUNCTIONS 3 TO 4  
POTENTIAL FOR FURTHER ARCHAEOLOGICAL EVALUATION

DRAWING NUMBER 1464/C1/108/01/4.

This sheet appears to have no potential for further archaeological evaluation following a walk-over survey, as the works will be contained to ground disturbed by the existing motorway.



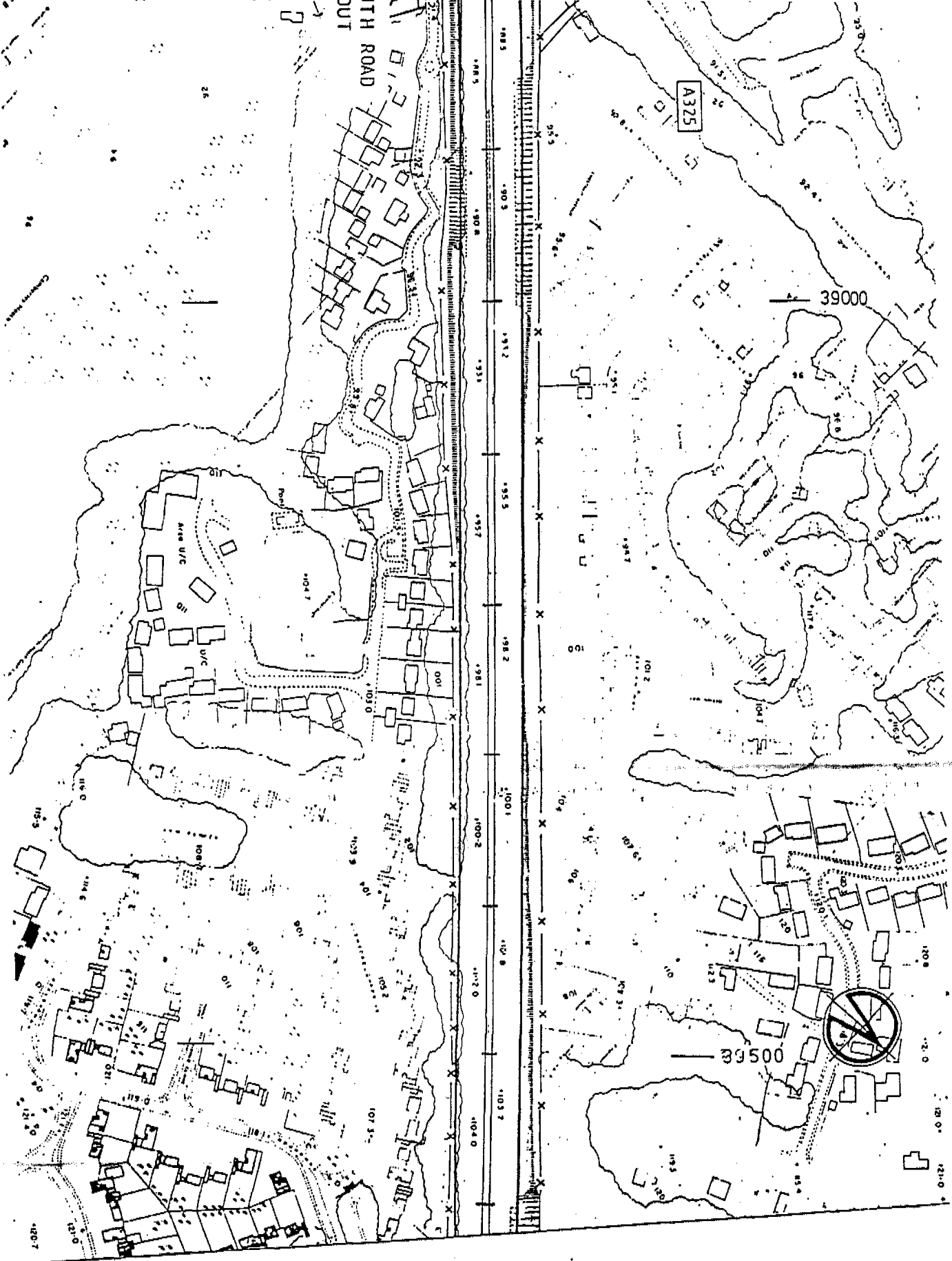


F.V.R.D.E.  
ACCOMMODATION  
SUBWAY

Proposed regrading of slopes and  
omission of retaining walls.  
Some land take to be agreed  
with M.O.D.

ORIGINAL AT A3

MAP 1464/C1/108/01/4



ORIGINAL AT A3

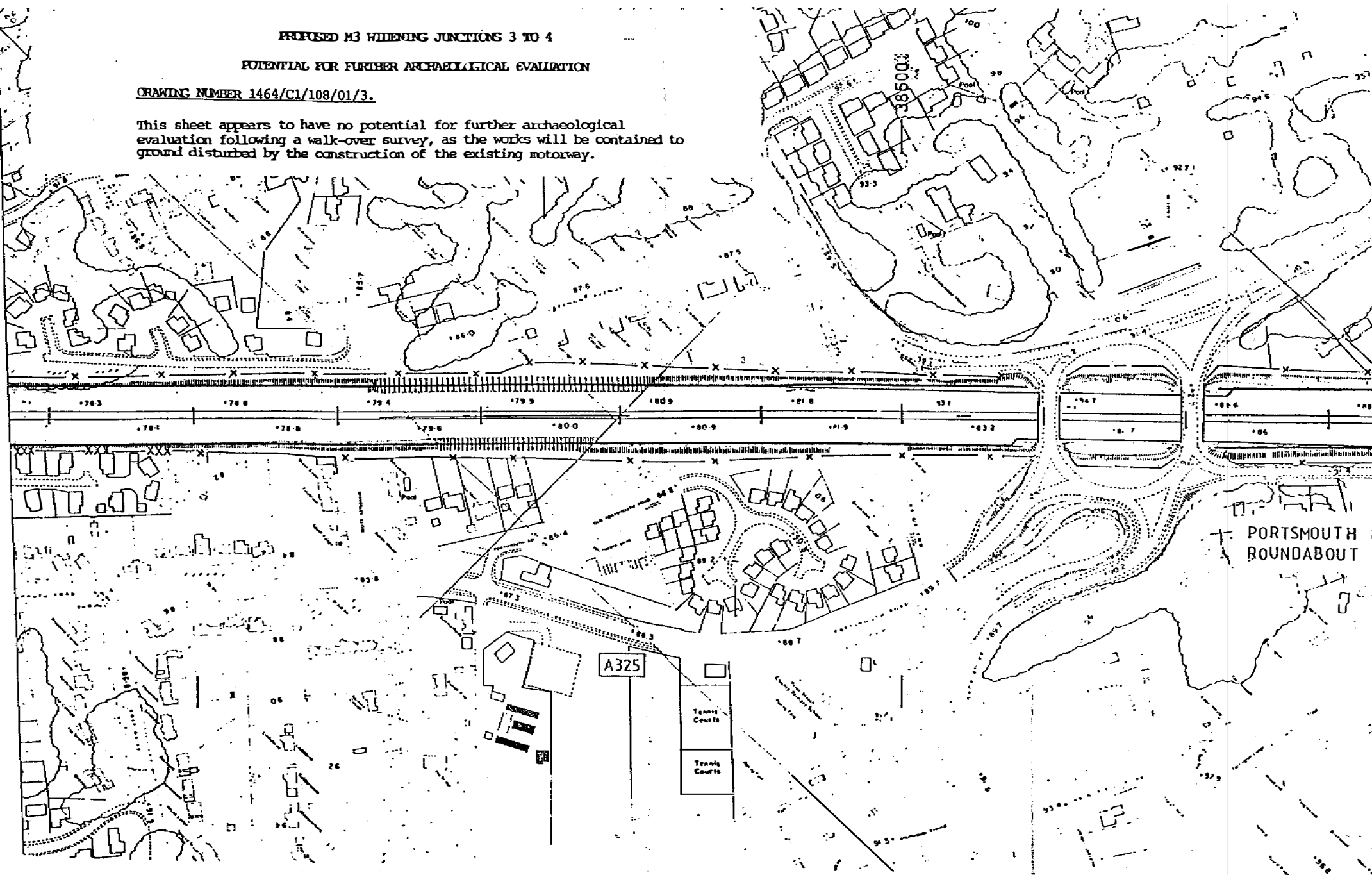
MAP 1464/C1/108/01/3

PROPOSED M3 WIDENING JUNCTIONS 3 TO 4

POTENTIAL FOR FURTHER ARCHAEOLOGICAL EVALUATION

DRAWING NUMBER 1464/C1/108/01/3.

This sheet appears to have no potential for further archaeological evaluation following a walk-over survey, as the works will be contained to ground disturbed by the construction of the existing motorway.

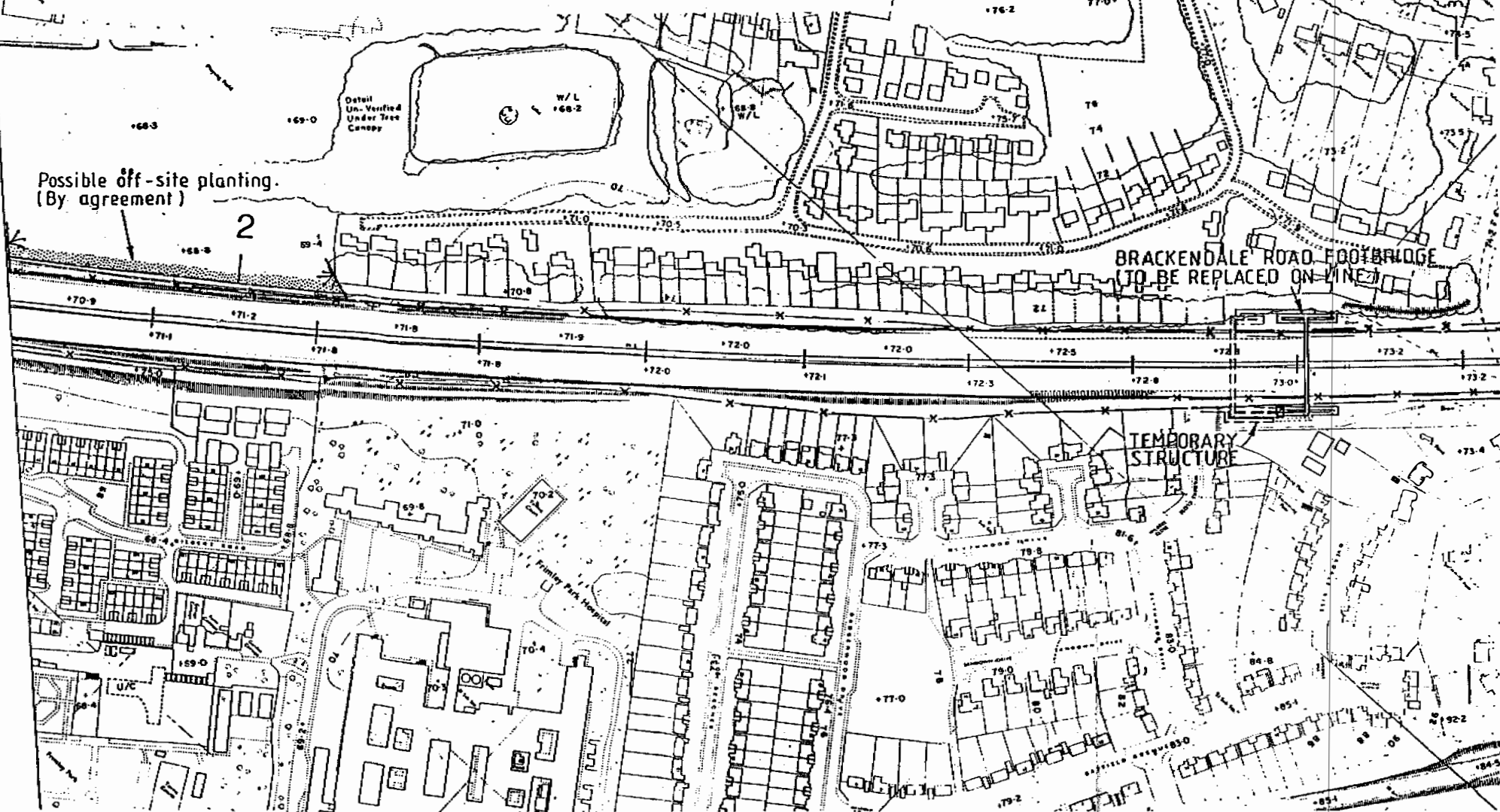


ORIGINAL AT A3

# POTENTIAL FOR FURTHER ARCHAEOLOGICAL EVALUATION

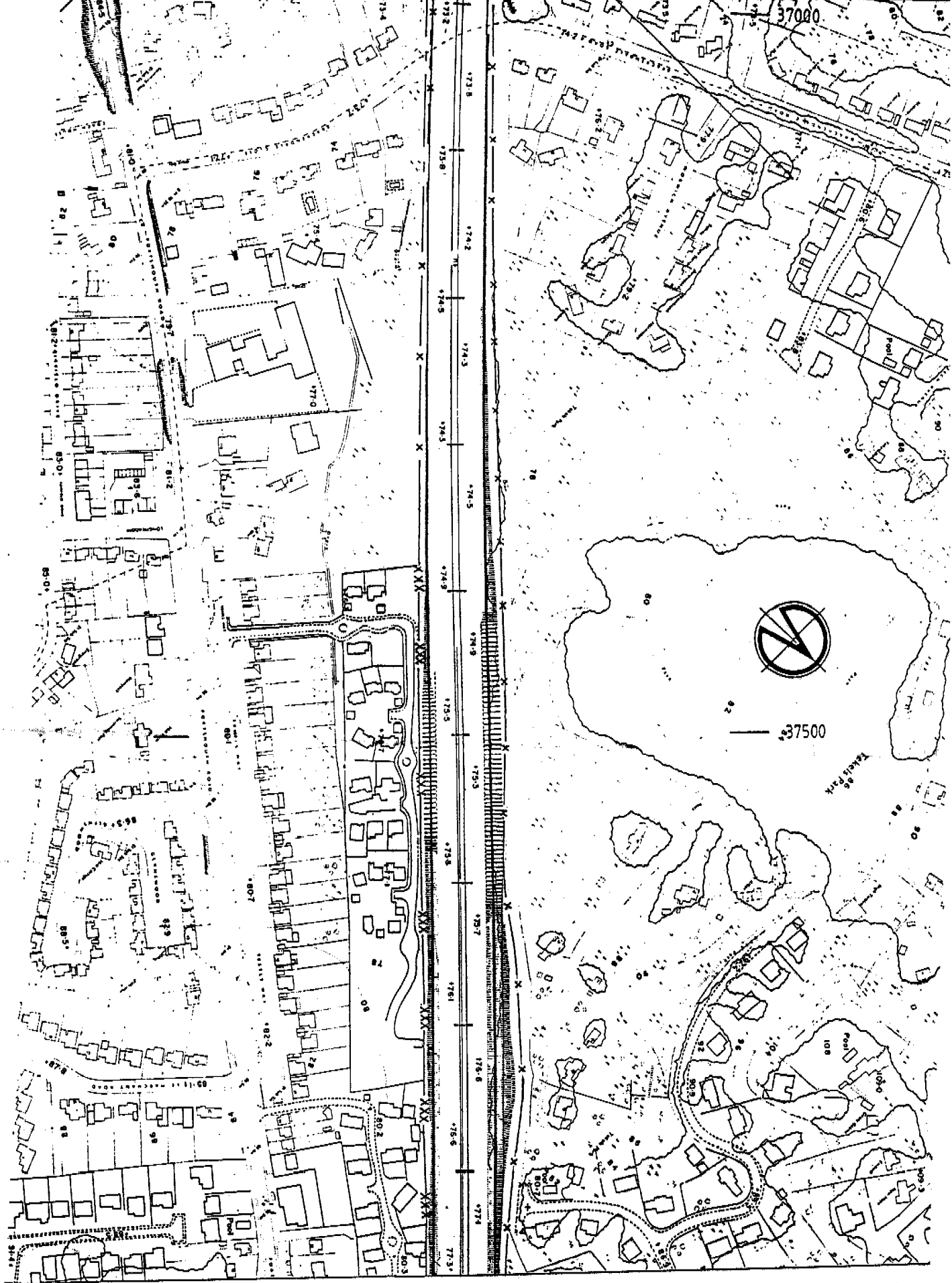
DRAWING NUMBER 1464/C1/108/01/2.

- 2 Metrage 36110 to 36270, east-bound carriageway. Possible off-site planting. Strip of land 160 by 6m. Trial trench along length of area.

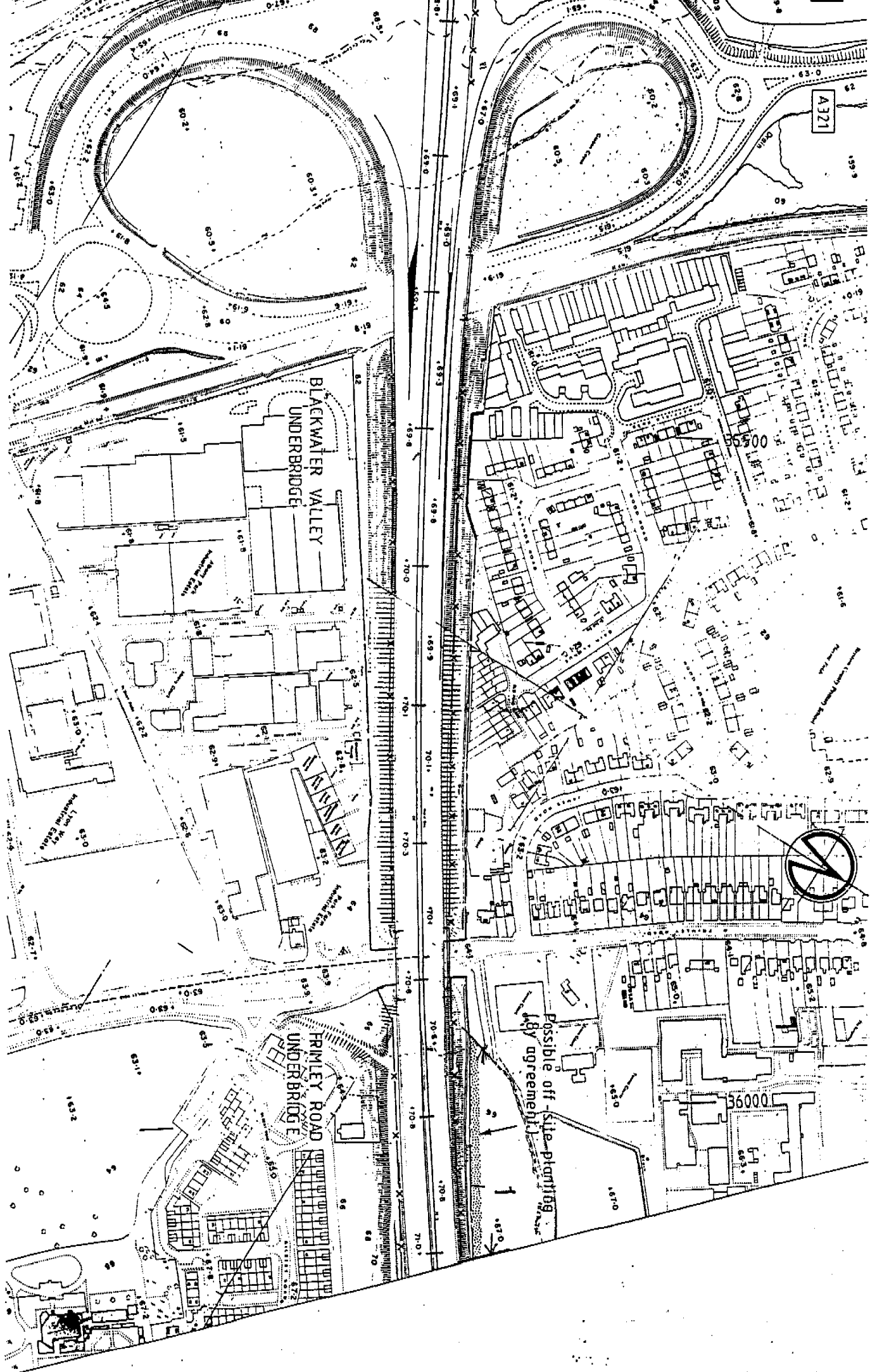


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ORIGINAL AT A3





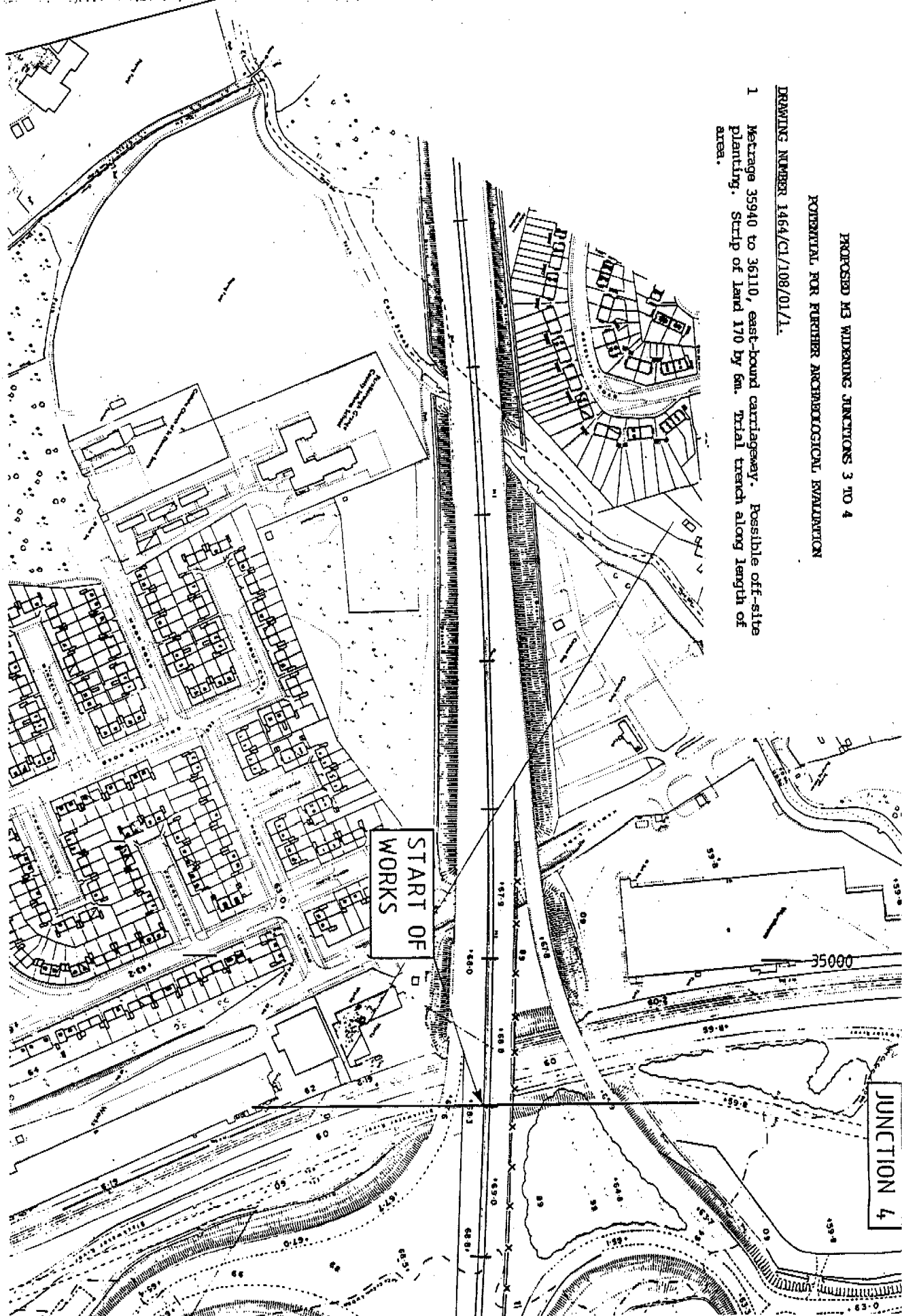


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MAP 1464/C/1/08/01/1

### POTENTIAL FOR FURTHER ARCHAEOLOGICAL EVALUATION

1 Metrage 35940 to 36110, east-bound carriageway. Possible off-site planting. Strip of land 170 by 6m. Trial trench along length of area.



ORIGINAL AT A3