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Scheme Title A27 Potsgate Bypass	Details Archaeological Evaluation INTERIM REPORT 1993/36
Road Number A27	Date March 1994
Contractor South Eastern Archaeological Services	
County East Sussex	
OS Reference	
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**A27 Polegate Bypass  
Archaeological Evaluation**

**An Interim Report**

Prepared on Behalf of

W S Atkins &  
The Department of Transport

By

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Project No: 1993/36

March 1994

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### ***South Eastern Archaeological Services***

*South Eastern Archaeological Services (SEAS) are a division of the Field Archaeology Unit, University College London; one of the largest concentrations of academic archaeologists in the country. Consequently, SEAS have access to the conservation, computing and environmental backup of the college as well as a range of other archaeological services.*

*The Field Archaeology Unit and SEAS were established in 1974 and 1991 respectively. Although field projects have been conducted worldwide, FAU/SEAS retain a special interest in southeast England with the majority of our contract and consultancy work concentrated in Sussex, Kent, Greater London and Essex.*

*Based in the local community, the Field Archaeology Unit sees an important part of its work as explaining the results to the broad public. Public lectures, open days, training courses and liaison with local archaeological societies are aspects of its community-based approach.*

*Drawing on experience of the archaeology of the countryside and towns of several counties the Unit can give advice and carry out surveys at an early stage in the planning process. By working closely with developers and planning authorities it is possible to incorporate archaeological work into developments with little inconvenience. The Unit employs some staff who have previously worked within local government and have experience of archaeology and the planning process, including public inquiry.*

*Field, desk top and consultancy projects have been undertaken for a wide range of clients, including water and gas utilities, The Department of Transport (A27, A259, A3), major private construction companies, local authorities, English Heritage and a range of other private and public concerns.*

## **1.0 INTRODUCTION**

- 1.1** South Eastern Archaeological Services (SEAS) have been commissioned by W S Atkins (The Client), acting on behalf of the Department of Transport (DoT), to undertake and report on the archaeological evaluation of the A27, Polegate Bypass (The Scheme).
- 1.2** Following initial desk top assessment in July 1991, a research design was drawn up by SEAS and submitted to The Client and the DoT. The programme of work was agreed by all interested parties, including English Heritage.
- 1.3** The project was initially conceived to run over 2 phases; the first to include hand dug testpits in areas of pasture and the second to involve Systematic Surface Artifact Collection (SAC) once arable areas were ploughed. The second phase would also include a series of trenches excavated by machine. Provision was also made within both phases for a soil magnetic susceptibility survey and a magnetometer scan. This phased approach was in response to current landuse and the availability of arable land for SAC.
- 1.4** When the project was finally undertaken it quickly became apparent that whilst two phases of work were required, the components of each phase could be modified. The geophysical survey, testpitting and SAC were undertaken together as Phase 1, to be followed by a phase of machine excavated trenches, Phase 2.
- 1.5** This document is a Phase 1 interim report.

## South Eastern Archaeological Services

(A division of the Field Archaeology Unit, Institute of Archaeology, University College London)

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Please reply to:

March 29, 1994

Mr. G. S. Bicker  
W S Atkins  
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KT18 5BW

Dear Mr. Bicker

**A27, Polgate Bypass; Archaeological Evaluation.**

Please find enclosed 3 No. copies of our interim evaluation report. I am sure that you would wish to forward a copy to The Department.

You will note that it highlights several areas which will require further evaluation in advance of road construction. This will involve excavating numerous trenches by machine, and you will recall that this component of the evaluation was included in Phase 2 of the agreed programme of works. We await your further instruction on the completion of the evaluation.

Even without this final phase of evaluation it is clear that rescue excavation of at least one site will be required in advance of construction work. Given that further areas are likely to require a similar response, I am sure that you would wish us to be in a position to provide you with the 'full picture' as soon as is reasonably possible.

My apologies for the delay in preparing this report.

Sincerely,



Chris Place  
Senior Field Officer

WORKS INVESTIGATION RECORDING					
Inch					
Grid					
Revised	5 APR 1994			RR	176
Scale					
Notes					
Ref No./File Ref.					

Enclosures: 3 No. Interim Reports

## 2.0 METHODOLOGY

2.1 For the purposes of the SAC and testpitting survey, the centre line of the Scheme, including slip and side roads, was divided into a series of 25 m lengths, 202 in all (Figure 4-6), and are used in this report to locate areas of fieldwork and items of archaeological interest. Not all transects were available for evaluation. Some included roads, buildings, woodland and ponds.

### 2.2 Surface Artifact Collection

2.2.1 Surface Artifact Collection is undertaken to recover artifacts from the topsoil. Only areas of ploughed ground or young crop with a high percentage of the ground visible were subject to SAC survey. Within each 25 m length, the centre line and two lines parallel to it, one on either side and at 12.5 m distance from it, were walked and all visible artifacts collected. All artifacts recovered from each length were bagged together and the totals for each artifact class recorded.

### 2.3 Hand Dug Testpits

2.3.1 Hand dug testpits were excavated in areas of pasture or stubble/set-aside; one per transect. Measuring 1 m x 1 m in plan, they were excavated to the base of the plough-soil, usually about 300 mm below present ground level. The purpose of the testpits was to locate and record artifacts in the top-soil rather than as a means of locating archaeological features, though this would be an added bonus if achieved. Artifact quantities, except under certain circumstances, will always be low and hence difficult to interpret. However, if viewed in a wide context they do provide an insight into the presence and absence of artifacts within the landscape at a general level.

### 2.4 Geophysical Survey (Magnetometer Scanning and Soil Magnetic Susceptibility Survey)

- The geophysical survey report will be submitted with the final evaluation report. A summary of the results, is provided here.

*"The results from magnetometer and magnetic susceptibility surveys are related, but they will not necessarily detect the same features or disturbances. The magnetometer responds to small localized anomalies in the earth's magnetic field caused when cut features such as ditches and pits are silted with topsoil, which usually has a higher magnetic susceptibility than the underlying natural sub-soil. It also detects the thermoremanent magnetism of fired materials, notably baked clay structures such as kilns and hearths. Burning associated with past human occupation enhances the magnetic susceptibility of topsoil, increasing the magnetometer response from ditches and pits, and also making it possible to locate sites by magnetic susceptibility measurements on*

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*the superficial topsoil. Susceptibility testing can be used with quite widely spaced readings to give a broad indication of occupied or disturbed areas, even if some individual features detectable by magnetometer are lacking. Equally, specific features detectable by magnetometer may not always be associated with an area of general magnetic enhancement identified by a susceptibility survey. Soil magnetic susceptibility values are also influenced by a number of non-archaeological factors including, geology, past land use, and interference from recent or present day activities, and so cannot always be relied upon in isolation for identifying archaeological sites. It is, therefore, helpful if findings from other geophysical and archaeological sources are compared before drawing final conclusions from a survey of this kind."*

A. D. H. Bartlett, January 1994.

- 2.4.1** Magnetometer traverses were at c. 10 m intervals with more intensive coverage if necessary. Scanning was generally to the whole width affected by the Scheme. In areas of potential interest, limited detailed magnetometer surveys were undertaken, though these were not exhaustive.
- 2.4.2** Readings for the soil magnetic susceptibility survey were located with reference to the Ordnance Survey hectare grid. Soil samples were taken from areas of pasture, and a field coil (Bartington MS2 meter) utilized in areas of arable; the latter requiring close contact with the soil to function effectively. Readings were taken at 20 m intervals, equating to 25 readings per hectare, where the field coil was used, and at a 25 m spacing where soil samples were required.
- 2.4.3** Whilst the two techniques described above are capable of producing very detailed information on the character and extent of archaeological remains, within the terms of this evaluation they have been employed essentially as prospecting devices. The aim being to cover all of the Scheme area and to detect any major zones of potential archaeological features and activity with a view to highlighting areas that require subsequent detailed evaluation by other techniques.

### **3.0 RESULTS (Figs. 1 - 3)**

#### **3.1 Surface Artifact Collection and Testpitting**

- 3.1.1** One hundred and sixty-eight transects were subject to SAC and testpitting, of which 58 were subject to SAC (11 were in arable and 47 were under a new crop) and 110 to testpitting (90 were in pasture and 20 in stubble). The presence of archaeological artifacts is taken to indicate past archaeological activity, though the exact extent and character of this activity is often difficult to determine; a problem exacerbated by such a small, linear sample area. Relatively high, localized concentrations of artifacts may suggest settlement and associated physical archaeological remains such as structures and features.

Whereas relatively low 'background' levels may be more suggestive of broad brush utilization, e.g. the distribution of artifacts during the manuring of fields. Whilst the results of the two techniques are not directly comparable (SAC will always recover more artifacts than testpitting due to sample size), provided that like is compared with like, they can be used within the same project to indicate areas where there has been a preferential disposal of artifacts, and consequently highlight areas that are worthy of subsequent evaluation. However, not all artifact classes preserve well in the soil. Thus prehistoric and early medieval pottery is usually under represented and settlement may be indicated by a very few sherds. Contrawise, extensive areas of artifacts may never have been associated with archaeological features and may represent a transient but repetitive utilization of an area.

- 3.1.2** Few artifacts were recovered during the evaluation and thus, in conjunction with the small sample size, it was not considered appropriate to undertake any basic statistical manipulation. Therefore, the archaeologically significant classes of artifact recovered (medieval pottery, fire-cracked flint and struck flint), are plotted as present or absent on Figs. 1-3, and not as standard deviations or quantity ranges etc. However, this makes the isolation of concentrations of artifacts from the background 'noise' very difficult.
- 3.1.3** A concentration of medieval pottery (up to 6 sherds per testpit) was located to the west of Bay Tree Lane in Transects 14-16, 156-159. This is adjacent to areas containing magnetic anomalies that have been interpreted as possible archaeological features. Prehistoric flint and fire-cracked flint are present to the west, though in quantities low enough to preclude the obvious identification of settlement.
- 3.1.4** SAC between Transects 70-89 recorded two broad areas of fire-cracked flint and flint flakes suggesting prehistoric activity, each with a localized area containing higher concentrations of artifacts. These are at Transects 71-74, and Transects 82-84. The latter is within an area of relatively high magnetic susceptibility. Limited amounts of medieval pottery are also present.
- 3.1.5** SAC between Transects 113-136 (excluding 128-129) located an extensive area of prehistoric artifacts. The area of highest artifact quantities (up to 600 gms fire-cracked flint and 3 flint flakes per transect) stretches south and east from the northern of the two proposed roundabouts (Transects 116-123, 134-136). This is adjacent to an area of enhanced magnetic susceptibility and includes an area of magnetic anomalies interpreted as possible archaeological features.



## **3.2 Geophysical Survey**

- 3.2.1** In the area between the A22 and Bay Tree Lane there were disturbances in the susceptibility response and a few isolated, high readings. However it is likely that much of this may be due to modern contamination. The scan detected magnetic anomalies in two areas (Fig. 1) and these were surveyed in more detail. Some of the anomalies may be pits or similar features, though others may be caused by iron.
- 3.2.2** A slight increase in susceptibility readings was noted in Fair Place Field (Fig. 1), which is said to have been the site of a medieval fair. However, it is difficult to interpret such slight evidence.
- 3.2.3** The scan located a major anomaly south of Otham Court and the area was subsequently surveyed in more detail. The survey detail, in conjunction with a large amount of tile found on the surface, suggests that a tile kiln and other features are present at this location (Fig. 2).
- 3.2.4** There are several distinct clusters of high susceptibility readings in the field between Otham Court and Sheepham Lane (approximately between chainages 3850.00 to 4100.00; Transects 46-69)) (Fig. 2). There are no obvious modern disturbances and the high susceptibility values persisted after the samples were sieved. However, no anomalies were detected by scanning, and if the susceptibility disturbances are of archaeological origin they are likely to relate to relatively sparse or short lived activity not associated with substantial subsurface features.
- 3.2.5** An extensive area of enhanced susceptibility was recorded between chainages 4700.00 to 5000.00 (Transects 81-92)(Fig. 3). Little was seen in the magnetometer scan through this section, but it is possible that any archaeological features are slight or sparse. Alternatively, magnetically enhanced soil may have spread from sites located outside of the Scheme. One distinct anomaly was recorded in the scan, and isolated readings of this kind are difficult to categorize. It may be a distinct feature such as a well, or perhaps a metal object at a depth of 1.5 m - 2.0 m, possibly even a wartime bomb.
- 3.2.6** An area of enhanced susceptibility was recorded between chainages 5300.00 to 5450.00 (Transects 103-107)(Fig. 3). Again, no anomalies were detected in the scan and similar conclusions to paragraph 3.3.5 are appropriate.
- 3.2.7** For approximately 150 m west of chainage 5500.00 there are some particularly high susceptibility readings (Fig. 3), e.g. chainage 5525.00 (Transect 113). However, again there were no obvious anomalies. Less intense susceptibility readings extend south between the two proposed roundabouts (Transects 134-136), where there were some definite findings from the scan. Detailed survey (Fig. 3 for location) indicates the presence of several linear features, one of

which is curved and may form part of an enclosure, and some possible pit-like features.

#### 4.0 CONCLUSIONS

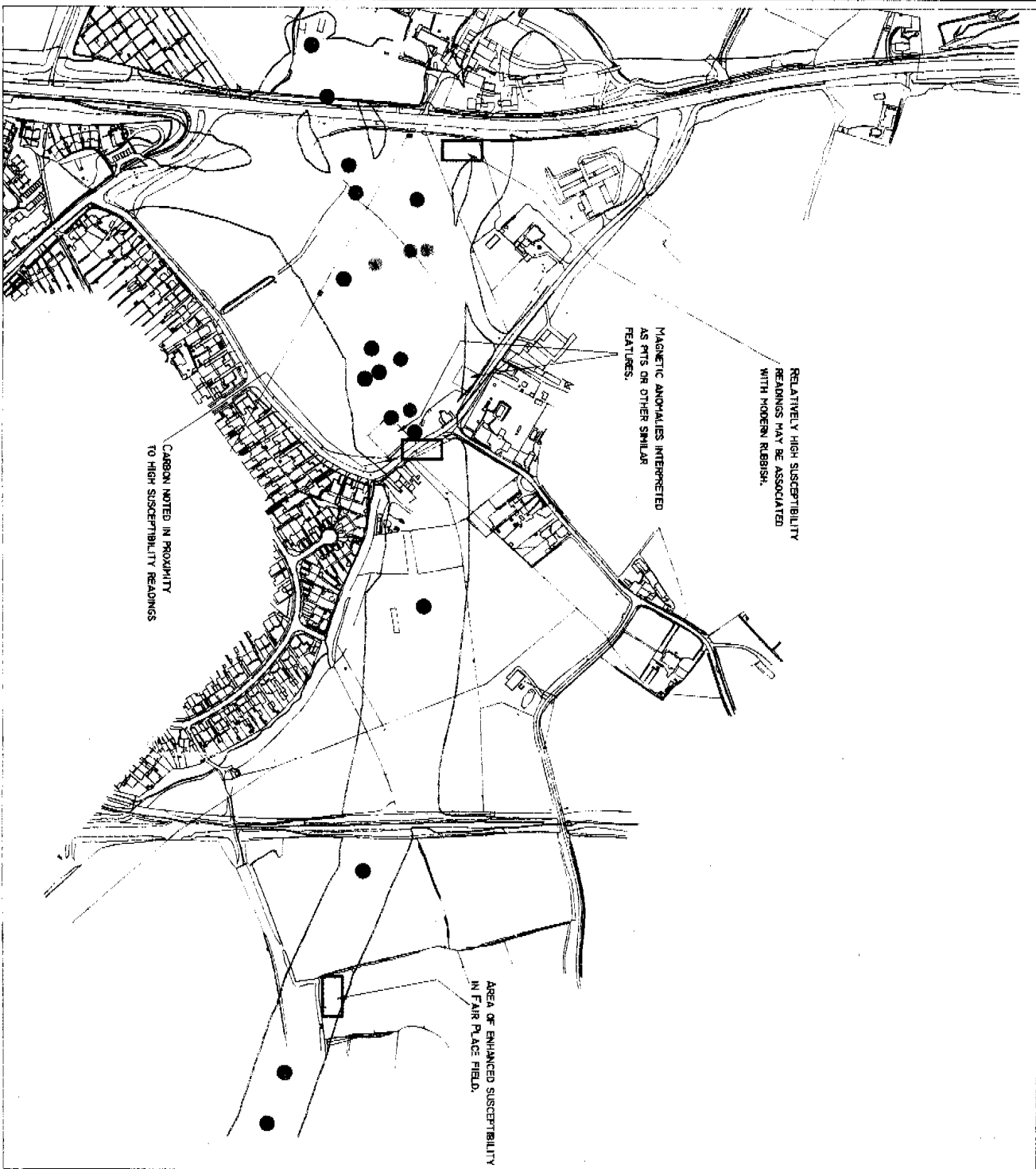
4.1 In conclusion, the evaluation to date has highlighted several areas that will require subsequent machine trench evaluation. They are listed below.

- **West of Bay Tree Lane;** approximately chainage 3075.00 to 3175.00  
An area of medieval pottery with magnetic anomalies.
- **South of Otham Court;** approximately chainage 3850.00  
Site of a probable tile kiln.
- **Otham Court to Sheephram Lane;** approximately chainage 3875.00 to 4100.00  
Area of high susceptibility readings, low levels of medieval pottery and prehistoric flint.
- **East of Sheephram Lane;** approximately chainage 4525.00 and 4750.00 to 4825.00  
Two areas of prehistoric activity, the latter associated with an extensive area of enhanced magnetic susceptibility.
- **North of existing A27;** approximately chainage 5500.00 onwards  
An extensive area of prehistoric activity, associated with areas of enhanced magnetic susceptibility and magnetic anomalies.

4.2 Each location is likely to require numerous machine excavated trenches, about 1.5 m wide and from 20 m to 30 m long. The trenches will aim to locate and define the extents of any archaeological features and deposits, with hand excavation of such deposits and features to determine their date, character, function and state of preservation.

4.3 In the first instance, within the areas described above, it is proposed to locate one trench per transect to determine the presence of any archaeological features. Thus, in the area 'North of existing A27', 15-20 trenches would be excavated initially. It is then likely that subsequent trenches would be required to fully determine the archaeological resource.

4.4 It is also proposed to locate some trenches in areas where artifacts were absent or totals were very low. These will act as control samples to test the effectiveness of Phase 1 and to check if any major items of archaeological interest have passed undetected.



RELATIVELY HIGH SUSCEPTIBILITY READINGS MAY BE ASSOCIATED WITH MODERN RUBBISH.

MAGNETIC ANOMALIES INTERPRETED AS PITS OR OTHER SIMILAR FEATURES.

CARBON NOTED IN PROXIMITY TO HIGH SUSCEPTIBILITY READINGS

AREA OF ENHANCED SUSCEPTIBILITY IN FAIR PLACE FIELD.

ORIGINAL AT A3

KEY

- PREHISTORIC FLINT
- FIRE-CRACKED FLINT
- MEDIEVAL POTTERY

□ AREAS OF RELATIVELY HIGH MAGNETIC SUSCEPTIBILITY

□ AREAS OF MAGNETIC ANOMALIES

— LIMITS OF PROPOSED ROAD CONSTRUCTION

— GRID LINES AT 100M INTERVALS



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DRAWING TITLE

A27 Polegate Bypass

Fieldwork results interim

DRAWING No: Figure 1 DATE 7/2/94

ORIGINAL AT A3

KEY

- PREHISTORIC FLINT
- FIRE-CRACKED FLINT
- MEDIEVAL POTTERY

□ AREAS OF RELATIVELY HIGH MAGNETIC SUSCEPTIBILITY

□ AREAS OF MAGNETIC ANOMALIES

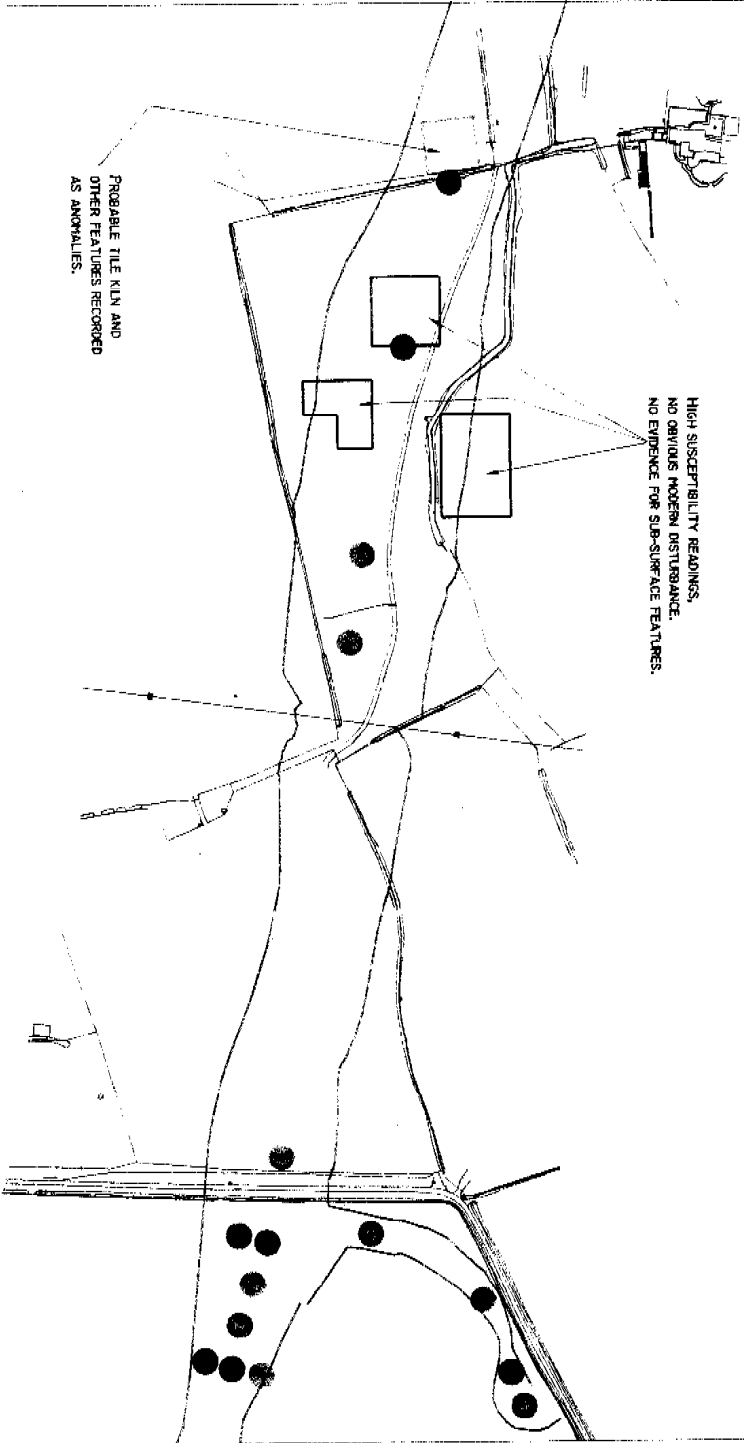
— LIMITS OF PROPOSED ROAD CONSTRUCTION

GRID LINES AT 100M INTERVALS

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PROBABLE TILE KILN AND OTHER FEATURES RECORDED AS ANOMALIES.

HIGH SUSCEPTIBILITY READINGS, NO OBVIOUS MODERN DISTURBANCE, NO EVIDENCE FOR SUB-SURFACE FEATURES.



**SEAS**

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DRAWING TITLE

*Fieldwork results: interim*

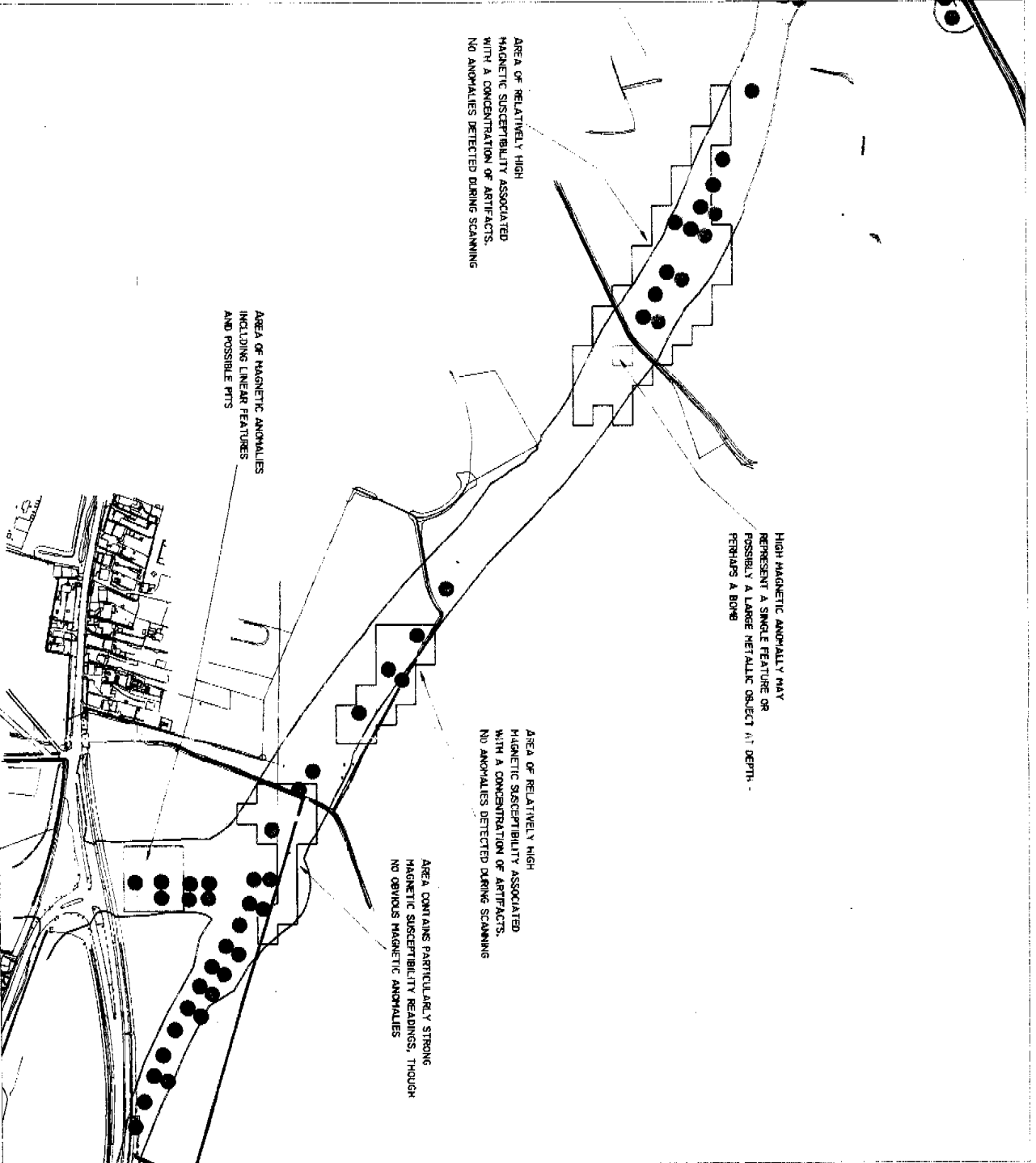
DRAWING No: *Figure 2* DATE *7/3/94*

ORIGINAL AT A3


KEY

- PREHISTORIC FLINT
- FIRE-CRACKED FLINT
- MEDIEVAL POTTERY
- AREAS OF RELATIVELY HIGH MAGNETIC SUSCEPTIBILITY
- AREAS OF MAGNETIC ANOMALIES
- LIMITS OF PROPOSED ROAD CONSTRUCTION
- GRID LINES AT 00M INTERVALS

N



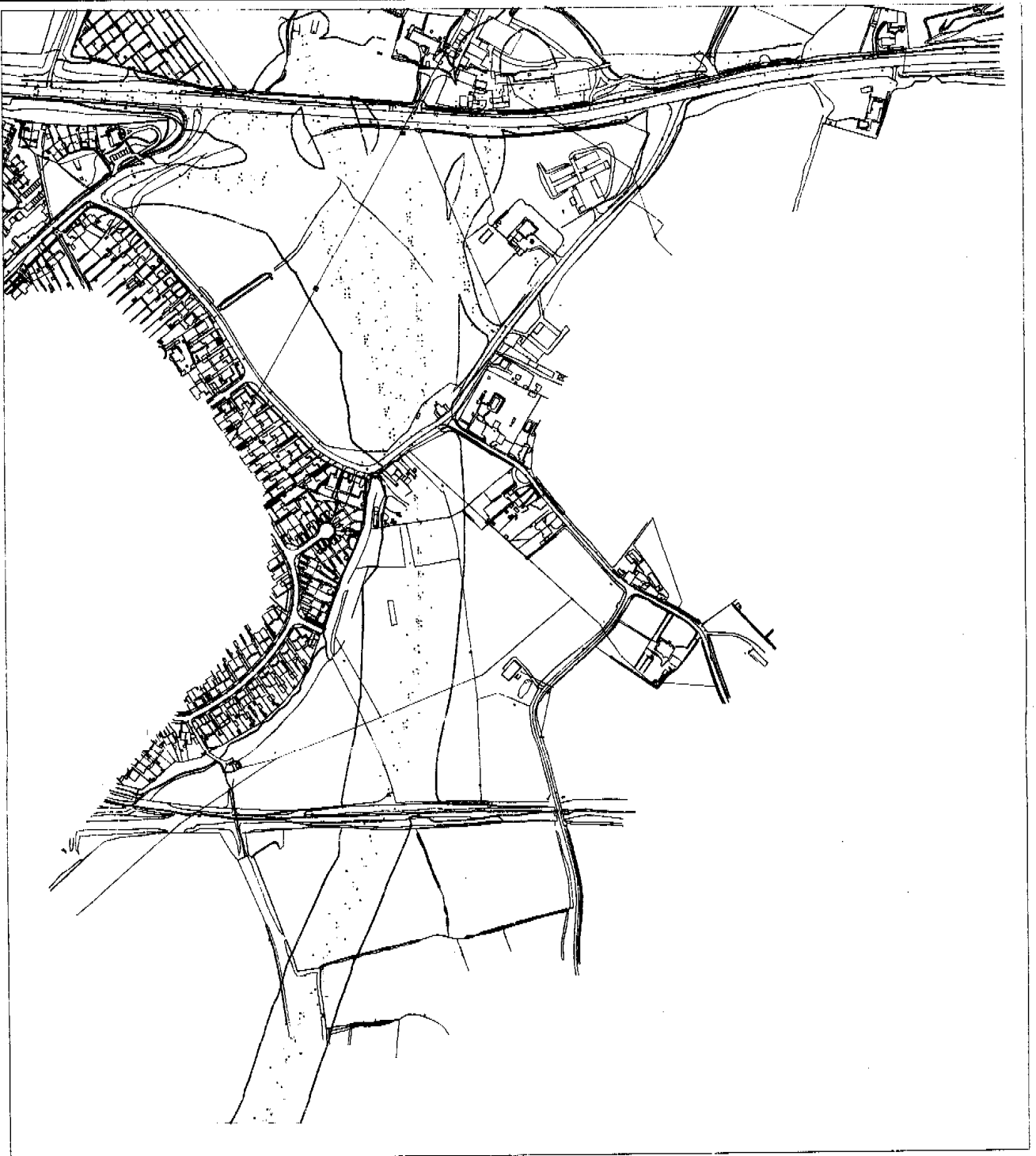
**SEAS**  
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DRAWING TITLE: A27 Pottery Bypass  
*Fieldwork results; interim*

DRAWING No: Figure 3 DATE 7/9/94

ORIGINAL AT A3



LIMITS OF PROPOSED ROAD CONSTRUCTION

GRID LINES AT 100M INTERVALS

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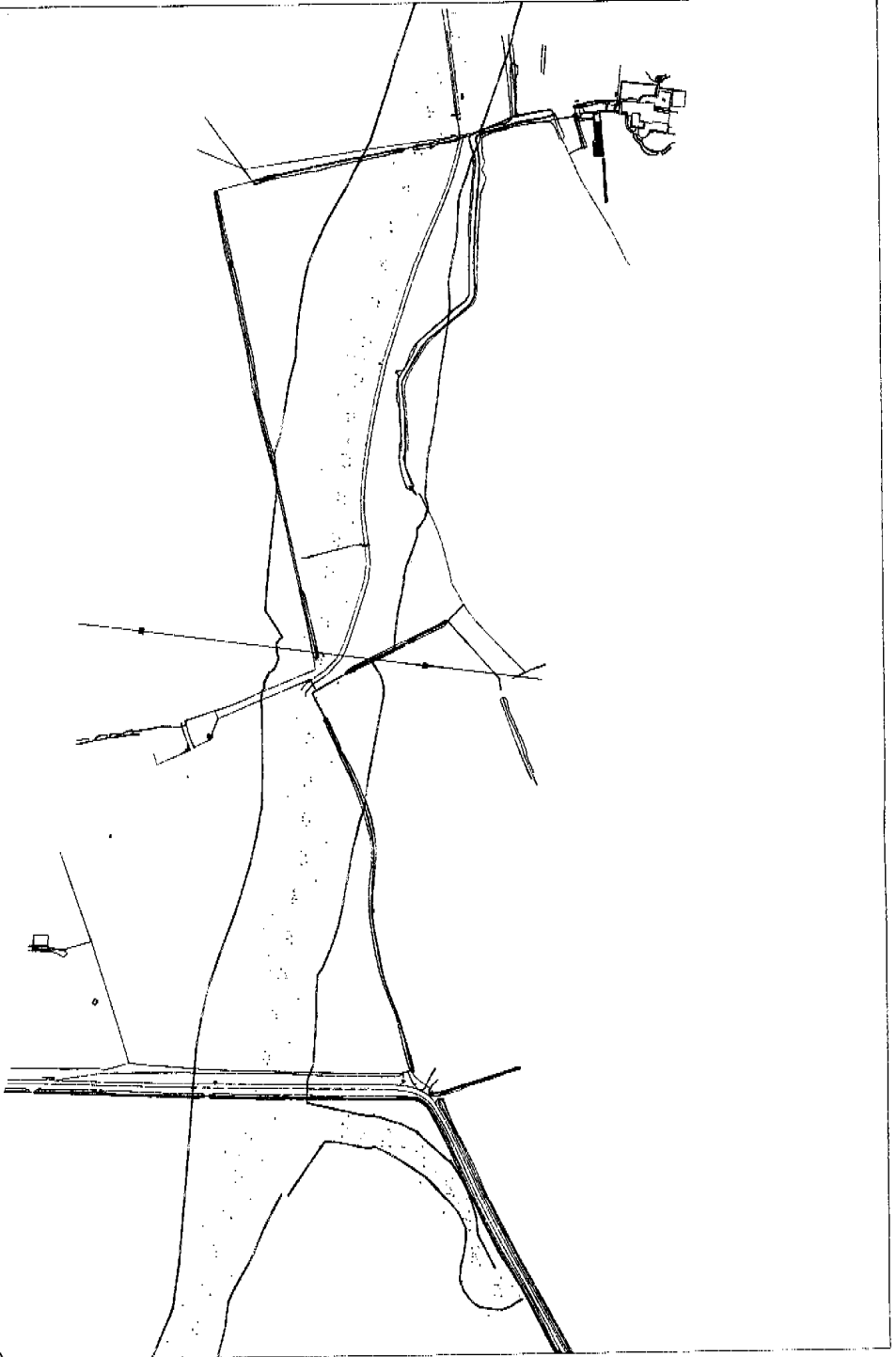
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*A27 Folkestone Bypass*

*Location of Fieldwork Trenches*

DRAWING NO: *Figure 4* DATE *29/3/94*

ORIGINAL AT A3



LIMITS OF PROPOSED ROAD CONSTRUCTION

GRID LINES AT 100M INTERVALS

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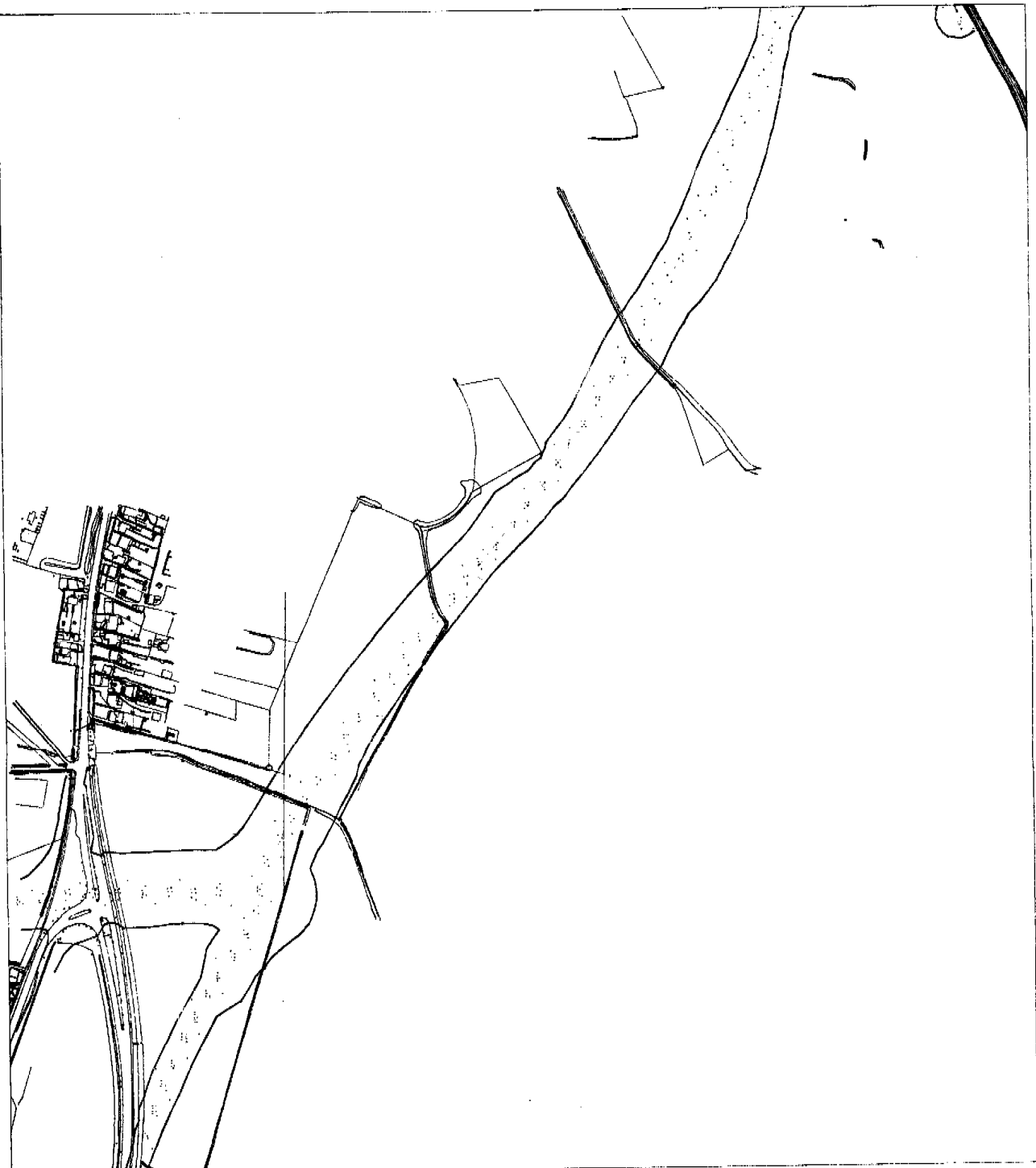
DRAWING TITLE

*A27 Polegate Bypass*

*Location of Fieldwork Trenches*

DRAWING No: *Figure 5* DATE *1/2/94*

ORIGINAL AT A3



LIMITS OF PROPOSED ROAD CONSTRUCTION

GRID LINES AT 100M INTERVALS



**SEAS**

SOUTH EASTERN ARCHITECTURAL SERVICES  
TURNER DUNNELL WOODHOUSE  
NORTH BAY, DITCHLEIGH, HASSECKS, E.SUSSEX, BN6 8TG  
0273 845497



DRAWING TITLE

*A27 Polegate Bypass*

*Location of Fieldwork Inspects*

DRAWING No: *Figure 6* DATE *7/2/94*