

EU 92

SLI 1806

92/3

**PROPOSED BIRCHWOOD LINK AND TRITTON ROAD  
IMPROVEMENTS**

70064 - Roman  
70168 - Undated  
70169 - Med  
70170 - Med.

**ARCHAEOLOGICAL EVALUATION OF GEOTECHNICAL TRIAL PITS**

**A Report to Lincolnshire County Council**

*City of Lincoln Archaeology Unit*

*Charlotte House*

*The Lawn*

*Union Road*

*Lincoln*

*LNI 3BL*



# Proposed Birchwood link and Tritton Road improvements.

## Archaeological evaluation of Geotechnical Trial pits.

<b>CONTENTS</b>		<b>Page</b>
<b>Introduction</b>		<b>2</b>
<b>General Information</b>		<b>2</b>
Location		
Topography and Geology		
Archaeological Background		
<b>Archaeological Evaluation</b>		<b>3</b>
Objectives		
Methodology:	Birchwood link Tritton Road	
<b>Archaeological Results</b>		<b>3</b>
General observations:	Birchwood link Tritton Road	
Archaeological observations:	Haw Hill and environs Detailed examinations Trial pit no. 40 Trial pit no. 41 Trial pit no. 42 West of Railway embankment Trial pit no. 33	
Conclusions		
Environmental Study		
<b>Recommendations</b>		<b>5</b>
Archaeological assessment		
<b>Illustrations</b>		
Map of development area		<b>Fig 1</b>
1:20 scale, Section of Trial pit no. 40		<b>Fig 2</b>
1:20 scale, Section of Trial pit no. 41		<b>Fig 3</b>
1:20 scale, Section of Trial pit no. 42		<b>Fig 4</b>
1:20 scale, Section of Trial pit no. 33		<b>Fig 5</b>

## INTRODUCTION

The City of Lincoln Archaeology Unit (CLAU) was commissioned by the Highways and Planning Department of Lincolnshire County Council to undertake a programme of archaeological observation and recording in conjunction with the excavation of geotechnical trial pits along the planned route of the above road schemes.

The investigation was carried out between January 23rd and February 5th 1992 in concert with LINC'S LAB, the geotechnical investigation contractor under the direction of JMP CONSULTANTS LTD., consultant engineers to the County Council.

This document summarises the results of the investigation and proposes a strategy for further evaluation of archaeological remains in accordance with the recommendations outlined in DoE Planning Policy Guidance 16 (PPG 16) published in November 1990.

The information in this document is presented with the proviso that further data may yet emerge. The Unit, its Members and employees cannot, therefore, be held responsible for any loss, delay or damage, material or otherwise, arising out of this report. The document has been prepared in accordance with the Unit's Article of Association, the Code of Conduct of the Institute of Field Archaeologists and The Management of Archaeology Projects (English Heritage, 1991).

## GENERAL INFORMATION

### *Location*

The route of the proposed schemes, and general location of trial pits are shown on JMP drawing No's 4400/GI/3 Rev B and 4400/GI/2A. (See also Fig.1)

As part of the Lincoln highways improvement scheme the Birchwood Link will also serve to open up for development a large part of the Skewbridge/ Swanpool area. The planned improvement of Tritton Road would connect the Birchwood and proposed Ropewalk to Carholme Road link roads to provide improved access into and to the west of the city.

### *Topography and Geology*

The Birchwood Link element of the project, between the junction at Skellingthorpe Road/Birchwood Avenue to the intersection with Tritton Road, traverses an area which is today mainly under arable cultivation. To the South and West the area is bisected by the Catchwater Drain, with the Lincoln to Nottingham railway line forming the southeast boundary of the development area. The Swanpool and its surrounding area of woodland lie to the west of an area where the ground level has been raised by refuse landfill.

The Tritton Road section of the work bisects a developing commercial area, much of which was previously occupied by heavy industry and 19th/20th Century terraced houses, on land reclaimed from a marshy area known as The Holmes.

The whole area of development lies over a Flood Plain Terrace southwest of the junction between the river Witham and Foss Dyke. The geology consists primarily of alluvium, river terrace sand and gravels over lias clays.

With the exception of Haw Hill and the landfill zone, contour changes across the development area are very gradual. From 7m O.D. in the South the ground slopes gradually down to below 4m O.D. in the North. Much of this lowlying area, being only slightly higher than sea level, was subject to seasonal flooding until it was drained by works begun in the 17th Century. (See Fig.1.)

### *Archaeological Background (See Fig.1)*

The archaeological record for the area is sparse. West of Oak Farm a kiln complex was identified through pottery scatters and rescue excavation carried out in advance of water mains installation. These

remains, together with other chance finds in the vicinity, indicate the presence of a substantial, 3rd to 4th century, Roman pottery industry. The site is on the north-west fringe of the Swanpool/Boultham area industry, one of the largest in late Roman Britain.

The area of elevated ground, known as Haw Hill, is believed to be a site of medieval/post medieval occupation and it is thought that the Swanpool, which may have been formed during the Roman period, was possibly later used as a medieval fish farm.

The exact nature and spatial extent of all these activities, and possible prehistoric use of the surrounding landscape, remains uncertain.

## ARCHAEOLOGICAL EVALUATION

### *Objectives*

As an element of the archaeological evaluation process, the Trial Pit observation and recording programme was designed to:

- i) assess the nature of flood plain deposits;
- ii) assess the survival and quality of preservation of peat/organic deposits which could contain evidence of early environmental conditions;
- iii) record depths of deposits with archaeological potential or significance including any evidence for occupation or land use;
- iv) assess the date and significance of any displaced artefactual material recovered from excavated spoil or ground surface in the vicinity of trial pits;
- v) accurately plot the location of surface and buried remains of possible archaeological significance and assess their potential for further investigation;
- vi) secure any other 'field' information which would assist in the assessment of possible development impact on sensitive archaeological remains.

### *Methodology*

#### *Birchwood Link*

Trial pits were mechanically excavated in locations as shown on drawing 4400/GI/3 Rev B. The locations and exposure of deposits was determined by the consultant engineer in relation to geotechnical investigation of sub-surface conditions for engineering design. While

not determined archaeologically the disposition of trial pits provided a reasonable indication of deposit sequence along the proposed route of the road.

Each excavation was approximately 2.25m long x 0.70 - 0.80m wide with depths varying from 2.80m to 3.2m. The unstable nature of alluvial deposits and water seepage caused collapse of trench walls in many locations.

Detailed records and descriptions stratigraphic sequence of deposits and archaeological features were made, all dimensions being taken from present ground level.

Oblique angle colour transparencies were taken where possible at selected trial pits, however the narrow trench width together with machine disturbance and frequent collapse of trench walls did not present ideal conditions for photography.

Dr. James Greig (of the University of Birmingham), Environmental Consultant to CLAU, observed trial pits excavated on the 24th January 1992 - (No.'s 39 to 47 inclusive.)

Artefactual material was collected for analysis and dating.

#### *Tritton Road*

In this area the location of active buried services and the potential problem of trench wall collapse resulted in modification to the method of geotechnical investigation.

Small trial pits, for ground contamination sampling, were hand excavated to depths between 1m and 1.5m, with the investigation of deep strata being carried out by borehole/core method.

## ARCHAEOLOGICAL RESULTS

In order to fulfill the archaeological objectives in the most cost effective manner, JMP Consultants Ltd. advised that duplication of the basic record of strata was unnecessary.

The archaeological results, therefore, primarily address the trial pit strata logs produced by Lincs Lab and provide supporting data with respect to the archaeological significance of deposits as recorded by CLAU.

Archaeological features are described in detail, the results being augmented by a brief assessment of artefactual material recovered and comments regarding the suitability of deposits for environmental analysis.

## General Observations

### *Birchwood Link*

The varied stratigraphic sequence of alluvial sand, silt and clay deposits appeared consistent with flood plain deposition from glacio-fluvial origins.

While occasional traces of organics, in the form of roots, were present in both sand and clay deposits, there was no evidence of a defined peat/organic layer.

The inconsistent occurrence of clay deposits, some of which were laminar in form with slight traces of organic material, were mainly found sandwiched between deposits of sand at depths of between 0.5m and 2.5m from the surface.

As the source of raw material used in the Roman pottery industry is unknown, samples of clay were collected from trial pits 30, 33 and 40. This will be fired and processed for thin section analysis and comparison with pottery from the Swanpool kiln complex.

Except as noted below most trial pits did not produce artefactual material or remains of archaeological significance. Local surface indications were, for the most part, negative and, with the exception of TP41 and TP42, the few fragments of artefactual material observed in the immediate vicinity of most trial pits were well dispersed and generally appeared to be of late (19th/20th century) date.

### *Tritton Road*

It is known that this low lying and previously marshy area was progressively reclaimed from the 17th century with most of the ground raising process taking place over the past 150 years.

As the modified geotechnical investigation method was unlikely to expose remains of archaeological significance our attendance in this area was minimal. In the few trial pits observed the nature of deposits recorded to depths between 1.2m and 1.5m confirmed the 19th/20th century landfill and development of the area.

Although the hand dug pits did not reveal evidence of organic deposits, sand encountered at the limit of excavation in some trial pits, and interpreted as flood plain terrace deposit, could possibly be natural sand redeposited during the process of landfill and development.

## Archaeological Observations

### *Haw Hill and Environs (SK9520/7070) (Trial Pits 40, 41 & 42)*

The proposed route crosses the north-east slope of the area of elevated ground known as Haw Hill. The 'hill', a long oval knoll c100m x 30m, rises approximately 2.5m above the surrounding area, and is characterized by the light brown nature of the sandy top soil and a concentration of visible occupation debris in the form of limestone, tile, pottery, and animal bone fragments. Since the area has been under the plough for some time, it was not possible to discern surface boundary features in proximity to the trial pits. (See Fig.1.)

The sequence of underlying deposits revealed by TP's 40, 41 & 42 would indicate that the 'hill' is probably of natural origin (one of the 'holms' or islands which previously characterized other locations in the vicinity), but possibly adapted in order to render it habitable. Such a knoll was found to the east of the Brayford in 1972, and produced the first structural evidence for a pre-Roman settlement in the city.

### *Detailed examination*

**Trial Pit 40** - located approximately 180m east of Haw Hill. Underlying the topsoil, a 12cm thick layer of light brown/creamy, slightly silty sand sloped gradually down to the north-east, this being consistent with the 'natural' slope of Haw Hill. (See Fig.2)

**Trial Pit 41** - located on the north-east slope of the 'hill' did not reveal archaeological features or artefacts. The primary underlying deposit, a 1.45m thick layer of light, orange-brown, silty, fine to medium sand appeared consistent with natural formation as no evidence of re-deposition was observed. (See Fig.3)

Fragments of pot, tile and glass were collected from the ground surface in the vicinity of TP41. Subsequent analysis of this material has produced the following results:

Tile - dated from Roman and 15th/early 16th century.

Pot - dated from Roman and 13th/14th and 17th centuries.

Glass - the three fragments recovered are believed to date from the 17th century.

**Trial Pit 42** - located approximately 160m NNW of Haw Hill. In this trial pit the surface of the underlying orange/brown silty sand sloped down approximately 15cm across the length of the trial pit, producing a significant thickening of the topsoil to approximately

0.5m at the east edge of the excavation. This could possibly indicate a boundary or other feature associated with the occupation at Haw Hill or the edge of an early drain or watercourse. (See Fig.4)

Fragments of tile collected from the ground surface in the vicinity of TP42 were subsequently dated as above and confirm a likely date for the principal use of the hill between the 13th and 17th centuries.

#### *West of Railway Embankment (SK961517015)*

**Trial Pit 33** - In this trial pit, located c.10m west of the railway embankment and c.450m north-east of Oak Farm, a sequence of possible post/ stake holes, aligned NE-SW, was recorded in the SE facing section. Cut from the surface of sand deposit underlying the top soil, two 250mm wide x 550mm deep post holes, tapered gradually to a slightly rounded point. Two intermediate post/stake holes approximately 100mm wide also tapered to rounded points at a depth of 200mm. The post hole fill consisted of a dark brown sand/silt/ organic matrix with small pockets of light grey sand. (See Fig.5)

As the post holes did not produce datable material it is not possible to establish the period when these features were originally established. They may result from construction of the adjacent railway embankment. It should, however be noted that the known area of the 3rd/4th century Roman pottery kiln complex lies to the south-east and the post holes could represent the associated occupation of the area during the Roman period.

#### *Conclusions*

It is never envisaged that archaeological investigation via dispersed trial pits will produce conclusive evidence of ancient occupation or land use. However, the results, when correlated with the existing archaeological record and related archive research, can be used to develop an appropriate strategy for possible further evaluation.

In this case the results and existing records indicate that at least two areas merit intensive field evaluation. These are:

1. the site of possible medieval/post medieval occupation at HAW HILL and its environs.
2. the area between Haw Hill and the railway embankment, including the Roman pottery kiln complex in the south and the Swanpool to the north.

While a less intensive field survey may be required across the area west of Haw Hill, further evaluation of

the Tritton Road area appears unnecessary as the proposed groundwork is only likely to disturb late reclamation and debris from industrial/residential demolition. Nevertheless, it would be appropriate to monitor the Tritton Road construction phase when localised excavation for services could expose organic deposits suitable for environmental analysis.

#### *Environmental Study*

The potential for organic sediments across the development area presents the first large scale opportunity to investigate the urban-rural relationship in proximity to the city.

While the geotechnical trial pits did not reveal evidence of prominent organic layers, it is possible that, in addition to natural deposits, organic material could be found in archaeological features such as moats and ditches or channels formed by the Foss Dyke canalisation of the river Till.

Environmental studies are crucial to the understanding of past economic systems, and it is therefore important that any programme of further evaluation incorporates provision for environmental sampling and analysis.

## **RECOMMENDATIONS**

The following recommendations are based on:

- a) The results of this investigation and the existing archaeological record for the area. It should be noted that a desk-top study covering the area is still to be carried out.
- b) Our current understanding of the proposed route of the road and the probable extent of ground disturbance to be caused by the construction work and related activities. In this respect it should be noted that archaeological remains previously recorded in the Swanpool area are no more than 300 - 600mm below the surface.
- c) The principal assessment criteria contained in PPG 16 including the 'importance' of remains known or thought to exist, the policy of preservation 'in situ' and, the alternative of preservation by record (ie, excavation)
- d) Our professional judgement on the merits of any possible remains, which should be seen as an aid to formulating strategy and not the only viable judgements that could be made.

## *Archaeological Assessment*

Prior to further field evaluation we recommend the immediate implementation of an integrated desk-top study covering the whole area of proposed development.

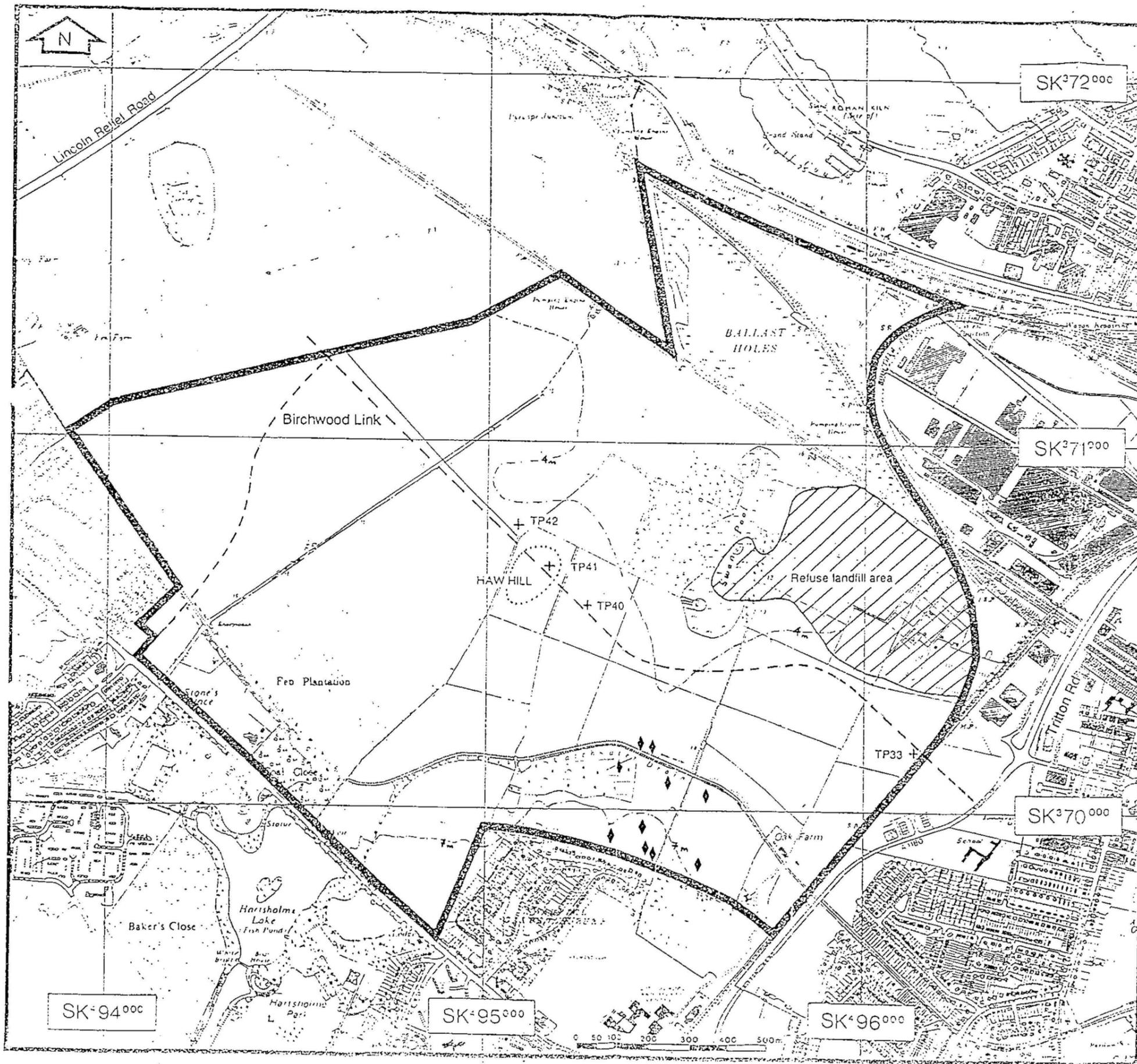
Such a study would present all available archaeological and historic evidence as an assessment report, which, by setting out objectives and priorities, would provide the basis for informed discussion in advance of further evaluation.

The report would also recommend an outline specification covering field evaluation by means of geophysical and contour survey, fieldwalking and possibly selective excavation of potentially threatened features.

In conclusion, we believe a thorough archaeological investigation of the area concerned is of vital importance in extending our understanding of the use and development of the landscape in close proximity to this major historic urban centre.

J. Hockley

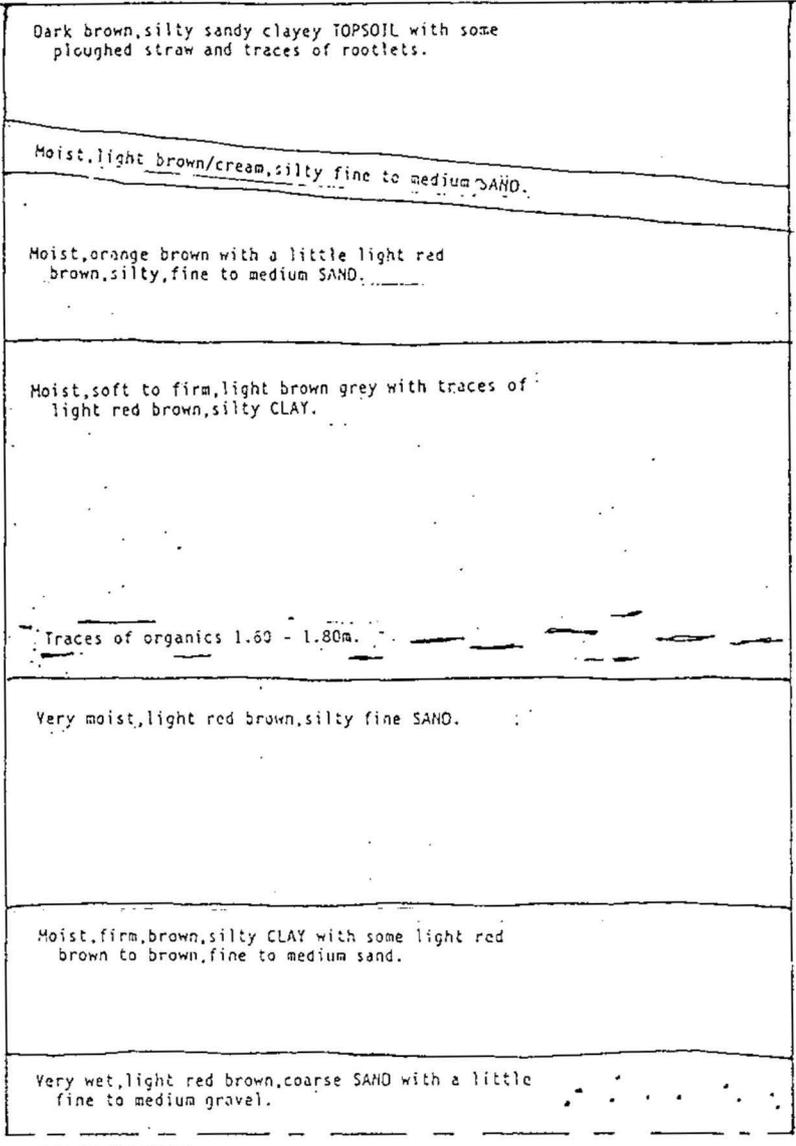
February 1992



- + location of trial pits discussed in text
- Area of elevated ground with occupation debris
- ◆ Known sites of Roman pottery kilns

SW ←

→ NE



END OF TRIAL PIT.

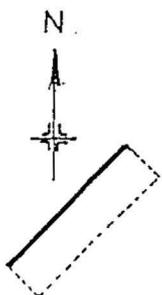


Fig.2 : Trial pit 40

Scale 1:20

NE ←

→ SW

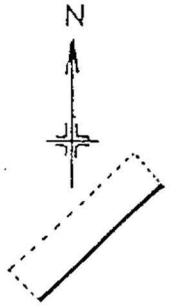
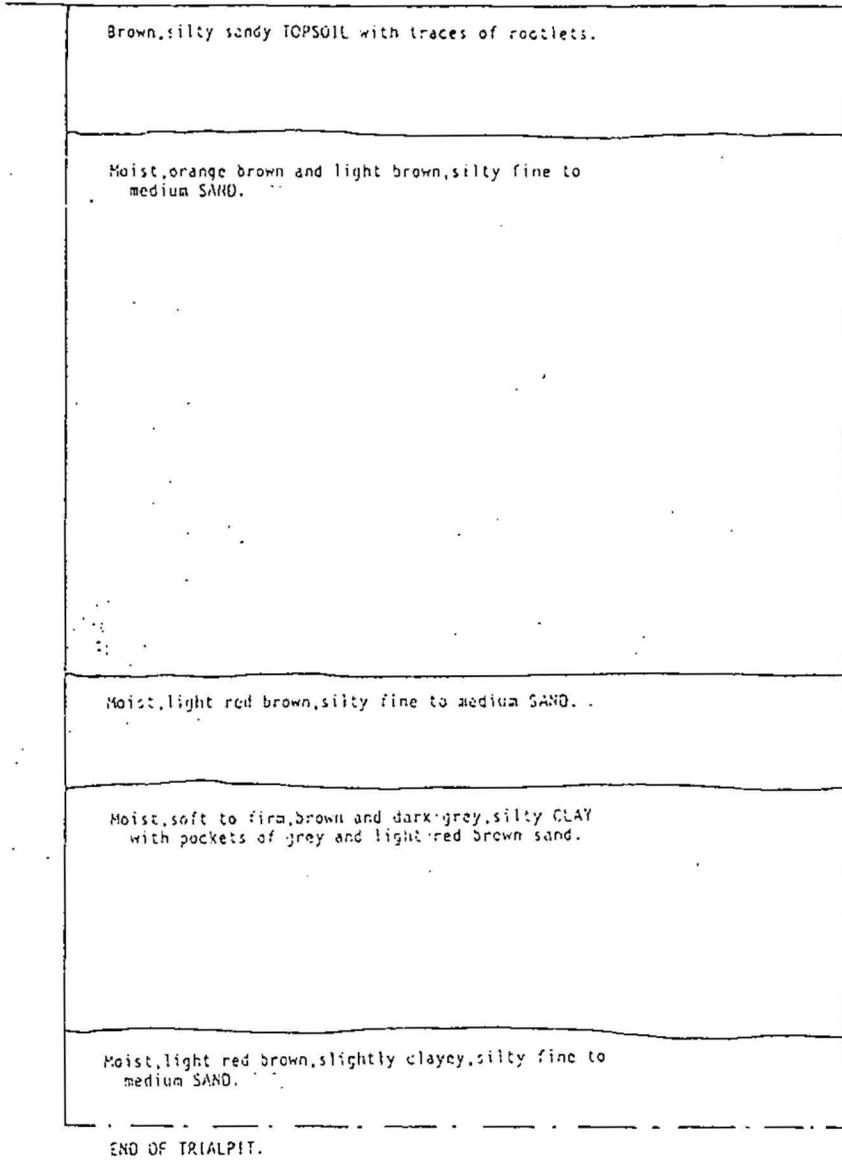


Fig.3 : Trial pit 41

Scale 1:20

NW ←

→ SE

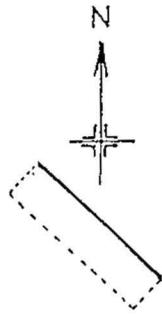
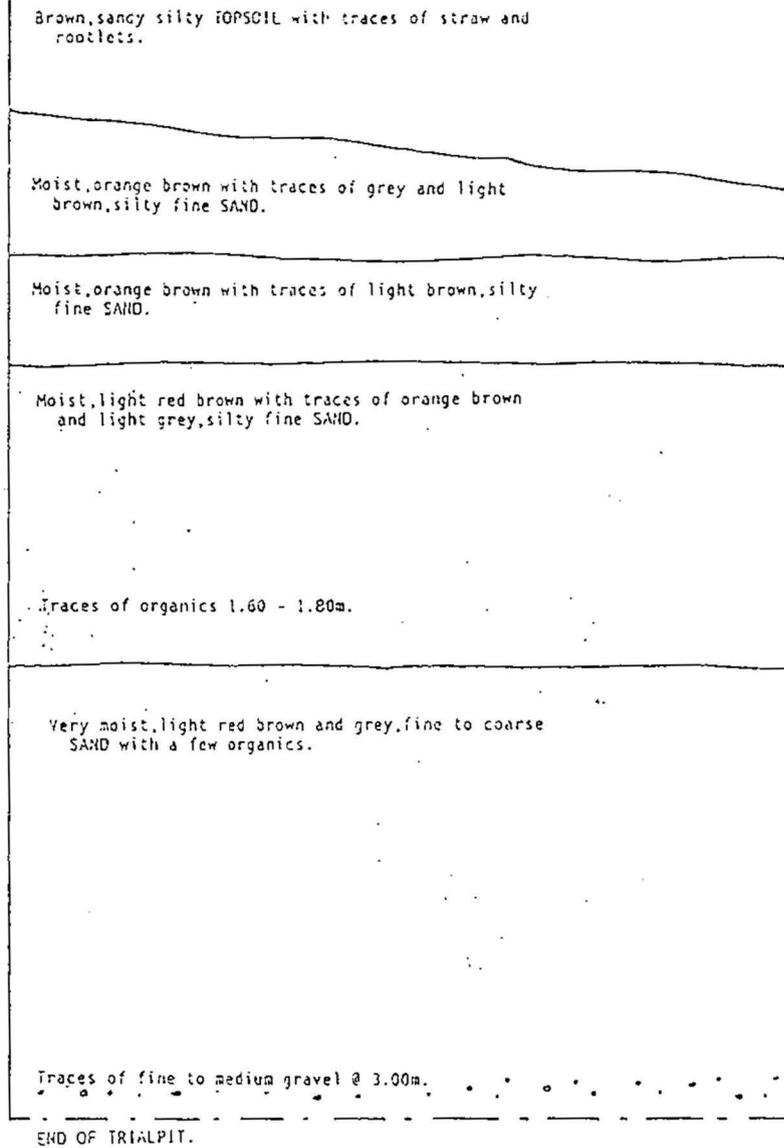


Fig.4 : Trial pit 42

Scale 1:20

SW ←

→ NE

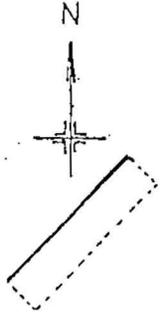
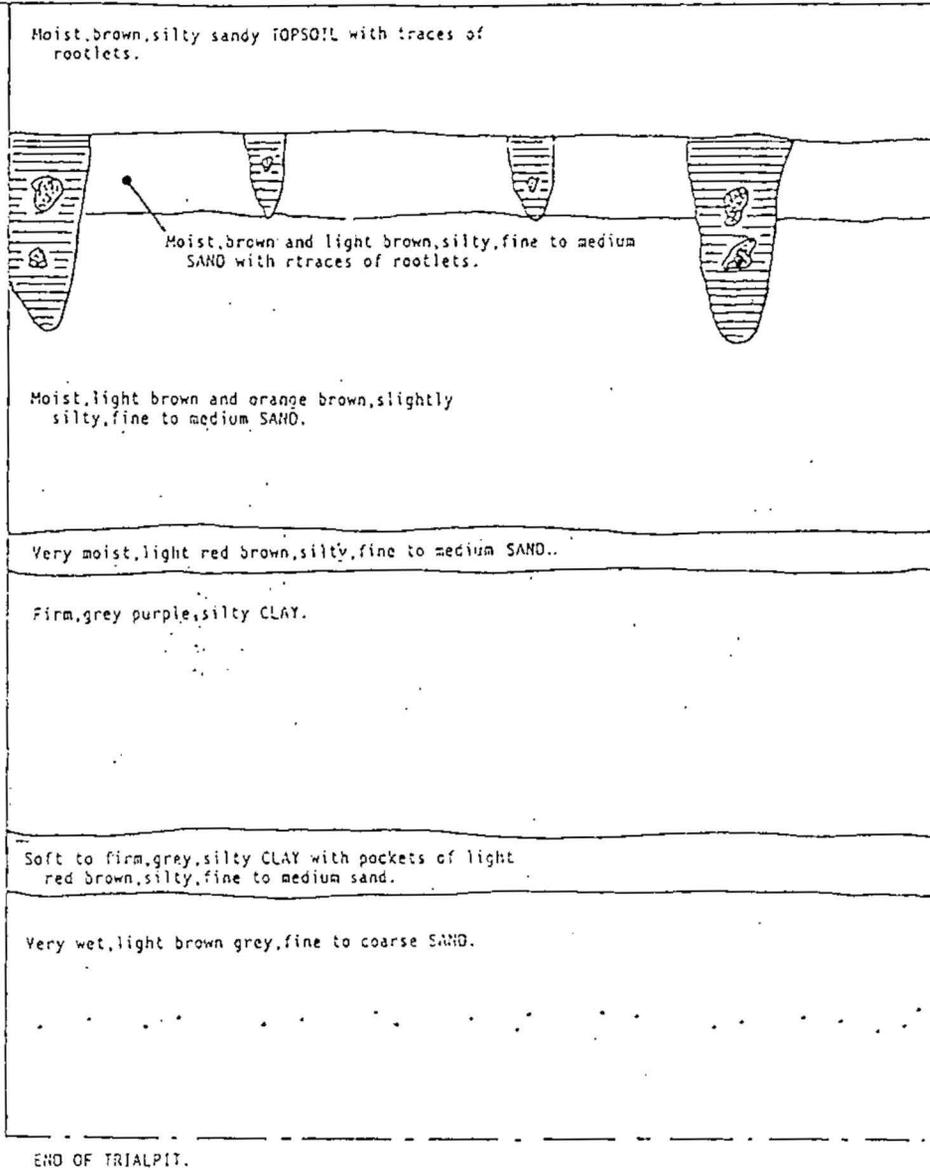


Fig.5 : Trial pit 33

Scale 1:20