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Trent & Peak
Archaeological
Trust

RAMPTON QUARRY SITE.

Preliminary Report.

K. Challis

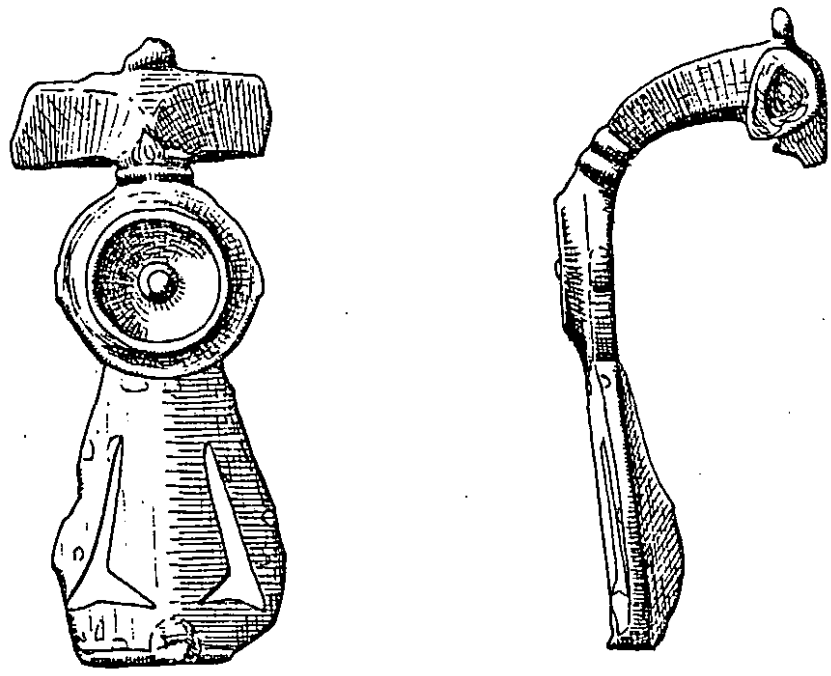

ILLUSTRATION SHOWS ROMANO-BRITISH BROOCH FROM RAMPTON FOUND DURING FONSFORD'S EXCAVATION OF 1956.

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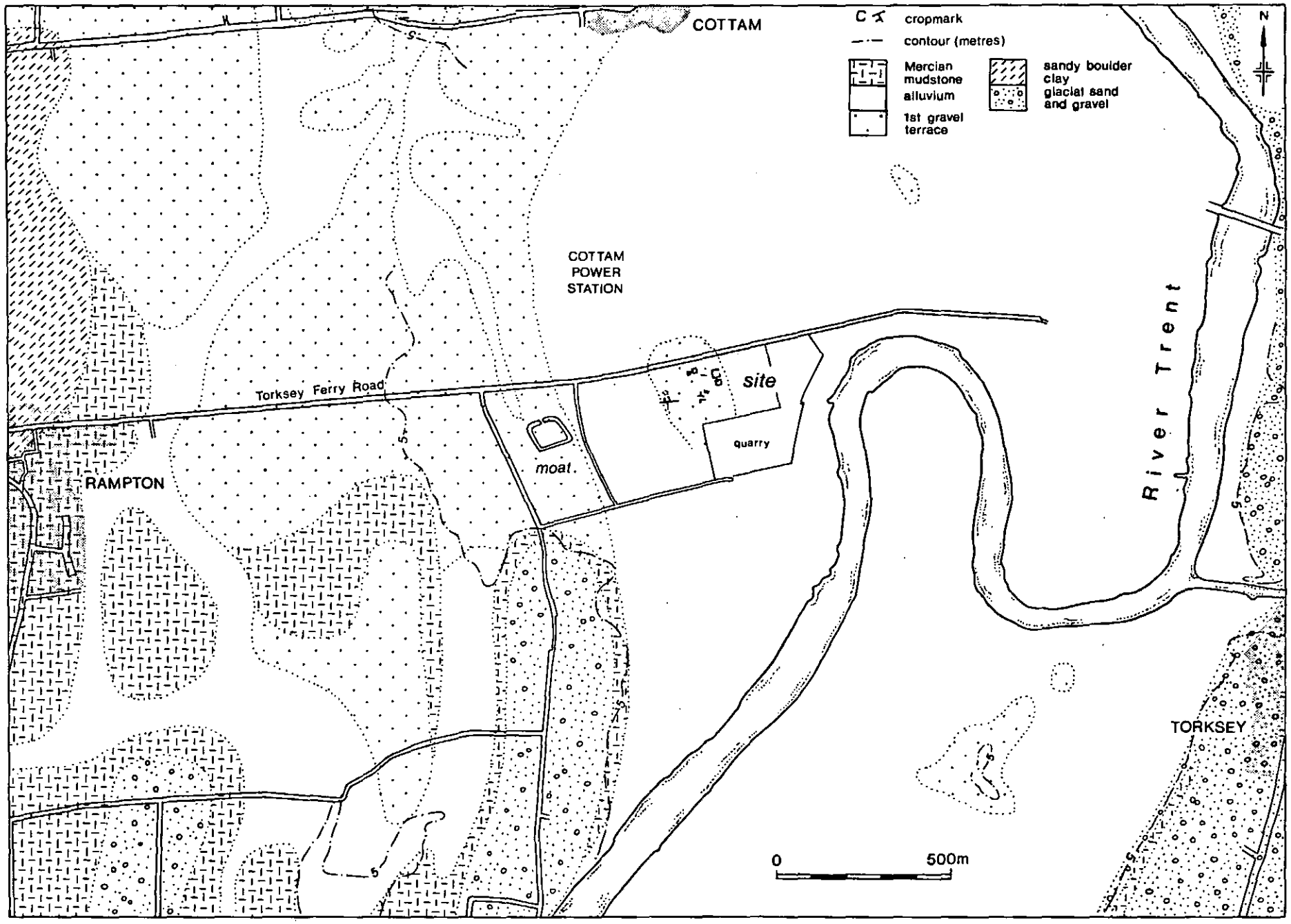


FIG. 1 Rampton Quarry Location Plan Showing Geology.

87 NW

1 INTRODUCTION.

1.1 Location of the Site.

The Rampton Quarry site is located in north east Nottinghamshire half a kilometre from the River Trent, within National Grid squares SK8178 and SK8278. The central focus of the site is a lobe of sand and gravel, possibly an outlier of the first terrace of the Trent, surrounded by alluvium (Fig. 1). The terrace material supports proven archaeological settlement of mid first century BC to late second century AD date (late Iron Age and Romano-British periods). In addition a potential ancient channel of the Trent crosses the western edge of the site.

The area of the site, comprising OS fields No. 5941, 7753, 0048, 0067, 0867 and 1575, is owned by Steetly Quarry Products and is adjacent to their working quarry at Rampton. Plans to extend the quarry face into these fields threatens the archaeological remains and has lead to the current programme of evaluation.

1.2 Previous Work on the Site.

The site was discovered during fieldwalking carried out in the early 1960's by R. Minnitt. The lobe of terrace material forms a distinct topographical feature rising several metres above the surrounding alluvium. Walking this feature produced a considerable concentration of first and second century Romano-British pottery mainly focused on field 0867 (SK 820787) but with a lessor concentration in field 0048 (SK 819786).

Fieldwalking was followed by the excavation of a series of small trenches in field 0867 and in 1966 by a larger scale excavation directed by M. W. Ponsford (Forthcoming) in the same field. The Ponsford excavation (Fig. 2) revealed a series of substantial ditches, a number of circular and rectangular post-built structures and a metal-working furnace all of mid first century BC to second century AD date (Ponsford 1966, 41).

Further evidence in the form of air photographs of the site, taken by R. Minnitt during the exceptionally dry summer of 1976, (a period of outstanding cropmark formation) revealed two sub-rectangular cropmark enclosures in field 0867, a possible enclosure and linear features in field 0048 and some fragmentary cropmark features in field 0067 (Fig. 3, section 2.1).

1.3 The Evaluation Procedure.

The initial evaluation plan as outlined in the document submitted by the Trust to Steetly Quarry Products involved the following seven stages:

1. Charting the Extent of the Archaeology. Fieldwalking
2. Charting the Extent of Archaeological Features. RM4 resistivity survey.
3. Establishing the Extent of the Alluvium. Close pattern borehole survey.
4. Characterising the Alluvium. Examination of cores from boreholes.
5. Testing Alluvium for Pollen.
6. Examining Alluvium for Floral and Faunal Remains.
7. Establishing the Quality of the Archaeology. Trial excavation programme.

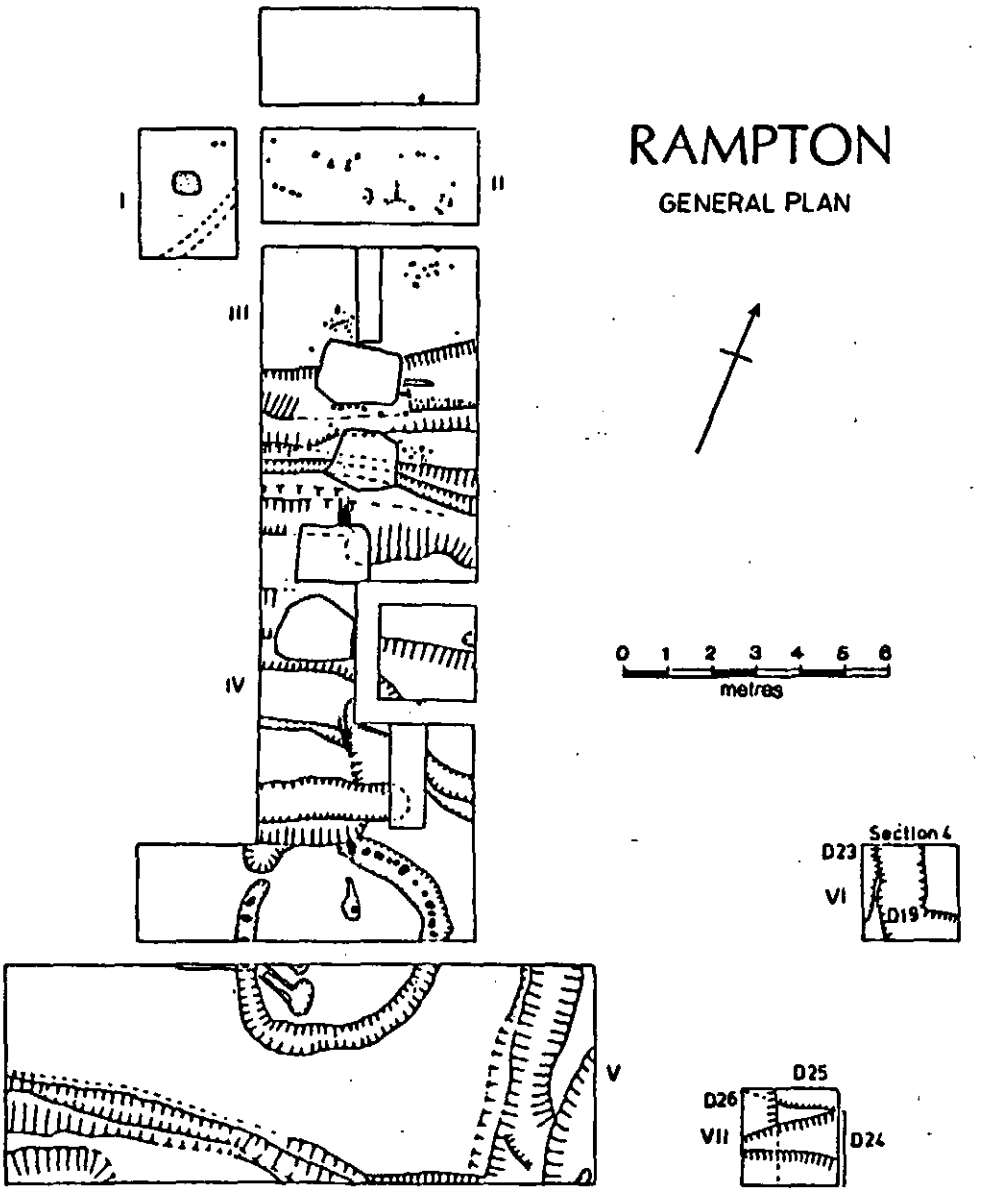


FIG. 2 Plan of Ponsford's Excavation of 1966.

In practice it has been necessary to vary the evaluation procedure to suit current field conditions and to produce more cost effective results. The main changes are outlined in the text.

In addition several other techniques have been employed. The susceptibility of the site to crop mark formation demonstrated by the 1976 air photos has been further exploited. High level photographs were taken from a platform mounted on a cooling tower of Cottam power station, overlooking the site, and from a ground based hydraulic platform (section 2.2). Dr. D. Riley of Sheffield University has also overflown the site and taken further air photos.

2 RESULTS OF WORK TO DATE.

2.1 Cropmark Plots.

The cropmarks visible on both R. Minnitts air photos of 1976 and those taken from the cooling tower of Cottam power station were plotted onto a tracing of the Ordnance Survey 1:2500 sheet of the site (Fig. 3) using a combination of the Möbius Network method (Scollar 198-) and a standard computer software package. Such plots are generally accurate to within five metres on the ground. At Rampton a somewhat greater error in the initial plotting of the cropmarks might be expected as a result of the extreme oblique view of the available photos and the indistinct nature of some of the cropmarks.

Field 0867.
The two sub-rectangular enclosures in field 0867 are the clearest cropmark features. The northern most enclosure is approximately 30m north-south by 20m east-west. The southern enclosure is smaller, about 20m square

Field 0067.
At least two sub-rectangular enclosures are visible in the northern half of field 0067. Immediately south of this is an east-west linear feature and there are further isolated linear features in the southern half of the field.

Field 0048.
A very faint cropmark sub-rectangular enclosure and north-south and east-west linear features are visible. Excavation in trench 02 (section 2.52) located a ditch approximately 0.40m deep and 1.00m wide, (Feature 0059), producing Romano-British pottery from its fill. It is possible that this ditch is the north-south linear cropmark feature.

2.2 High Level Photography.

Colour print and infra-red transparency photographs of the site were taken by remote control from the top of a 40 foot extendable hydraulic platform. The photographs were taken to give maximum infra red-coverage of fields 0067 and 0867, where there were still standing crops, providing the opportunity to observe the effectiveness of this technique in enhancing cropmark visibility.

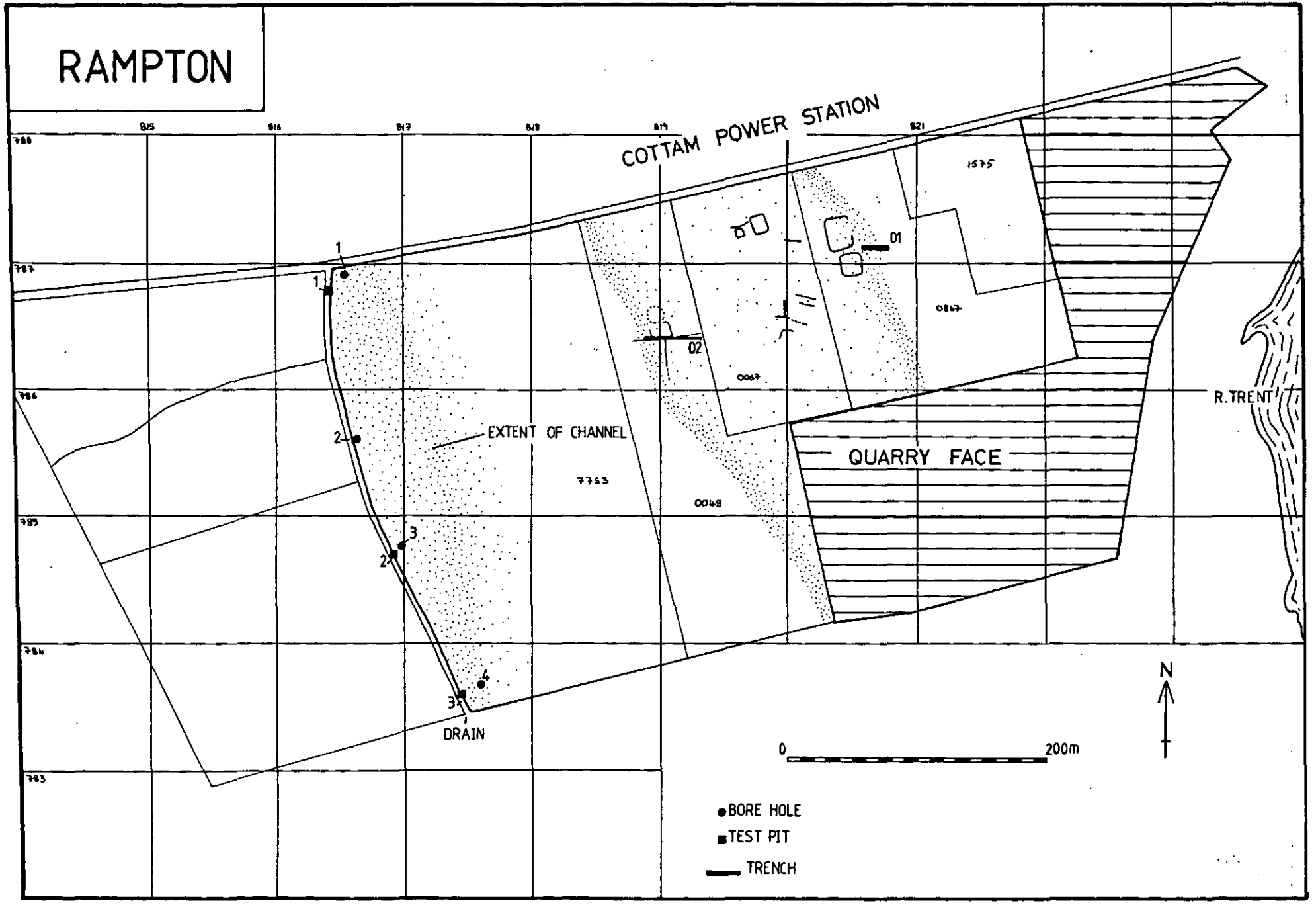


FIG. 3 Rampton. Cropmark Plots and Location of TPAT_Excavations and Sampling June to August 1990.

The results of both the colour print and infra-red transparency films were disappointing. Though individual cropmark features were visible in field 0067 they were not at all clearly defined.

It seems likely that the infra-red technique would produce better results if used earlier in the season when colour differences in the crop, and hence infra-red characteristics, are more pronounced. The colour prints, though providing high quality panoramic photographic coverage of the entire site, do not clearly show cropmarks.

2.3 EM31 Conductivity Survey.

After discussions with Steetly Quarry Products it was decided to substitute the costly close pattern borehole survey (stage 3 of the evaluation procedure) with an EM31 conductivity survey, a more cost effective geophysical technique. The EM31 survey was carried out on Friday 8th and Monday 11th June by geologists and geophysicists from British Geological Survey (BGS), Keyworth, Nottingham. Results were presented in a short paper (Allsop, Bridge and Raines 1990), of which this is a brief summary with some additional interpretative comments.

The EM31 instrument is designed for rapid mapping of near surface geological deposits. It functions on the principle of a receiving coil detecting the difference between the current produced by a primary magnetic field induced by the instrument and a secondary field reflected by the ground (Zalasiewicz, Mathers and Cornwell 1985, 139). The difference has, within limits, a linear relationship to the ground conductivity and hence the sub-surface deposits. The technique provides a quick and effective way of mapping the interface between different geological deposits and at Rampton has provided a most effective way of mapping the extent of the alluvium.

Two EM31 traverses were made running north-west and south-west, from off of the terrace material onto the alluvium (Fig. 4). Readings were taken at 2m intervals. A combination of EM31 survey and hand augering confirmed that the sand and gravel terrace extends south of the mapped extent on the six inch geological map (Sheet SK87NW). The terrace varies considerably in thickness from zero at the western edge of the site to a maximum of 12.3m at the crest of the terrace feature. The alluvium, consists of brown and grey clay and silty clay, with a maximum proved depth of 3.70m at the northwest corner of the site.

Fig. 4 shows the edge of alluvium as being at a point where alluvium cover of the terrace material is less than 0.50m thick. EM31 survey results are provided in the form of graphs of conductivity values and interpretive cross sections (Fig. 5).

The channelling in the surface of the sand and gravel (Fig. 5) represents the position of a relict channel of the Trent. A combination of borehole data, hand augering, test pits and documentary research seem to confirm the existence of a relict river channel at this point. The archaeological and environmental significance of this channel is further discussed in section 2.6.

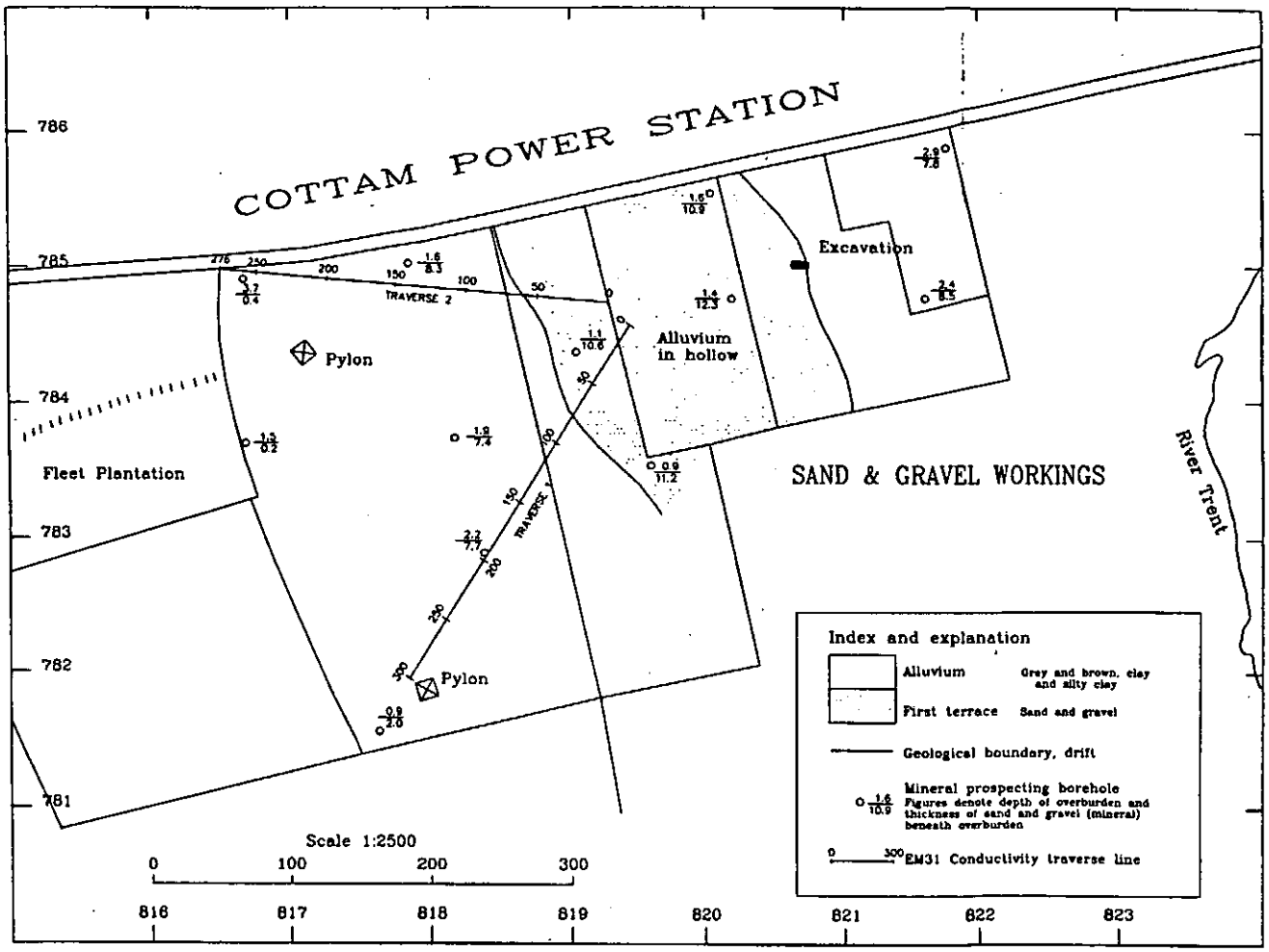


FIG. 4 Location of EM31 Survey by British Geological Survey.

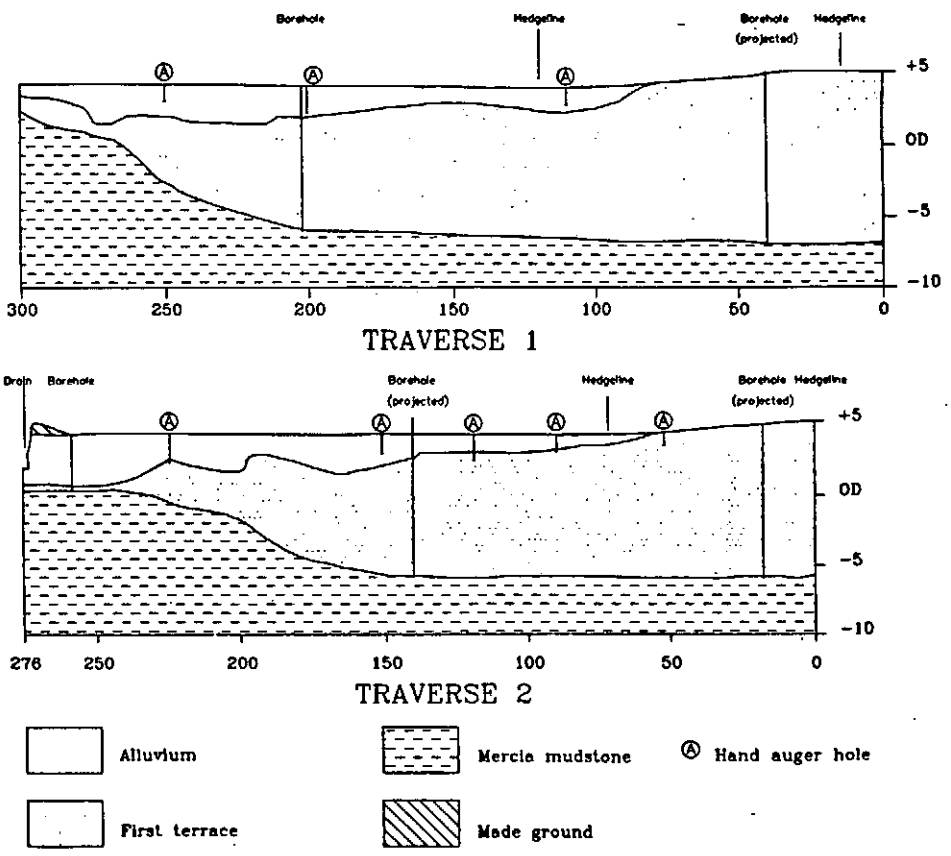


FIG. 5 Diagramatic Sections of EM31 Results.

2.4 RM4 Resistivity Survey.

Resistivity survey works on a similar principle to the conductivity survey described in section 2.3. A small electrical current is passed into the ground through a pair of remote probes sited some way from the survey point. A set of mobile probes connected to a resistance meter are then used to measure the resistance of the ground to the electrical current at various points on the survey grid. Since different materials have a differing electrical resistance the fill of, for example, a buried ditch, will have a different resistance value to the natural gravel into which it is cut. This difference may be measured and recorded. A number of such measurement are used to build up a graphic plot of sub-surface features.

The Trust's resistivity survey was carried out using a Geoscan RM4 Resistivity Meter coupled with a DL10 Data Logger. Measurements were made at one metre intervals within 20m grid squares marked out on the main site grid. Results, processed on a Epson Portable PC using Geoscan's Dataplot programme, were used to produce dot density diagrams of resistance values. Such results require experience to correctly interpret. An interpretive drawing (Fig. 6) of the area surveyed to date is provided.

Field 0867.
A total of 44 20m grid squares were surveyed giving almost total coverage of the area of terrace material and a 100m by 40m transect of the alluvium. The approximate position of Ponsford's trenches of 1966 and the exact location of TPAT's Trench 01 are marked on Fig. 6 for reference. The results clearly show the division between terrace and alluvium, the sand and gravel terrace material producing high resistance values and the clayey alluvium much lower values. The clarity of this division enabled trench 01 to be accurately placed over the terrace/alluvium interface. However, the features subsequently revealed during the excavation of trench 01 were not visible on the resistivity plot.

A number of clearly marked anomalies are visible within the terrace material but not within the alluvium. Feature A appears to be a sub-rectangular enclosure approximately 30m north-south, with a possible entrance in the west side. This enclosure is also revealed by the air photos (section 2.1). To the south is feature B, a smaller sub-rectangular enclosure approximately 20m square, also with a possible entrance on the western side and visible in the air photos. Feature C, a large rectangular enclosure, is formed of a number of linear anomalies. It is unclear whether feature C represents a single enclosure or several in close proximity. Features D and E represent linear ditches, possibly forming boundaries or for drainage. At one point linear feature D is masked by the alluvial edge. This masking effect demonstrates that the RM4 is not able to detect features that have been covered by alluvium, the alluvial clay forming an impenetrable barrier.

Field 0048.
A total of eight 20m grid squares were surveyed prior to the opening of trench 02, again the division between terrace material and alluvium was clearly marked, though no other anomalies were obvious.

Conclusions.
Overall the technique provides a quick and effective way of examining the area of the site. However, the failure of the technique to predict features

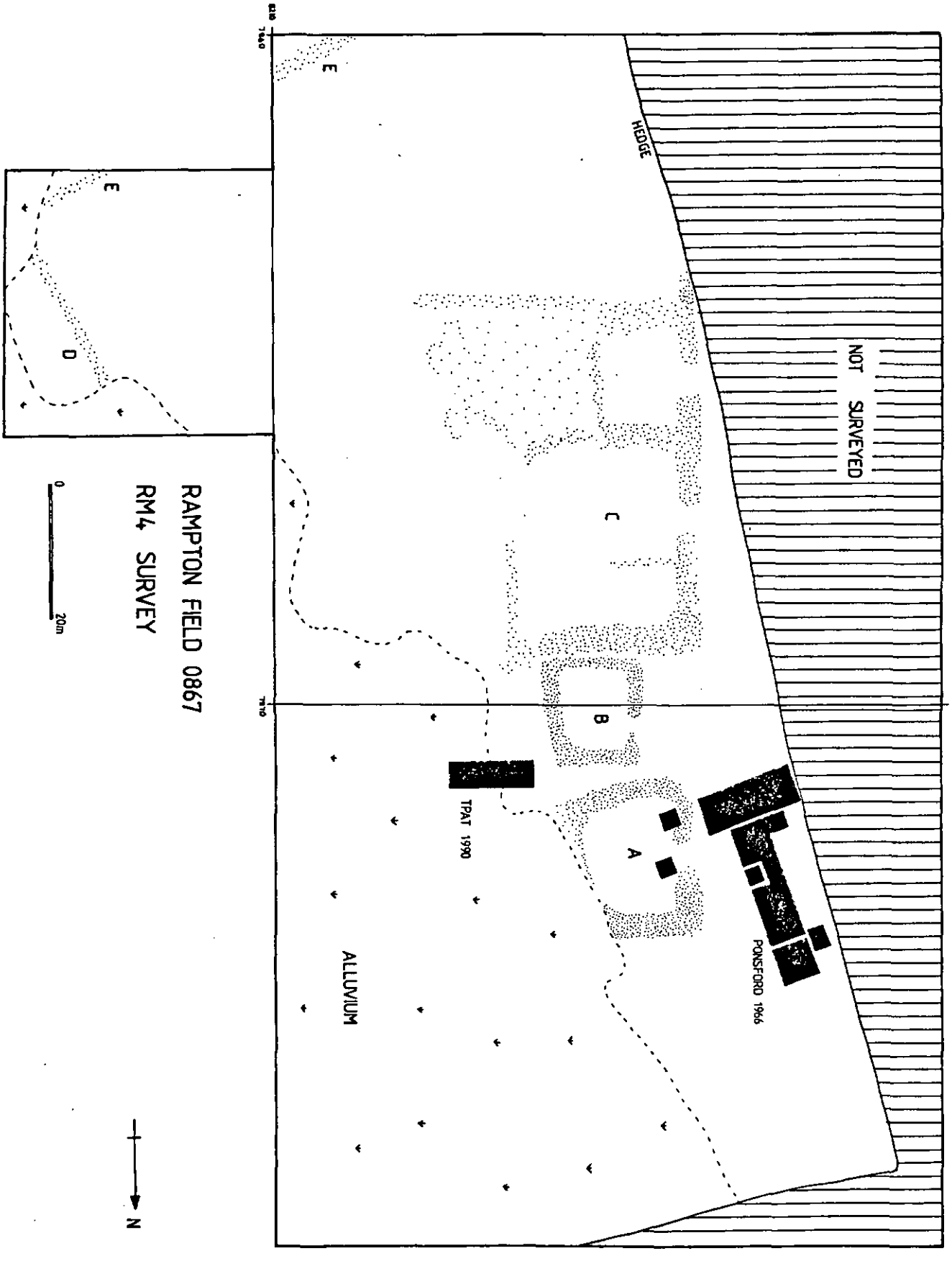


FIG. 6 Field 0867: RM4 Survey Interpretative Drawing Showing Probable Deep Enclosure Ditches Beneath Ploughsoil.

subsequently found on excavation in both trenches 01 and 02, and to reveal the continuation of features excavated in Ponsford's trenches of 1966 demonstrates its limits. While resistivity survey works well in revealing the most substantial features on this site, and should for example, effectively predict large enclosures with substantial ditches, it is not able to resolve smaller features, such as the detail of occupation remains within these enclosures. The results of the survey should be considered with this fact in mind. Significantly, the survey shows some features to be partially sealed beneath alluvium, indicating the possibility of well preserved archaeological remains beneath the covering clay.

Exceptionally dry weather conditions during July and early August led to the temporary suspension of the RM4 survey programme. Extreme drying of the ground increases ground resistance to a level which the meter is unable to cope with. It is intended to continue the RM4 survey as soon as ground conditions permit.

2.5 Excavation.

2.51 Trench 01.

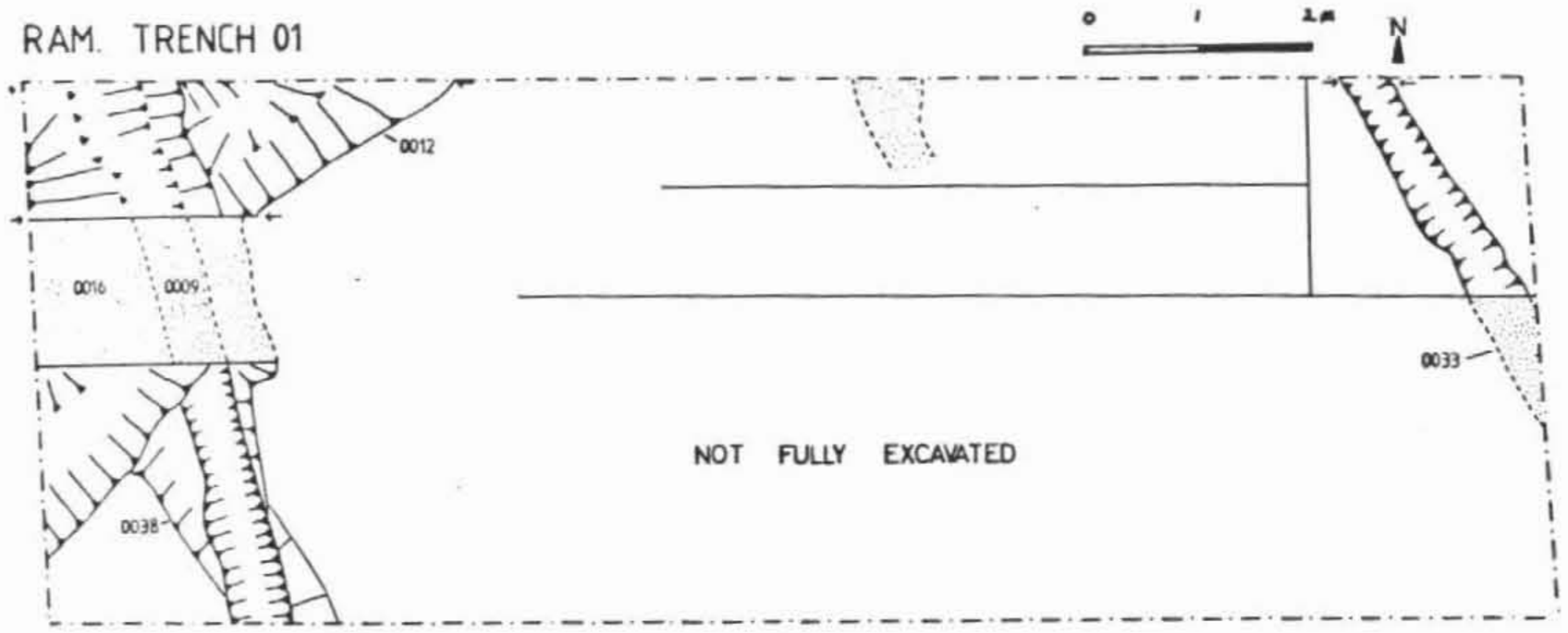
This trench was located in field 0867 on the basis of the resistivity survey data to conform to the evaluation research design to examine the interface of the terrace and alluvium, exposing c. 7.5m of terrace and running c. 5.0m into the alluvium. Dimensions of the trench were slightly larger than specified being c. 5.0m wide and 13.5m long. The trench was excavated between 4th June and 5th July 1990. Initially a JCB 3CX was used to machine away c. 0.70m of overburden comprising modern topsoil and an underlying stiff brown clay. Machining ceased when a dark brown sandy layer with patchy clean orange sand was visible at the west end of the trench and stiff mid grey alluvial clay at the east. Excavation then proceeded by hand.

Beneath the modern topsoil (0001) (Fig. 8.1), a brown clay layer (0002) approximately 0.25m thick extended across the entire area of trench 01. This layer was removed by machine and itself sealed a grey clay layer (0004) extending approximately 5.5m west from the eastern edge of the trench. 0002 and 0004 together may represent at least two different alluvial events caused by initial partial flooding of the site and subsequent total inundation.

Layer 0004 formed a fine feather edge over a grey-brown silty sand (0003) beneath. This layer varied between 0.20m and 0.40m in thickness and contained large quantities of abraded Romano-British pottery sherds, provisionally dated to from the first to third century AD. At the east end of the trench the brown silty sand overlay and merged with a number of other similar sandy layers. These layers seem characteristic of the horizons of an agricultural soil and taken in combination with the large amount of abraded pottery from layer 0003, possibly representing the dumping of domestic rubbish on a field surface to fertilize it, may indicate the presence of a relict Roman soil horizon sealed beneath the later alluvial deposits. Samples of all the above layers were taken and will be subjected to particle size analysis. Results should indicate the nature and origins of the deposits.

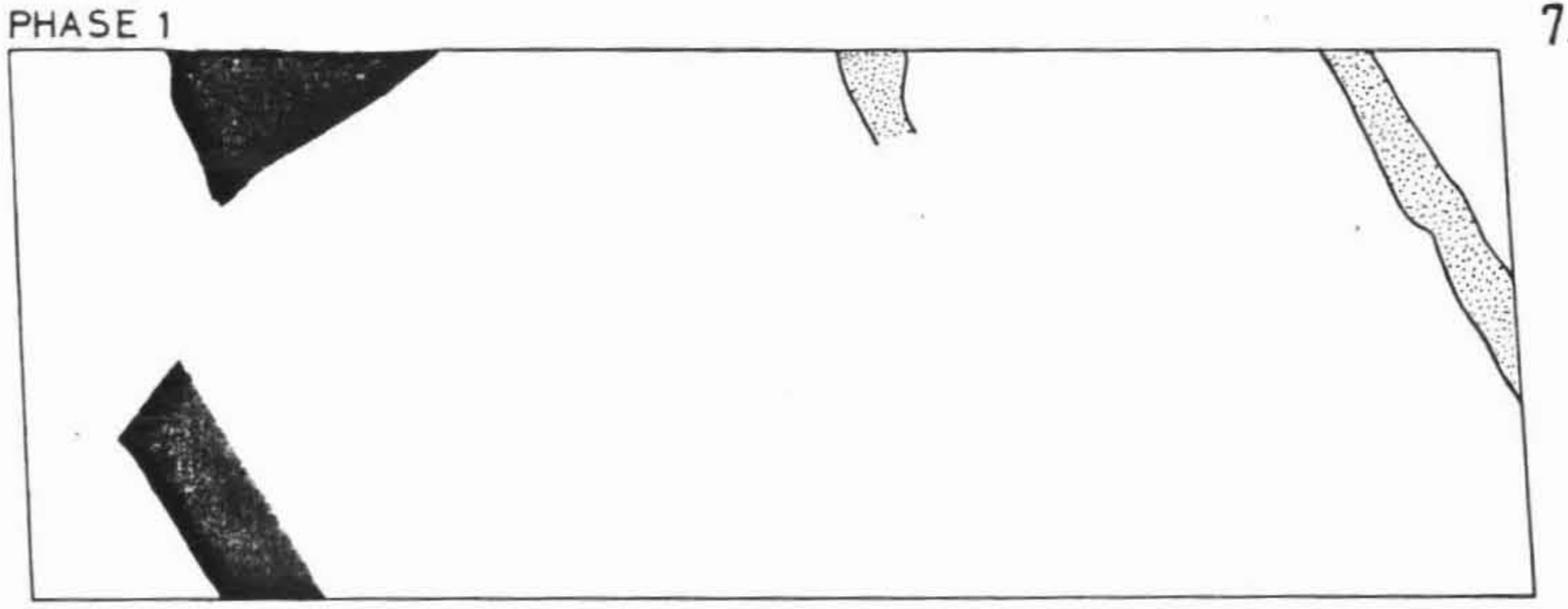
At the west end of the trench layer 0003 appears to seal at least three phases of ditch and gulley cut into the natural sand (Fig. 7.1). At the east end a north-west to south-east gulley (0033) was cut from an indeterminate

RAM. TRENCH 01



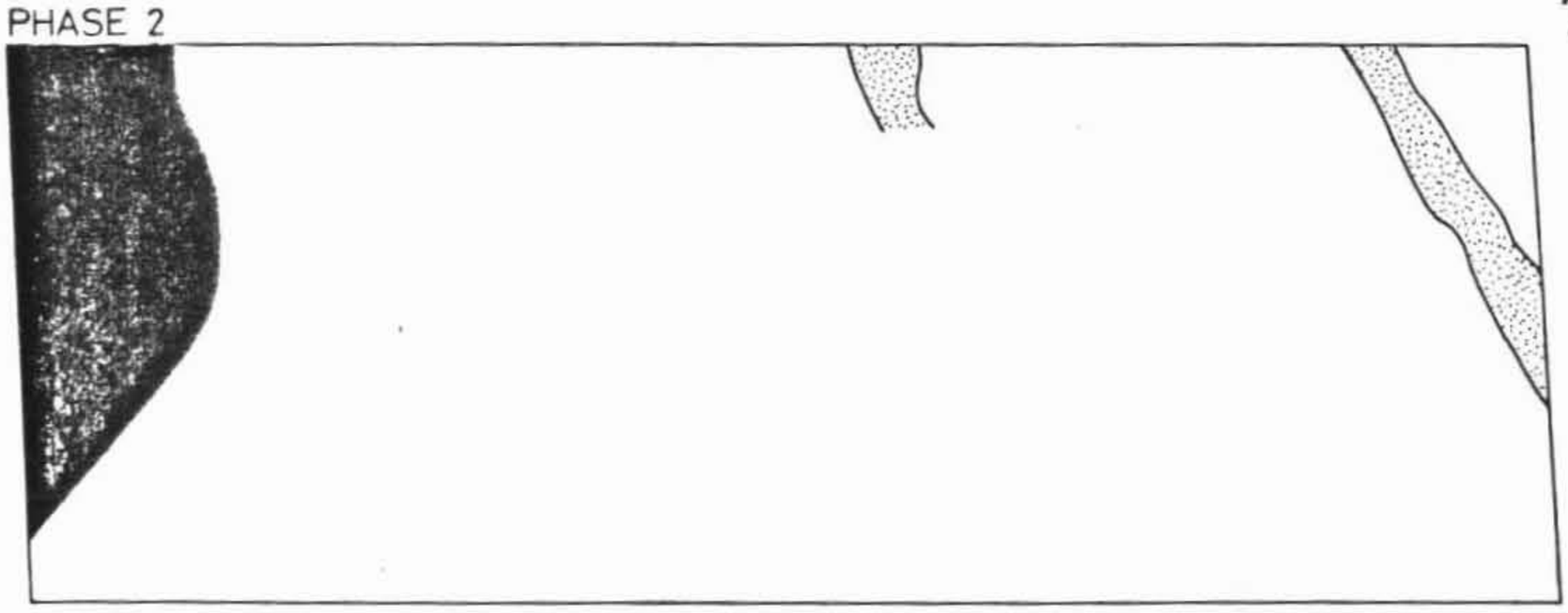
7.1

PHASE 1



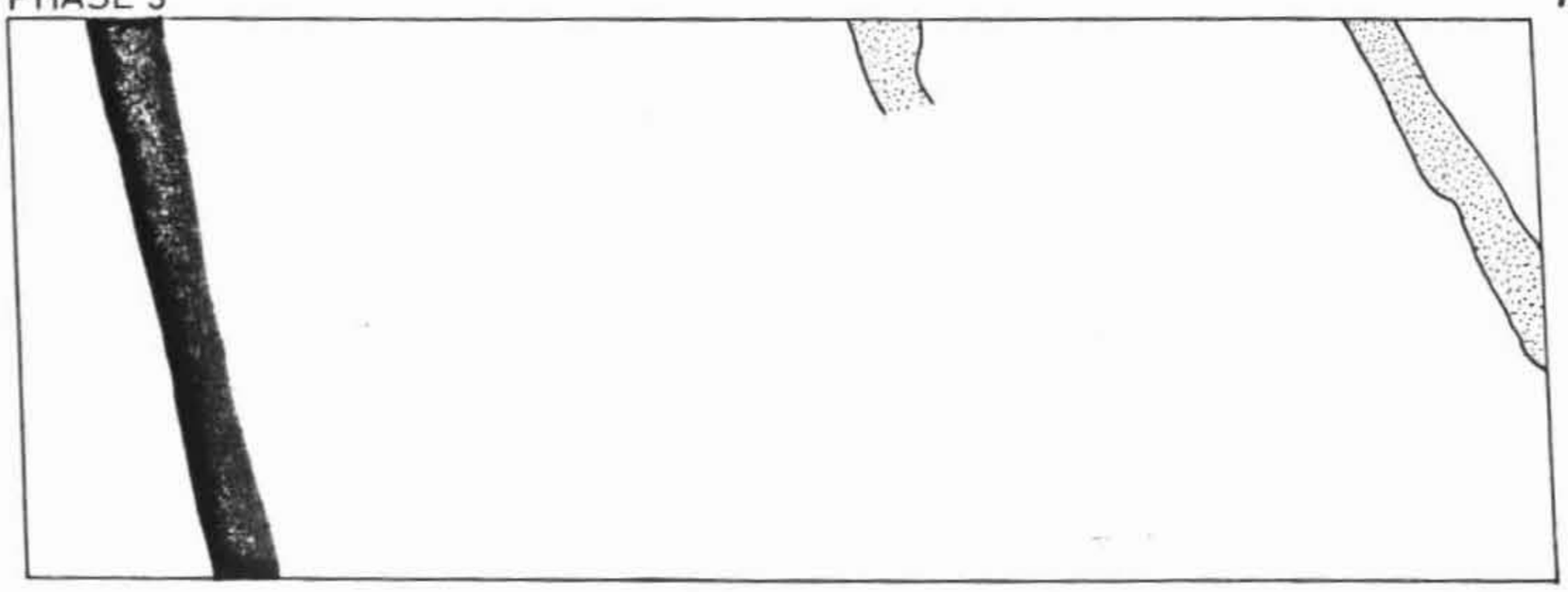
7.2

PHASE 2



7.3

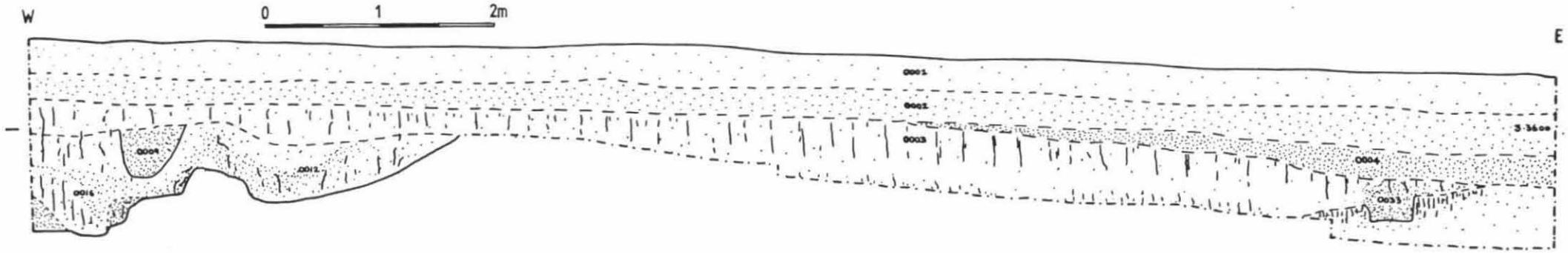
PHASE 3



7.4

FIG. 7 Plan of Trench 01 Showing Preliminary Phasing.

RAMPTON TRENCH 01 SUMMARY SECTION



RAMPTON TRENCH 02 SECTIONS

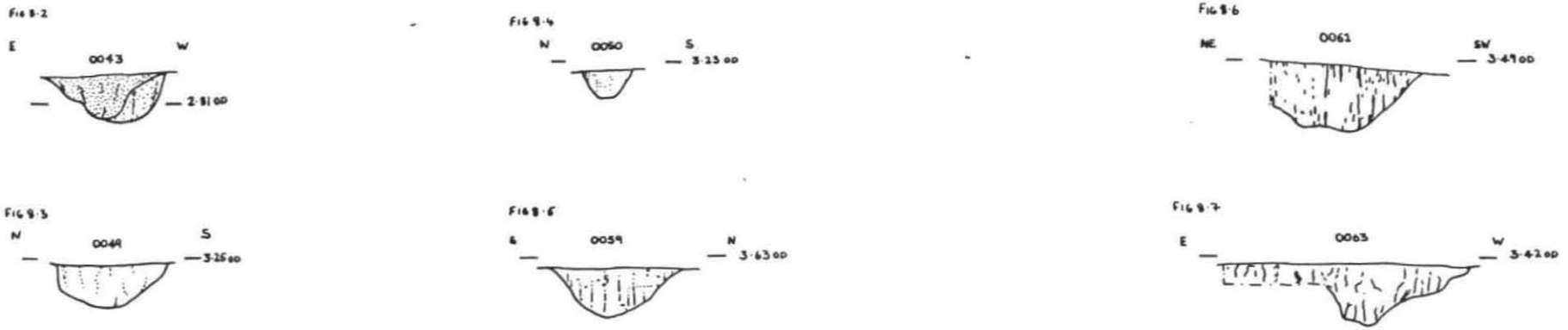


FIG. 8 Sections Across Excavated Features in Trenches 01 and 02.

level and cannot at present be assigned a definite relationship to the other features. All features with the exception of 0038 produced finds attributable to the first and second century AD. In addition samples were collected from all features for flotation, sieving and examination for charred plant remains. The present phasing is based on the stratigraphical relationship of the various features. Finds of pottery and metalwork from the features have yet to be processed and examined, but will in time provide evidence to refine the provisional phasing below, and allow more precise dating.

Phase 1 (Fig. 7.2).
The first (earliest) phase of activity is represented by a 1m wide shallow north-west to south-east gulley (0038). Possibly of a similar date is a deeper south-west to north-east running gulley (0012).

Phase 2 (Fig. 7.3).
Both 0012 and 0038 are cut by a much more substantial feature (0016). This ditch was at least 1.5m wide and 0.90m deep and appeared to run initially north-east before turning under the unexcavated baulk to run north-west. The ditch was recut on roughly the same line after it had partially silted up, the two cuts indicate a prolonged period of use.

Phase 3 (Fig. 7.4).
At a time when feature 0016 had almost entirely silted up a shallow steep sided and flat bottomed gulley (0009) was dug across it running almost exactly north-south. This gulley seems to represent the latest phase of activity in trench 01

Conclusions.
Trench 01 demonstrates a number of important points, particularly that all of the archaeological remains in this trench are sealed beneath at least one layer of alluvium. At the east end of the trench the earlier reduced grey alluvial layer seals both archaeological features and a possible Roman soil layer. This horizon may represent a period of flooding leading to the abandonment of the site.

The grey clay layer is that detected by the RM4 survey (section 2.4) as the edge of the alluvium and the RM4 results indicated that it may seal archaeological features. Excavation here confirms that the alluvium has sealed archaeological deposits and hence there is potential for further archaeological remains beneath the alluvial layers.

Should layer 0003 prove to be a relict Romano-British soil horizon it will provide a significant opportunity to examine a buried soil of Romano-British date on a large scale, possibly providing important environmental evidence and information on agricultural practice. This soil layer appears to have built up over filled in ditches of Romano-British date. This might suggest an extended period of occupation for the site with the focus of settlement moving periodically, the old settlement areas being abandoned to the plough.

The ditches and gullies at the west end of trench 01 indicates the complexity of multi-period remains likely to survive over much of the site. They represent an archaeological resource that only area excavation on a fairly large scale can adequately investigate.

2.52 Trench 02.
Trench 02 was located in field 0048 with the intention of both examining the interface of the alluvium and terrace material on the western side of the terrace and investigating the cropmark features plotted from the 1976 air photos (Fig. 3). An initial area approximately 21m long (east-west) by 2.5m wide was opened, this was subsequently extended to a total east-west length of 45m, with a 7m extension to the south at the eastern end. The trench was excavated between the 26th June and 27th July 1990. Initially a JCB 3CX was used to remove c.0.90m of overburden comprising modern topsoil, stiff brown clay and weathered sand to a level at which features were visible cut into the natural sand. Excavation then proceeded by hand.

At the western end of the trench the modern topsoil sealed a brown clay layer similar to layer 0002 in trench 01 and probably of alluvial origin. This layer extended c.25m east along the trench becoming gradually sandier. The reduced grey alluvial clay found in trench 01 was absent from trench 02. The different character of the alluvium here may suggest that is was laid down by a different event, or under differenr localized conditions, to that which deposited the alluvium in trench 01. Beneath the alluvium a substantial layer of orange-brown sand covered the clean natural sand apparently sealing features cut into natural sand and gravel. It is not at present clear what this layer represents.

At the western end of trench 02 (Fig. 9) were a series of gently meandering, roughly parallel south-west to north-east shallow gullies (0049), (0050) and (0053). All had a similar profile (Figs. 8.3 & 8.4) and broadly similar greyish silty-sand fill. None produced finds or any trace of human activity. It seems likely that these features may be naturally formed channels, the result of fluvial action on the gravel surface. If so they are of little archaeological significance.

Features 0049 and 0053 are cut by a north-south running shallow gulley (0043) (Fig 8.2) with a grey-brown loamy sand fill. This shallow gulley had at least two cuts and was associated with a small circular feature in its eastern slope, possibly a post-hole. The fill of the second cut of 0043 produced a single fire-cracked pebble but no other finds. Gulley 0043 can be interpreted as a man-made feature of indeterminate date.

At the eastern end of the trench were a series of three interrelated ditches and gullies comprising 0061 a substantial north-west to south-east ditch (Fig. 8.6), 0059 an east-west gulley (Fig. 8.5) and 0063 a north-south gulley (Fig. 8.7) the latter partially exposed in the southern extension of trench 02 and possibly with several cuts. All of these features had a similar dark brown loamy fill and produced Romano-British pottery and some possible metal-working slag. No attempt was made to demonstrate the stratigraphical relationship of these features as it was considered that insufficient area of feature was exposed in plan to adequately allow this.

Conclusions.
None of the features in trench 02 appear to relate directly to the cropmark plot. It is possible that 0043 may represent the north-south linear

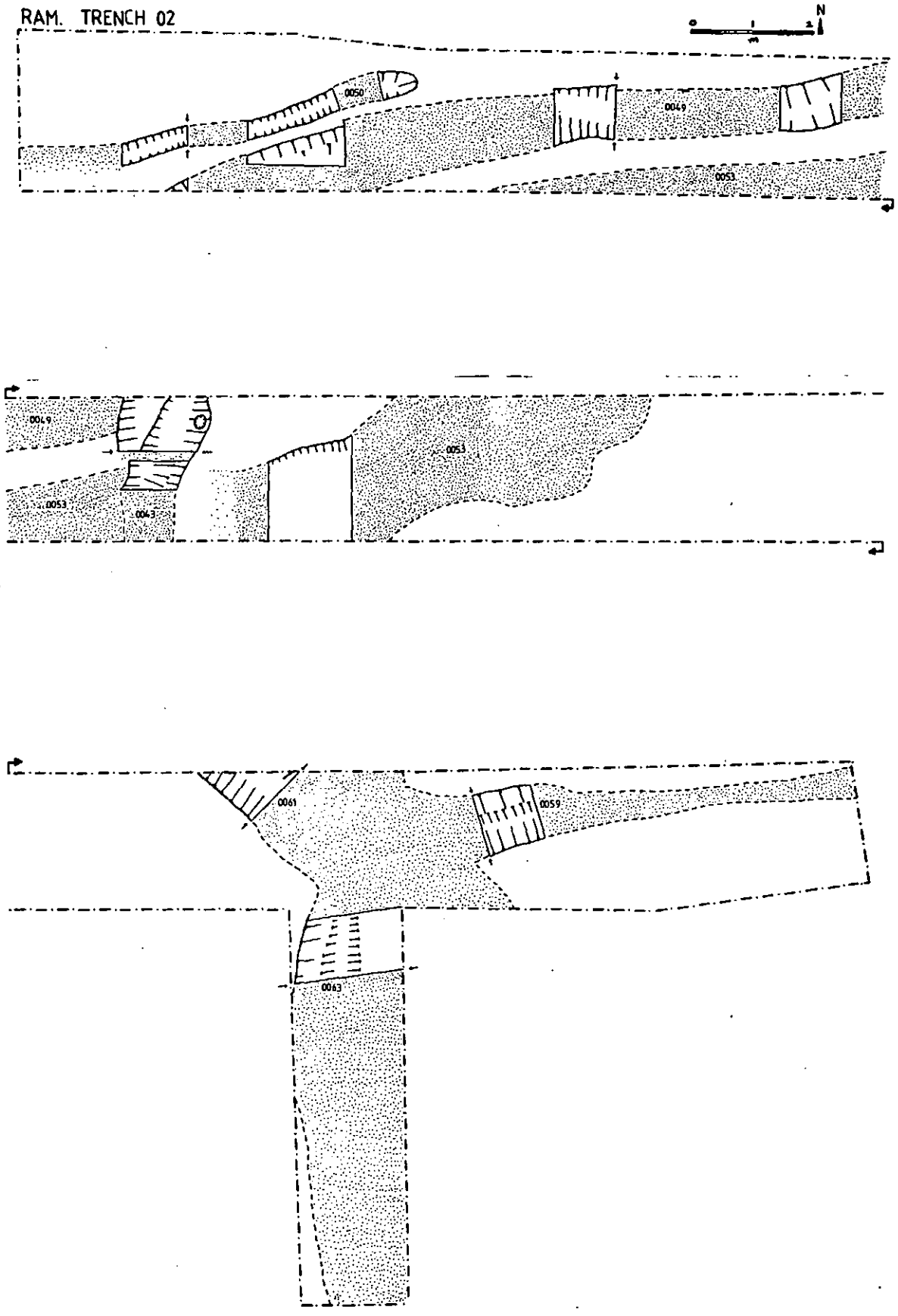


FIG. 9 Plan of Trench 02.

cropmark, although as adjacent equally substantial features have evidently not produced crop marks this seems unlikely. It appears that trench 02 is located to the south of the cropmark enclosure in Fig. 3 and so has failed to locate any of the cropmark features. This would indicate an error in excess of 5m in the plotting of the cropmarks from air photos. However, the features at the eastern end of the trench suggest that the quality and complexity of the archaeology is likely to be as great here as in field 0867 and of broadly similar date.

The trench clearly demonstrates the different nature of the terrace edge on the western side. There is a gentler gradient and a more gradual change to alluvium which is of a different character to that on the eastern terrace edge. It seems likely on the basis of results from trench 02 that archaeological deposits are confined to an area well away from the terrace edge in this part of the site. It is hoped that a combination of field walking and RM4 survey will serve to clarify both the location of the cropmark features and extent of occupation in this field.

2.6 Investigation of the Possible River Channel.

A major aspect of the archaeological significance of the Rampton Quarry site rests in the presence of an ancient channel of the River Trent on the western side of the threatened area. Such a channel may contain waterlogged material yielding important environmental evidence for the Trent valley during a considerable time period, as well as providing geological data on the development of the Trent. The fact that it is in close proximity to an archaeological site further increases its significance as environmental data may be directly related to the activity of man. The evaluation procedure has involved a combination of geophysical survey, field examination, and documentary research to determine the presence and nature of the channel.

Geophysical Survey.
As has been reported in section 2.3 the EM31 conductivity survey carried out by BGS indicated channelling in the surface of the terrace material which could be the result of a past water course.

Borehole Data.
Detailed borehole logs provided by Steetly Quarry Products for the entire site demonstrate the presence of 'peaty' material and silt deposits preserving organic material, including wood and shell, within the channel area (Fig. 3). The deposits are sealed beneath up to 1.70m of brown alluvial clay and are up to 1.80m thick (in BH 1 and 3).

Field Examination.
Hand augering with a Dutch Auger demonstrated the presence of black silty sand with a fetid smell and organic content up to 60m east of the western edge of field 7753. This material appears to be the same as that discovered in boreholes 1 to 4 and can be presumed to represent an organic fill within the channel. Its maximum extent is marked by stippling on Fig 3.

Three test pits were dug in the bottom of the deep field drain along the western side of field 7753 (Fig. 3). The pits allowed examination, recording and sampling of the deposits identified in the borehole logs and were afterwards

backfilled and made good to the satisfaction of an inspector from Laneham Internal Drainage Board.

Test Pit 1.
Located approximately parallel to Borehole 1 at NGR SK81647867. A three metre section was exposed. 1.90m of topsoil and brown alluvial clay similar to that seen in section in trench 02 sealed the channel deposits. Beneath this were mixed layers of sand and silt, a homogenous black silty horizon, grey silt and a grey clay layer containing large very well preserved wood fragments. This section was examined by Dr. P. Buckland of Sheffield University who was able to identify fresh water molluscan remains within the black silty horizon.

Test Pit 2.
Located approximately parallel to Borehole 3 at NGR SK81697845. A 1m section was exposed in the bottom of the field drain. Approximately 30cm of mixed sandy material and a grey clay layer were present beneath brown alluvial clay. The grey clay rested on undisturbed mercian mudstone. Shell fragments and a large bone fragment (awaiting identification) were recovered from this section. The fact that mercian mudstone was present beneath such insubstantial channel deposits may indicate that this test pit is on the extreme western edge of the channel.

Test Pit 3.
Located approximately parallel to borehole 4 at NGR SK81757846. A 1m section was exposed on the bottom of the field drain. Material was similar to that in test pit 1 with layers of mixed sandy material over a black silty horizon and grey clayey layers.

Documentary Research.
In many cases old river channels may be indicated either as surviving water courses, in boundaries or by place-name evidence often recorded on old maps or parish records. A brief survey of the most easily accessible sources for Rampton, stored in the East Midlands Collection (EMC) at the University of Nottingham and the Nottinghamshire County Records Office (CRO), has been made.

A map of 1769 of the 'Ings, Meadows and Marshes with other Low Grounds in Laneham, Rampton,' etc. by John Grundy and George Kell (CRO LA 2 S) shows a channel named as Seamere Dyke cutting off the Rampton meander of the Trent from a point just opposite Marton in the north to c. ½ mile below Torksey in the south (Fig. 11). The channel has the characteristic meandering course of a natural stream or river channel, although in several places it is clearly shown as having been straightened to facilitate increased flow during flooding. This channel appears to be one of several natural streams progressively straightened and adapted for use in draining the marshy ground close to the Trent, a process initiated by act of Parliament in the mid 18th-century (CRO QPO 5/27).

The 1st Edition Ordnance Survey (OS) map of the area c. 1820 (Fig. 10) also shows the channel in less detail. It is clearly different in character to the straight man-made drainage channels nearby. The survival of an ancient river channel as a nineteenth century stream, and its subsequent incorporation into a field drain system seems to be paralleled at Girton Quarry, also on the Trent (see below).

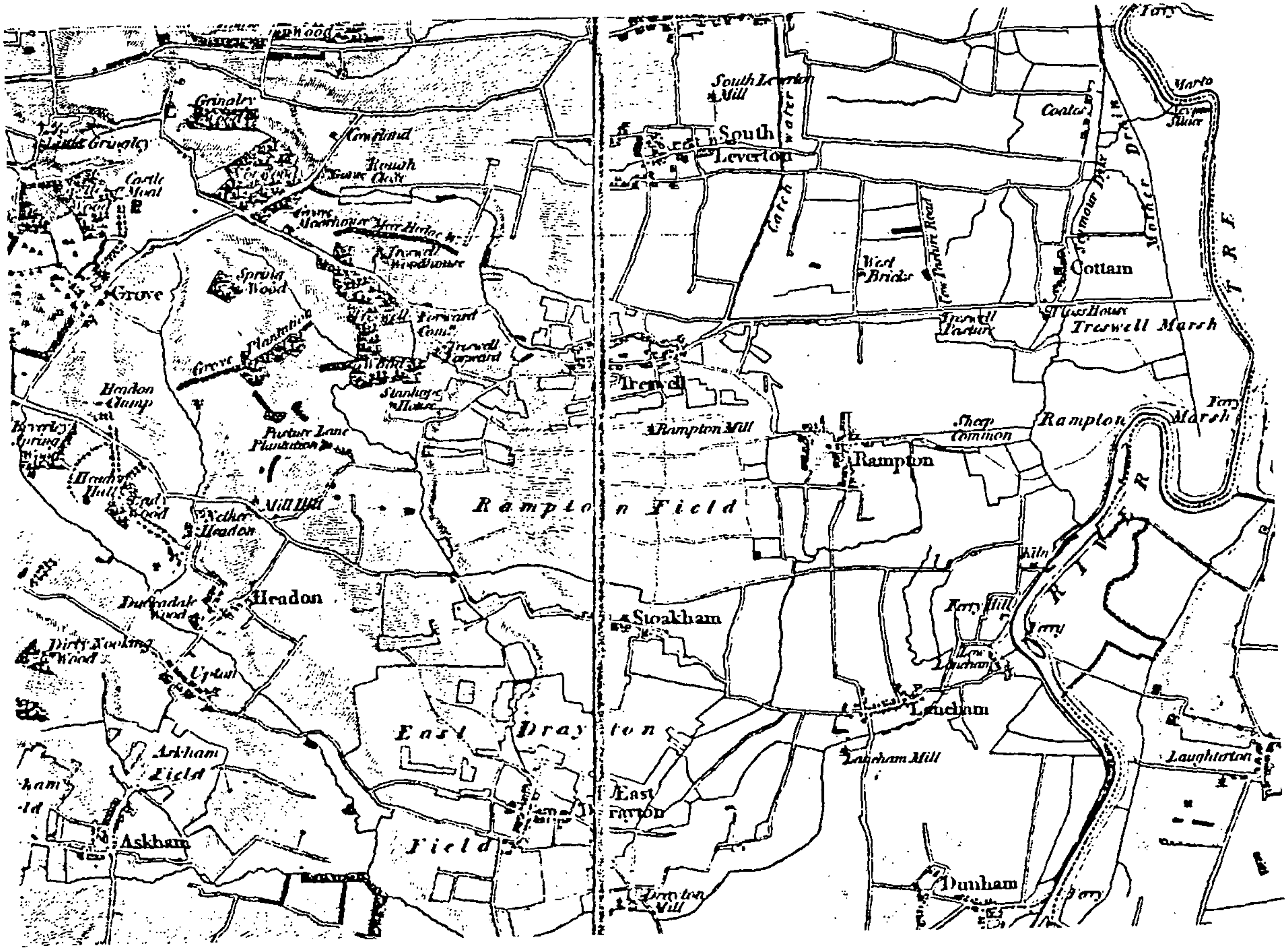


FIG. 10 Extract from 1st Edition OS Map c1820. Showing Seymour Drain. (2 inches to mile, enlarged to twice original size).

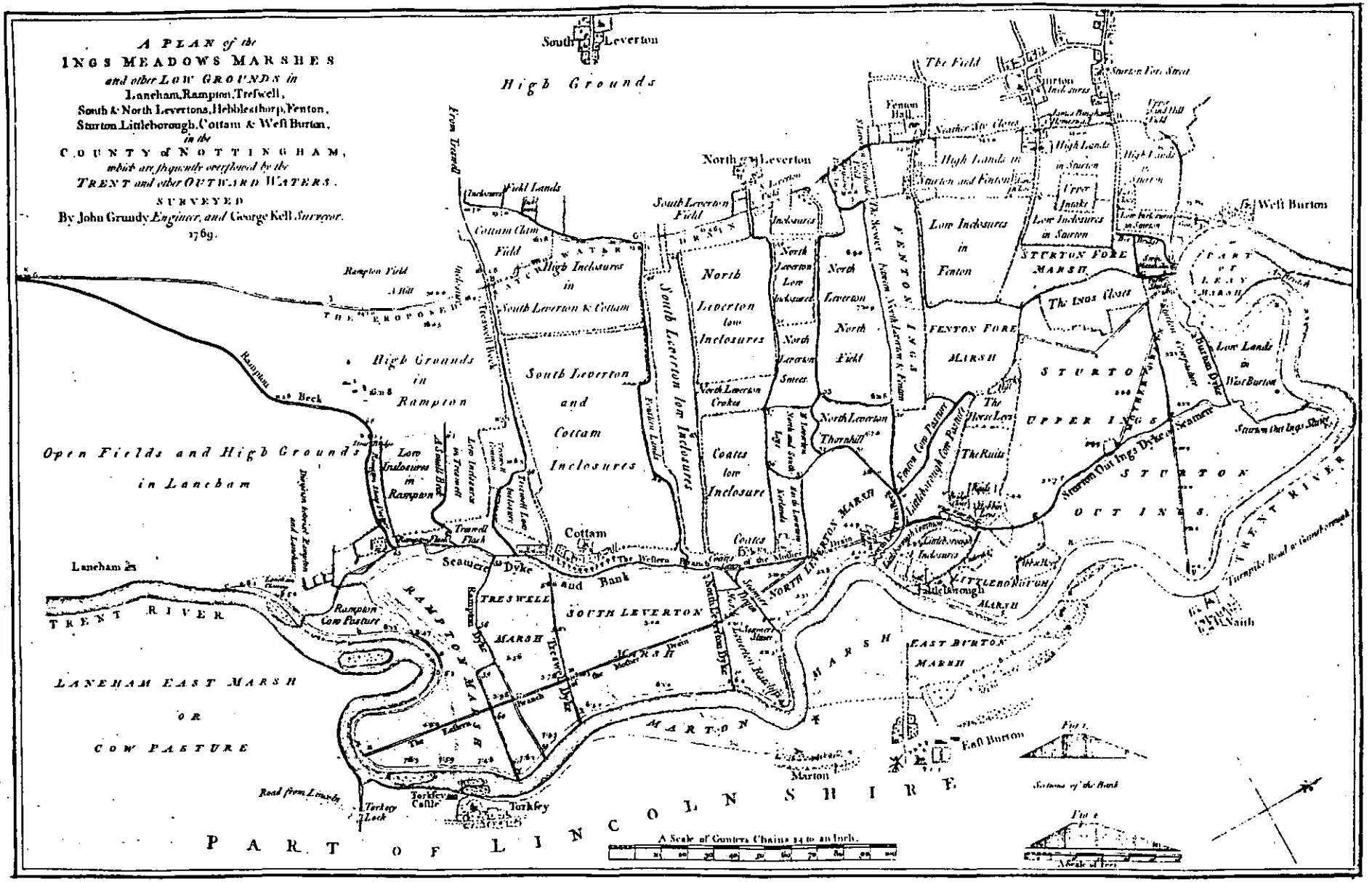


FIG. 11 Grundy & Kell's Map of Rampton 1769, Showing Seamere Dyke.

The Enclosure Awards for Rampton c. 1842 (CRO AT 107/19) and the Tithe Awards of c. 1847 (CRO RP 1 R), both show a considerably straightened channel course which no longer joins the Trent in the south. The enclosure award text confirms this, describing Seamere Drain as commencing at a point a quarter of a mile from the river in the 'south east corner of Short Leys Common'. Both of these sources and the 2nd Edition OS map of 1899 show the old course of Seamere Channel preserved in the parish boundary as far as the Trent.

Both the Tithe Awards of 1847 and a hand drawn map of c. 1845 showing Rampton prior to enclosure (CRO DDRC 14/19-20) provide place name evidence which supports the case for Seamere Dyke having originally been a natural watercourse. Land to the east of the channel is called Behind Fleet Common on the 1845 map. The same area is named Fleet Close on the Tithe Award map of 1847. The element also occurs in Fleet Bridge (the bridge carrying Torksey Ferry Road across the channel) on the 1st Edition OS six inch map of the area and in Fleet Plantation on the present OS 1:10000 map. The use of the place name element Fleet derived from OE *Fleot* meaning creek or inlet (Gover et al. 1940, 58) appears locally to be associated with relict river channels, for example one still in existence at Girton Nottinghamshire, adjacent to an ancient channel (see below).

This summary search of the documentary evidence would appear to bear out the case for an ancient river channel at Rampton. The channel, probably an earlier course of the Trent, having survived as a water carrying feature until at least the mid Eighteenth century, was subsequently adapted and straightened to form a land drain.

Conclusions.

The test pit, bore hole and hand auger data together indicate a sizable relict river channel filling gradually over an extended time period. The various different deposits represent the stages in the process of decay. The current field inspection was judged to provide sufficient evidence of the presence and character of the channel to make time consuming and expensive environmental sampling and radiocarbon dating (the results of which would not be ready in time to be incorporated in the final evaluation report) unnecessary at this stage. Resources should instead be concentrated on a future extensive sampling programme as part of larger scale site investigation.

The Rampton channel seems to represent a similar feature to that seen at Girton Quarry (SK 82567), where field investigation is currently being carried out by Trent & Peak Archaeological Trust. Here a relict channel of the Trent, with its origins in the Early Holocene, underwent a process of gradual change and decay, and survived as a small stream until the late 19th-century (Grattan 1990). The Girton channel has provided good geological and environmental data with extensive sampling by the Trust for sediment particle size, beetle remains, pollen (Green 1990) and radiocarbon dating.

On the basis of material recovered so far the Rampton channel might be expected to yield similar results to that at Girton. The significance of Rampton is enhanced by its relationship to proven archaeological sites nearby. Results from Rampton and Girton, together with other data recovered from continuing research along the Trent will provide important evidence for the change and development of the Trent and in particular the major changes which seem to have effected the Trent Valley in the third and fourth centuries AD.

3 FURTHER WORK PLANNED THIS YEAR.

3.1 RM4 Resistivity Survey.

It is intended to carry out RM4 resistivity survey in the entire area of field 0067, approximately 50 twenty metre grid squares. Since this field is entirely terrace material and has produced some fragmentary cropmark evidence it is potentially of major archaeological significance. It is hoped that the RM4 survey will fill out the picture provided by the cropmark plots, by indicating the full extent of the fragmentary features already seen and the extent of archaeological activity in the southern half of this field, where cropmarks are absent.

Additionally a sample area of field 0048 will be surveyed. A large part of the southern area of this field is terrace material but has produced no indication of archaeological activity from cropmark or other sources. A transect of approximately 16 twenty metre grid squares will be surveyed in the southern portion of the field. The survey of the northern half of the field, which is largely terrace material, will be completed.

The effectiveness of the RM4 survey technique depends largely on appropriate ground condition. Consequently the completion of this stage of the evaluation will, by necessity, be delayed until conditions are suitable.

3.2 Excavation.

Some further excavation is planned in field 0067. The fragmentary cropmarks in this field require investigation to elucidate both their date and nature. In particular it is important to show whether the cropmarks reveal the full extent of these features. It is therefore proposed to open at two small trenches over the isolated linear features in the southern half of the field in the area shown in Fig. 3.

3.3 Fieldwalking.

In the past fieldwalking the site has produced a considerable quantity of material. It is intended to walk the entire area of the site once conditions are suitable. Finds from fieldwalking can be plotted onto a base map of the site and provide information on the intensity of occupation and relative dates of archaeological features in different parts of the site.

4 SUMMARY AND CONCLUSIONS.

Evaluation work carried out by the Trust has demonstrated a large poly-focal site of Romano-British date occupying an isolated area of gravel terrace of the River Trent and surrounded by alluvium. A number of sub-rectangular enclosures of likely Romano-British or earlier date have been located. It has been shown that the extensive occupation remains excavated by M. W. Ponsford in 1966 are outside of the area of these enclosures. The Trust's excavations also revealed occupation outside of the enclosures, suggesting that the site may have been intensely used over a considerable period of time, with both enclosed and unenclosed phases of occupation.

It appears that archaeological remains at the edge of the terrace have been at least partially covered by alluvium during past flooding of the Trent. This flooding may have been responsible for the abandonment of the site in the third century AD. It is hoped that further excavation will elucidate both the cause of the alluviation and its effect on the settlement. Well preserved archaeological remains may be anticipated beneath the alluvium.

On the western edge of the site a variety of research and field techniques demonstrate the presence of a relict channel of the River Trent. The channel contains well preserved organic deposits which will yield important evidence for the environment of the Trent Valley in the past. Its proximity to an archaeological site enhances its importance since evidence directly related to the activity of man may be preserved.

5 BIBLIOGRAPHY.

Allsop, J. M, Bridge, D. McC, and Raines, M. G. (1990) Geophysical Appraisal of Rampton Quarry Archaeological Site. British Geological Survey.

Gover, J. E. B, Allen, M. and Stenton, F, M. (1940) The Place-Names of Nottinghamshire. English Place-Name Society. Vol. XVII. Cambridge.

Grattan, J. (1990) Girton Quarry Preliminary Fieldwork Report. Specialist Report submitted to TPAT.

Green, F. (1990) Girton Gravel Pit SK825670, Palaeobotany - Preliminary Report. Specialist Report submitted to TPAT.

Ponsford M. W, (1966) 'Rampton. SK818787'. in EMAB 9.

Ponsford, M. W, Forthcoming A Late Iron Age and Romano-British Settlement at Rampton, Nottinghamshire.

Scollar, I. (198-) Transformation of Extreme Oblique Aerial Photographs to Maps or Plans by Conventional Means or by Computer.

Zalasiewicz, J. A, Mathers, S. J, and Cornwall, J. D. (1985) The Application of Ground Conductiverty Measurements to Geological Mapping. Q.J. eng Geol. Vol. 18

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