ANGLIA WATER AMPTHILL TO SUNDON PIPELINE: Archaeological Field Evaluation Report

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Introduction

The planned route of the Ampthill to Sundon water pipeline follows a rough north - south line east of Ampthill down as far as Sundon near Flitwick. The pipe cuts through the Flitwick Association Flitwick and Milton soil series of gleyed brown earth soils. These are based on the lower green sands and Jurassic clays. It also crosses the river valley of the Flit. Here the soil is very wet with deposits of peat underlying the low fields. As a result the route of the pipe cuts through an interesting swathe of landscape and one that was probably favoured in terms of human settlement from earliest times.

Between 21 November and 6 December 1990 a series of 2m wide transects were excavated along the route of the planned pipeline in the area thought to be the most sensitive in terms of archaeological deposits. This report will describe the results obtained from the evaluation fieldwork and will also discuss previous archaeological knowledge collected during the past thirty years.

Previous knowledge

Although no large scale systematic excavation has ever been conducted in the area, the Sites,Monuments and Building Record in the Planning Department of Bedfordshire County Council contains sufficient evidence to postulate the presence of an extensive Roman settlement. The enclosed plan shows the density of known findspots. The field south of the Pumping Station has produced large quantities of Roman material and it has been suggested that the house known as Woburn Lodge might have been the site of a villa. Finds have included brooches, coins, grain and rubbish pits and fragments of walling, painted wall plaster and tesserae all dating to the Roman period. Dating evidence from the coins suggests that occupation continued through from the 2nd to the 4th century AD.

Pipe-clay figurines found further down slope towards the A507 have been used as evidence for the location of a Roman temple. This area has also produced evidence for cremation burials that might date to the late Iron Age. The area to the south of the A507 contains waterlogged deposits relating to the river Flit. Some Roman material has been found below the current water table and suggests a rise in the water level together with the formation of blanket peat in perhaps the 2nd and 3rd centuries.

The most recent Roman discoveries were found by the Ampthill and Flitwick Archaeological Society during construction of the A507 in 1982 when an important opportunity for more systematic rescue fieldwork was missed. These included an urned cremation visible

in the drainage ditch adjacent to the road.

This evidence strongly suggests that an extensive settlement, with Iron Age origins was present in this area. The aim of the evaluation excavations was to assess the in situ quality of archaeological features.

Achaeological Evaluation

The initial project design had proposed a series of 12 transects along the route between the village of Greenfield and south of the pond at Model Farm; this was the northern point of the area of concern. Owing to problems concerning access to land and the short time scale involved, it was possible to excavate only 8 out of the 12 transects. As a result, the proposed transect numbers 1-3 were not investigated, nor was transect 12 just north of the village of Greenfield.

In terms of the likely limits of the known Roman settlement, it is a matter of concern that the area around transects 2 and 3 was not evaluated; it would have provided important information for forming excavation policy and estimating clearance costs.

The excavated transects are numbers 4 to 11 and occupy the land south of the Flitton Pumping Station and across the A507 road into the fields east of Buxox Farm.

A JCB 210 mechanical excavator with a 1m wide ditching bucket was used to excavate the transects down to the top of archaeological deposits and take sample sections through selected features. Topsoil was carefully separated from any subsoils that were excavated, so that backfilling would not mixing plough soil with subsoils.

The field south of Flitton Pumping Station

Transects 4 to 7 were positioned in the field south of the Pumping Station and in the area known to be the core area for Roman settlement. Aerial photographs indicate substantial enclosure type ditches with cropmarks radiating westward of the existing pipeline and therefore across the route of the new pipeline. The four transects were laid out evenly in the field without reference to known cropmarks. This was to provide information concerning hidden archaeological features as opposed to confirming the presence of known features. Two transects were positioned parallel to the existing water pipe and the other two perpendicular. The field occupied a south facing slope and it was hoped that the transects would provide evidence regarding downslope soil erosion (or colluviation). Archaeological features are often better preserved under such deposits since they are protected from the erosive forces of ploughing.

Transect 4:

This was located approximately 10m west of the existing pipeline and measured 25m in length. The transect measured 2m wide and achieved a maximum depth of about 0.5m. The main feature located was a Roman ditch which contained large quantites of pottery including a fine Samian bowl (good quality shiny red table ware) probably imported from France. Other pottery consisted of local coarse wares used for cooking and other domestic purposes. This material was in very good condition and often in very large fragments. Animal bone belonging to cattle was also found. The ditch appears to have been in use for a considerable time as it was recut on at least two occasions.

The transect also revealed evidence of small post holes that might have been associated with a building; a larger area would need to be examined in order to verify this.

Transect 5:

This was located perpendicular to the existing pipeline and measured 20m in length. It was excavated to a depth of 0.3m below topsoil and revealed a more limited concentration of archaeology. The eastern limit of the transect (closest to the existed water pipeline) revealed a shallow pit that contained further cattle bones. This might have been a rubbish pit associated with the nearby Roman settlement.

Transect 6:

Transect 6 ran parallel to the existing pipeline and measured 25m in length. It was excavated to a depth of 0.55m and produced a larger number of archaeological features. Due to the 2m width of the transects it was often unclear whether the archaeological features were shallow pits or in some cases the terminals of ditches. A total of five of these features were partially excavated. They all proved to be Roman in date, producing large quantities of pottery and some bone fragments. The pottery dated from the 1st to the 3rd centuries AD.

Transect 7:

Transect 7 ran perpendicular to the existing pipeline and measured 20m in length. The transect was the furthest point south investigated and it was apparent that the depth of plough soil was much deeper than in the previous three transects. The was probably the result of colluviation associated with agricultural activity. As a result the transect was excavated to a depth of 1m before reaching archaeological deposits.

The major archaeological feature consisted of a substantial ditch

which measured approximately 6.5m in width. The ditch was orientated approximately north-south. Owing to its size, it was impossible to hand excavate it entirely and the JCB machine was used to establish the full depth of the ditch. This measured approximately 2.7m in depth and contained waterlogged material including a large piece of wood. The condition of this material would suggest that other organic material such as seeds and insect remains could be well preserved giving an important additional dimension to the understanding of the site and the landscape. Unfortunately the depth of the ditch and the narrowness of the trench made it unsafe to take environmental samples at that time.

Finds from the ditch included fragments of Roman pottery, animal bone and minute fragments of mortar and masonry that might have washed into the ditch from buildings further up slope. The ditch has provisionally been interpreted as part of the boundary to the Roman settlement and might be compared to the villa site at Gorhambury in Hertfordshire (Hingley 1989).

Immediately east of the ditch a human inhumation was found. The skull and an accompanying Roman vessel, dating to the 3rd or 4th century AD were excavated. The rest of the body is located outside the transect and will have to be exhumed in due course. The position of this burial is relatively close to the cremation found during road construction in 1982 and could indicate the presence of an extensive cemetery in this area.

Further archaeological features were also found in transect 7 and contained fragments of animal bone. This indicates that settlement activity extended along the entire length of the pipeline in the field south of Flitton Pumping Station.

Area south of the A507

Transects 8 to 11 were excavated south of the A507 and in an area of lowland associated with the river Flit. Roman deposits (in some cases waterlogged) are known from this area and the possibility of a mesolithic (c.10,000-6000 BC Stone Age hunter gatherers) flint working area has also been suggested.

Transect 8:

This was positioned parallel to the existing pipeline and measured 23m in length. In most areas it was excavated to a depth of 1m. A single archaeological feature was recorded and this consisted of a ditch, possibly used for field drainage. No datable finds were discovered so it is not possible to relate the ditch to the nearby Roman settlement. It does appear, however, that the ditch follows the same alignment as an existing field boundary and drainage ditch. It has been observed in the past that Roman material had been sealed by later peat formation in the river Flit area (eg Simco 1984 and K Faddon pers comm) and the ditch might therefore have Roman origins. Radiocarbon dating of the peat material would resolve this question and pollen analysis

could provide useful vegetation history of the area.

Transect 9:

Transect 9 was positioned perpendicular to the existing pipeline and measured 15m in length. It was excavated to a depth of 1m and cut through gravel and sandy soils. Evidence of waterlogging was also apparent and it is possible that an old stream bed was revealed. Tree roots were also recorded. In terms of archaeological activity, a small area of burnt clay was the only evidence for human presence. It is difficult to interpret such a deposit in isolation and it might simply have been the remains of burning associated with tree clearance.

Transect 10:

Transect 10 was positioned relatively close to the area which has been previously seen to contain mesolithic flints and provisionally thought to represent an activity area of some kind (K Faddon pers comm). Reconnaisance fieldwalking failed to locate any mesolithic flint material, but this could have been due to the fact that the ground surface was covered with crops. It is usually necessary to conduct very careful ground coverage in order to detect this type of flint work.

The transect was located parallel to the existing pipeline and measured 20m in length. It was excavated to a depth of 1... No archaeological features of any kind were found.

Transect 11:

Transect 11 was positioned parallel to the existing water pipeline. It measured 20m in length and 1.3m in depth. It failed to produce any archaeological deposits.

Summary and Recommendations

The extensive information held in the SMBR provides important evidence regarding the Roman settlement in the Ruxox Farm area and shows the potential for recovering substantial remains along the pipeline. This information is further enhanced by the limited evaluation work reported in this text.

The archaeological evaluation programme for the Ampthill to Sundon water supply had originally planned to excavate a total of 12 transects evenly placed along the planned route of the pipeline. In some cases access to land was refused and only 8 transects were excavated.

The area south of the pumping station produced large quantites of Roman material and there is no doubt that an extensive Roman

settlement and probably an inhumation and cremation cemetery is under direct threat from the planned pipeline. Large scale excavation covering the whole width of the pipeline working area is necessary to clear the area of both settlement and burial archaeology. immediately south of the A507 limited excavation might be necessary if the possible cemetery extends beyond the road.

A sample of the peat should also be taken to provide an important environmental framework for the area. The resulting pollen analysis would provide clues to the vegetational history of the river area.

The area covering transects 9 -11 contain a much lower density of archaeology and in most cases a watching brief presence is all that is necessary. However, the possible mesolithic area requires further investigation. This would in the first instance involve an intensive fieldwalking programme over a limited area followed by sample excavation.

Finds

Although no metalwork was found within the transect, the opening of archaeological trenches and the groundwork for the easement strip will undoubtedly attract metal detectorists. Some arrangement should be made with the contractor to allow only accredited assistants of the Bedfordshire County Council Archaeology Service on site.

Arrangements must also be made for finds conservation in a laboratory. Iron objects and other materials often need specialist attention in order to preserve important finds from further decay. The site is also likely to be prolific in terms of other finds, notably ceramics and animal bone. Although no structures were found these are quite likely to be in the area of the pipeline.

Provision should therefore be made regarding the ownership of finds, preferably as a gift after study to Bedford Museum.

Excavation costs

These will need to be calculated subsequent to discussion regarding preservation options, stripping of spoil heaps areas etc, but it should be noted that the pipeline runs through an area exceptionally rich in archaeology and with the added dimension of waterlogged deposits to be taken into account. Extensive excavation will therefore be costly.

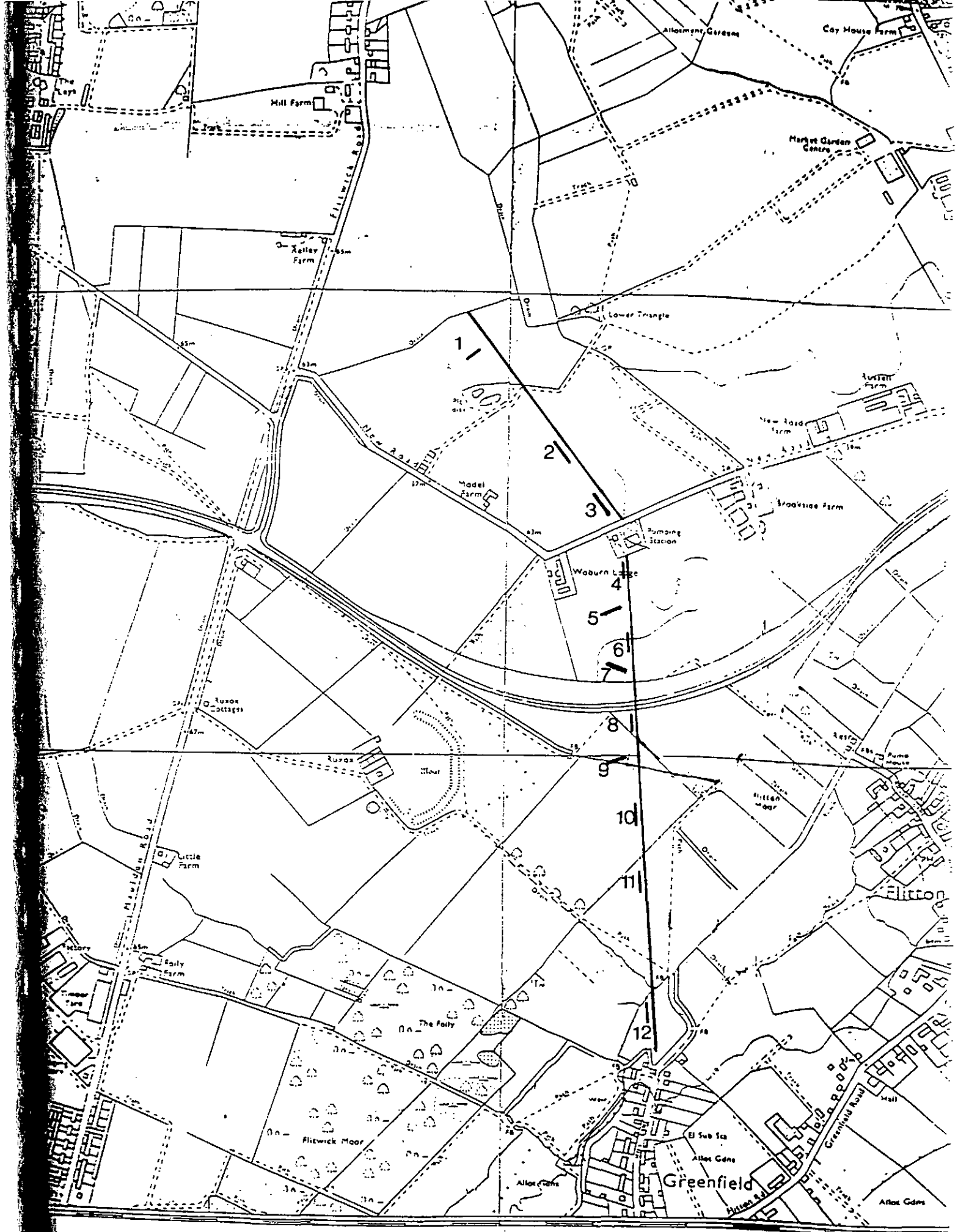
Some areas immediately outside of the pipe trench could perhaps be protected if they were covered with a terram surface for machinery to pass over. This was successfully done by Petrofina when they constructed the Hemel-Humber oil pipeline. Ground conditions for that project were much dryer which probably made

the terram alternative more practical. The archaeological record could prove a useful addition to borehole information for engineering aspects over the route.

Bibliography

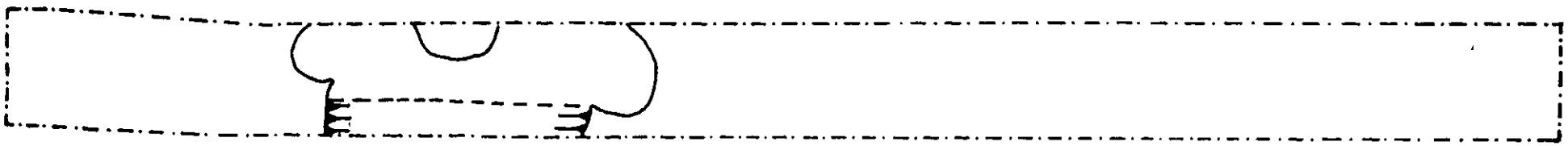
Hingley, R. 1989 **Rural Settlement in Roman Britain.** Seaby, London.

Simco, A. 1984 **Survey of Bedfordshire: The Roman Period.** Bedfordshire County Council, Bedford.



Position of Transects 1-12

Transect 4

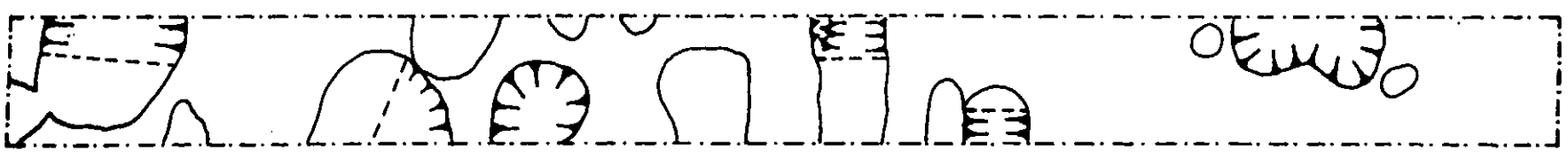


Transect 5

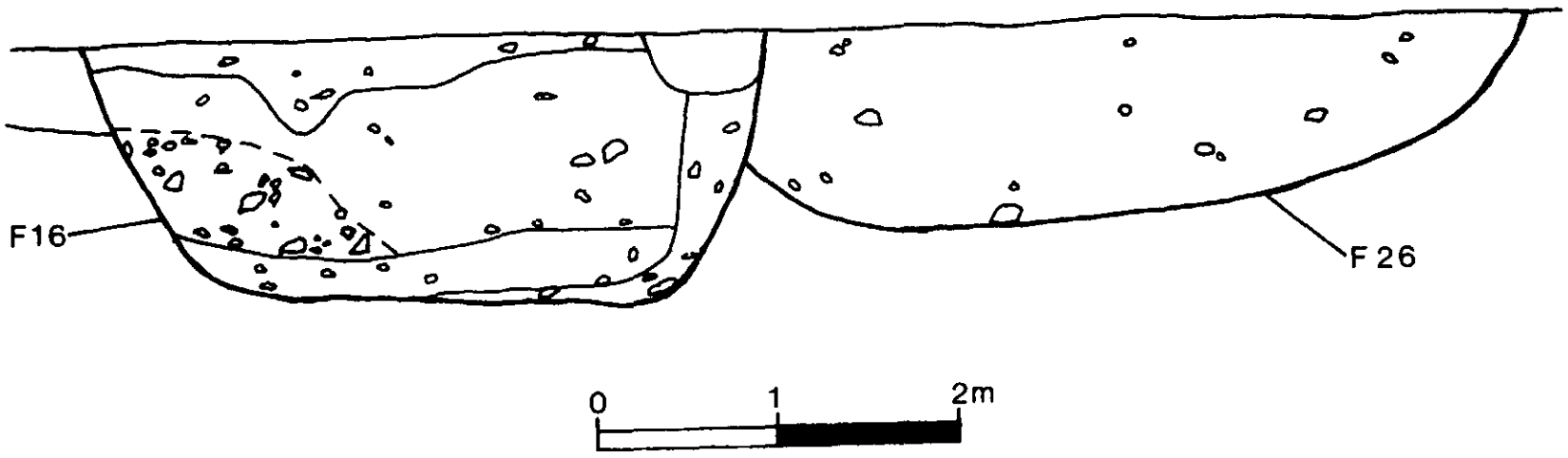
0 1 2 3 4m

Transect 6

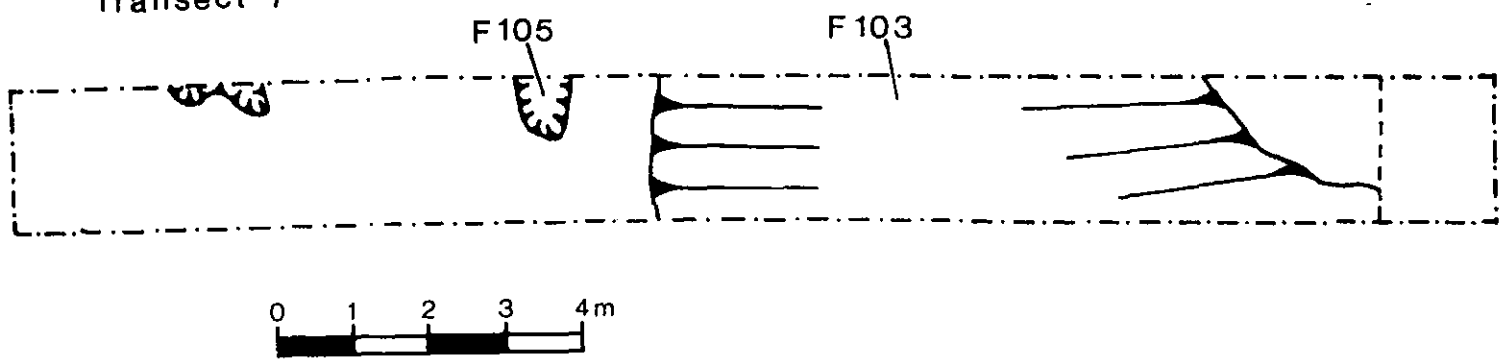
0 1 2 3 4m



West facing section of features in transect 4



Transect 7



North facing section of transect 7