

NAU ARCHAEOLOGY

Report No. 1233

**An Archaeological Evaluation at Pentney Quarry
Extension, Wormegay, Norfolk**

Test Pitting Phase

HER 48990 WGY

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BAU 1339

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Location: Pentney Quarry, Wormegay
District: West Norfolk
Grid Ref: TF 6720 1368
HER No.: 48990 WGY
Date of fieldwork: 16th to 25th October 2006

Summary

The Test Pitting Phase constituting part of an archaeological evaluation has been undertaken at Pentney Quarry, Wormegay, Norfolk. The work involved the excavation of a series of Test Pits designed to map the geomorphology of the sands and gravels and to characterise deposits overlying mineral. The results are to be used to assist in devising a programme of Trial Trenching which forms the Trial Trenching Phase of the project.

The work established that the gravels are relatively level with no distinct gravel 'islands'. It also established that the overlying deposits consist of a single uninterrupted sequence of peat growth with a maximum depth of 2.65m. Peat was recorded throughout the area of the site. No features of archaeological interest were discovered and no artefacts were recovered.

1.0 Introduction

The Test Pitting Phase constituting part of an archaeological evaluation has been undertaken on land which forms the site of a proposed extension to Pentney Quarry, Wormegay, Norfolk (Fig.1). The survey area measures 12ha. The work was commissioned by Stephen M Daw Limited on behalf of Middleton Aggregates Limited, and funded by Middleton Aggregates Limited. The full programme of work is set out in a Project Design prepared by NAU Archaeology (1339GT). The work involved systematic Test Pitting of the site and was concerned with mapping the geomorphology of the gravels in order to pinpoint higher areas which are more likely to have supported past occupation and/or industrial activity. Any higher areas are to be targeted by a programme of Trial Trenching which forms the Trial Trenching Phase of the project. A further objective is to characterise the sequence of deposits which overlie mineral.

This archaeological programme is being undertaken in order to fulfil the requirements of Norfolk Landscape Archaeology to carry out an archaeological evaluation prior to a planning decision being made by Norfolk County Council to allow the extraction of underlying Sands and Gravels. It is being carried out in accordance with a Project Design and Method Statement prepared by NAU Archaeology (Ref: 1339GT) and a Brief issued by Norfolk Landscape Archaeology (NLA Ref: Andy Hutcheson, 6 June 2006) amended by an email from Andy Hutcheson to Stephen M Daw MRICS dated 19 July 2006.

The work is ultimately designed to assist in defining the character and extent of any archaeological remains within the proposed redevelopment area, following the guidelines set out in Planning and Policy Guidance 16 — Archaeology and Planning (Department of the Environment 1990). The results of the completed evaluation will enable decisions to be made by the Local Planning Authority with regard to the treatment of any archaeological remains found.

The site archive is currently held by NAU Archaeology and on completion of the project will be deposited with Norfolk Museums and Archaeology Service, following the relevant policy on archiving standards.



Plate 1. View of site looking north

2.0 Geology and Topography

The site is located directly upon peat deposits of between 1.5m and 2m thick which lie above sands and gravels. The site lies at an elevation of 0.50m AOD and is located 4km to the southeast of King's Lynn. It occupies the valley floor immediately to the north of the canalised River Nar. The valley of the Nar is an offshoot from, rather than an intrinsic element of the main fenland basin which lies to the west. The palaeogeography of the valley floor is complex with successive deposits of marine silts and peats derived from several episodes of marine regression and transgression. Locally however, the survey area consists of what appears to be uninterrupted peat growth directly above sand and gravel.

3.0 Archaeological and Historical Background

Ancient saltworks are known from the area with the Roman saltern site at Middleton excavated as part of the fenland project (Lane and Morris eds 2001). It is possible that further salt working sites are located along the valley edge. Eroding peat on the south side of the River Nar has exposed a number of gravel islands on which occasional finds of worked flint have been made (HER 35614, 35615, 35616).

On the higher ground to the north of the proposed quarry extension lies the medieval monastic establishment of Blackborough Priory (NHER 3430). The priory was founded in about 1150 and dissolved in 1538. The probable south wall of the church and the gable end of a substantial medieval building are still standing and dense spreads of building materials mark the sites of other buildings attached to the

priory. The earthworks of five medieval fishponds have also been recorded on the site. Excavations in the nineteenth century revealed a number of burials, medieval pottery and assorted building material.

A short distance from the eastern boundary of the evaluation area a human skull was found at a depth of around 1m (NHER 29912) within exposed peat deposits during quarrying operations. The skull may be an isolated find of considerable antiquity although its precise age remains uncertain. An Iron Age or Romano British bronze cauldron (NHER 3445) was recovered during ploughing in the field bordering the east side of the site.

The sites listed above indicate that there is a good potential for recovering archaeological artefacts and evidence for features or deposits within the survey area.

4.0 Methodology

The Project Design stated that a gridded system of 84 test pits located at 40m intervals should be laid out across the site (Fig. 2). Each test pit measured 2m x 3m in area. In the event 64 Test Pits were excavated owing to the obstruction of part of the site by a standing maize crop which served as pheasant cover and health and safety considerations which prevented excavation directly beneath overhead power cables. In addition, the field boundary which marks the east side of the site is situated 40m further west than marked on current maps. This discovery reduced the area available for survey and necessitated the excavation of fewer Test Pits. The movement of the field boundary is due to an episode of flooding in the recent past which caused collapse of the sides of open quarry pits which lie to the east of the site.

Machine excavation of the Test Pits was carried out with a hydraulic 360° excavator using a toothless ditching bucket under constant archaeological supervision.

Spoil, exposed surfaces and features were scanned with a metal detector. All metal-detected and hand-collected finds, other than those which were obviously modern, were retained for inspection.

All deposits were recorded using NAU Archaeology *pro forma* sheets. Trench locations, plans and sections were recorded at appropriate scales and colour and monochrome photographs were taken of relevant deposits.

The considerable depth of the Test Pits (between 1.5 and 2.5m) and the height of the water table (0.60-0.80m below ground surface level) constituted an obvious risk to health and safety. For this reason no staff members entered the Test Pits at any time. Therefore, all recording was done from ground level. This meant that conditions for recording sections was not ideal which was further compounded by water rapidly filling the Test Pits after machine excavation. Hence lower parts of the Pits were only visible for around 5 minutes.

A level was transferred from an Ordnance Survey benchmark of 2.37m located on a bridge crossing an open drainage ditch to the south of the survey area.

No environmental samples were taken at this stage of the project.

5.0 Results

The programme of test pitting has enabled an understanding to be gained of the general topography of the sands and gravel. It has also provided an insight into the nature and depth of the overlying deposits.

The gravels are generally level with a mean height Below Ordnance Datum (BOD) of 1.36m (Figs 3, 4 & 5). The deposits above the gravel comprise a continuous sequence of uninterrupted peat growth which was present in all Test Pits (plate 2). The gravel surface undulates slightly over the survey area with the lowest point at 2.18 BOD and the highest at 0.84 BOD. The highest area of gravel was located in the southwest quadrant in the vicinity of Pits 37, 38, 43 and 44. Here the gravel measured around 0.90m BOD. Another high point with a similar height relative to OD but smaller in area was recorded in pits 72 and 73 in the northeast part of the site.

The lowest area of gravel was recorded to the north of the site where pits 65, 74, 75, 76, 77, and 79 had depths ranging between 1.73m BOD to 2.18m BOD. This formed a broad lower lying area measuring approximately 140m x 100m. The site is also punctuated in places by smaller hollows which are considerably deeper than the surrounding gravel. These hollows are located in the vicinity of Pits 22, 39, 62, 63 and 32.

The present ground surface, which in effect forms the top of the peat, is generally level across the site although there is a very slight rise of around 0.20m toward the north of the site. However, the undulations of the underlying gravel surface meant that the peat deposits varied in depth across the site. Peat depths ranged between 1.30m and 2.65m. The shallowest areas of peat correspond to the higher points of the gravel surface discussed above. Hence peat deposits in the vicinity of pits 37, 38, 23 and 24 measured just 1.30m – 1.50m whilst similar depths were recorded in Pits 72 and 73. Deeper peat deposits up to 2.65m were recorded in the broad hollow formed in the gravel surface to the north of the site as well as in several smaller areas. In general peat deposits averaged around 1.70m in depth across the remainder of the site.

The main variation noted within the peat sequence was a colour difference between the lower and upper portions. The upper 0.60m – 0.80m was black in colour whilst the lower portion was a mid-brown or tan. This difference reflects the degree of oxidisation which has taken place. The lower parts survive in anaerobic conditions whilst the upper horizons have been subject to a degree of oxidisation. The relative quantities of surviving fibrous and woody material also varied in depth. Whilst the lower parts of the peat contained much branch wood and occasional tree trunks, the upper black parts contained no fibrous or woody material. Oxidisation of the upper portion has resulted in complete decomposition of woody material. Some stratification within the peat reflecting changes in environmental conditions were noted (Fig. 3). Horizons of brushwood indicative of reed swamp interchanged with horizons of branch wood reflecting periods when the environment was dry enough to support trees.



Plate 2. View of peat in Test Pit 66.



Plate 3. View of brushwood and tree branches in Test pit 72

6.0 Conclusions

The programme of Test Pitting has succeeded in establishing the depth at which mineral deposits occur across the site and the nature of the overlying deposits. The data will provide Norfolk Landscape Archaeology with the information necessary in devising a strategy for the Trial Trenching Phase of the project.

No distinct gravel 'islands' are apparent although marginally higher areas of gravel and sands are detectable. These high points may have been dryer areas during the earlier stages of peat growth but it is unlikely that they would have remained above the surrounding peat for a significant length of time before they became subsumed by peat. The small areas encompassed by the 'islands' may not have been large enough to attract occupation or industrial activity although it is feasible that they may have afforded dry platforms on which hunter gatherers could have established temporary camps whilst exploiting fen type resources.

No features of archaeological interest were recorded during the course of the work and no artefacts were recovered.

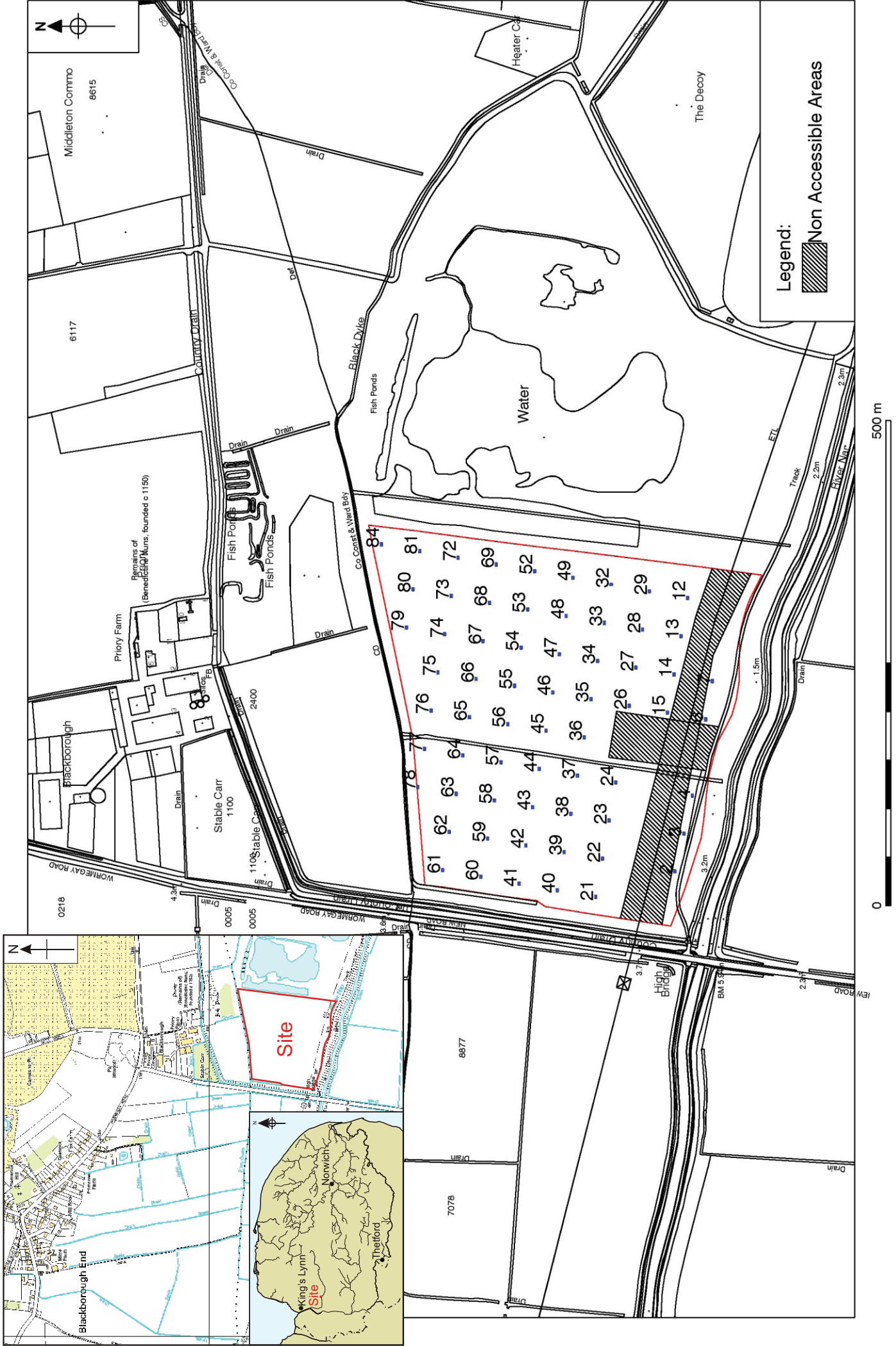


Figure 1. Site location. Scale 1:5000

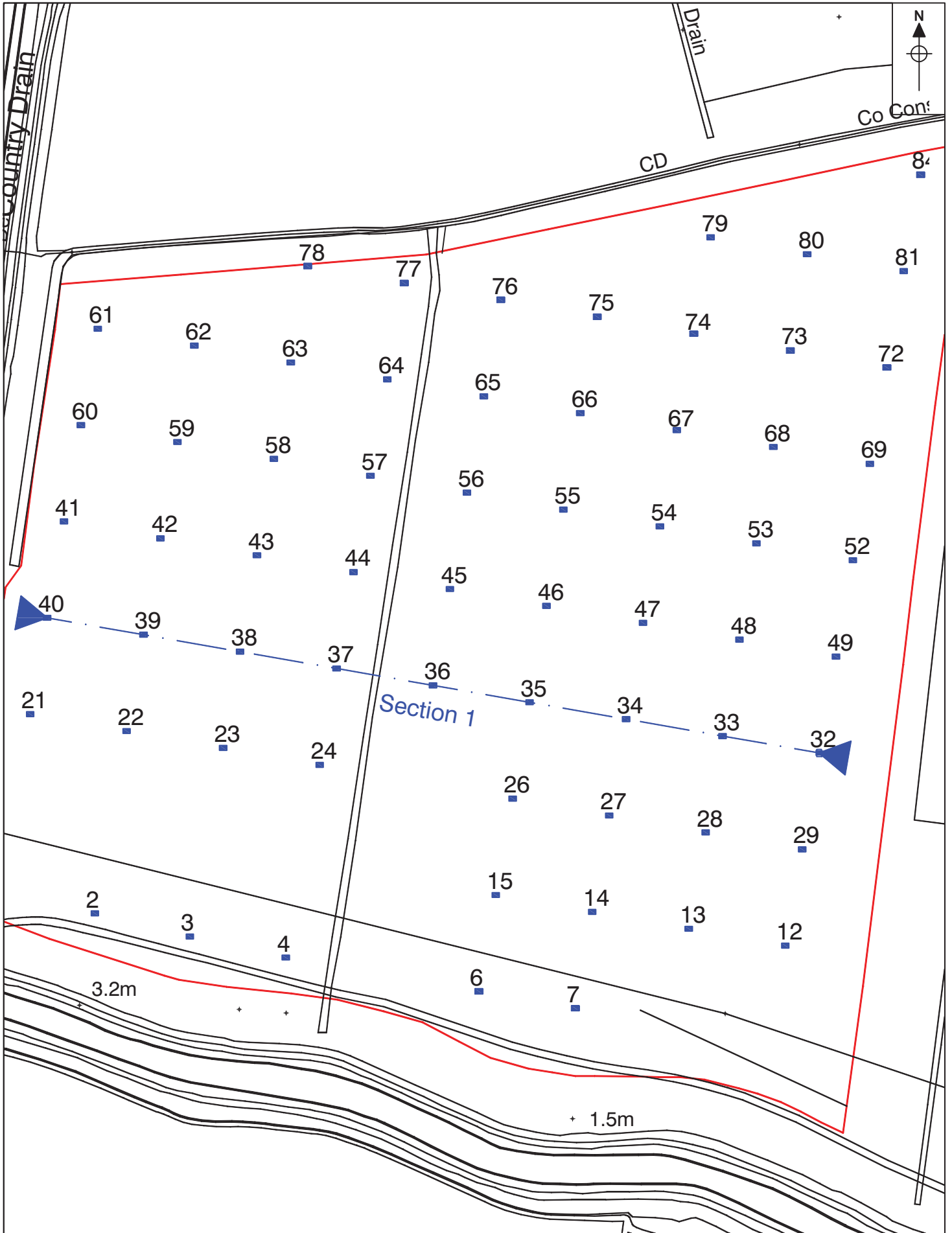


Figure 2. Test pit and Section location. Scale 1:2000

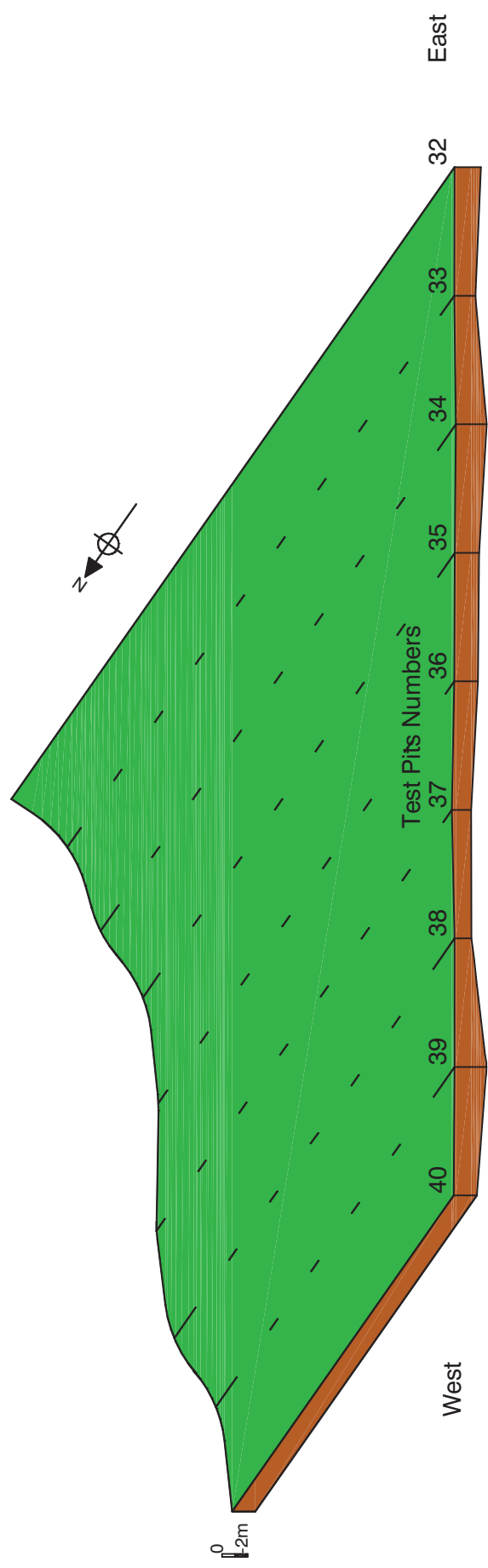


Figure 3. Section across the site. Horizontal scale 1:2000, vertical scale 1:500

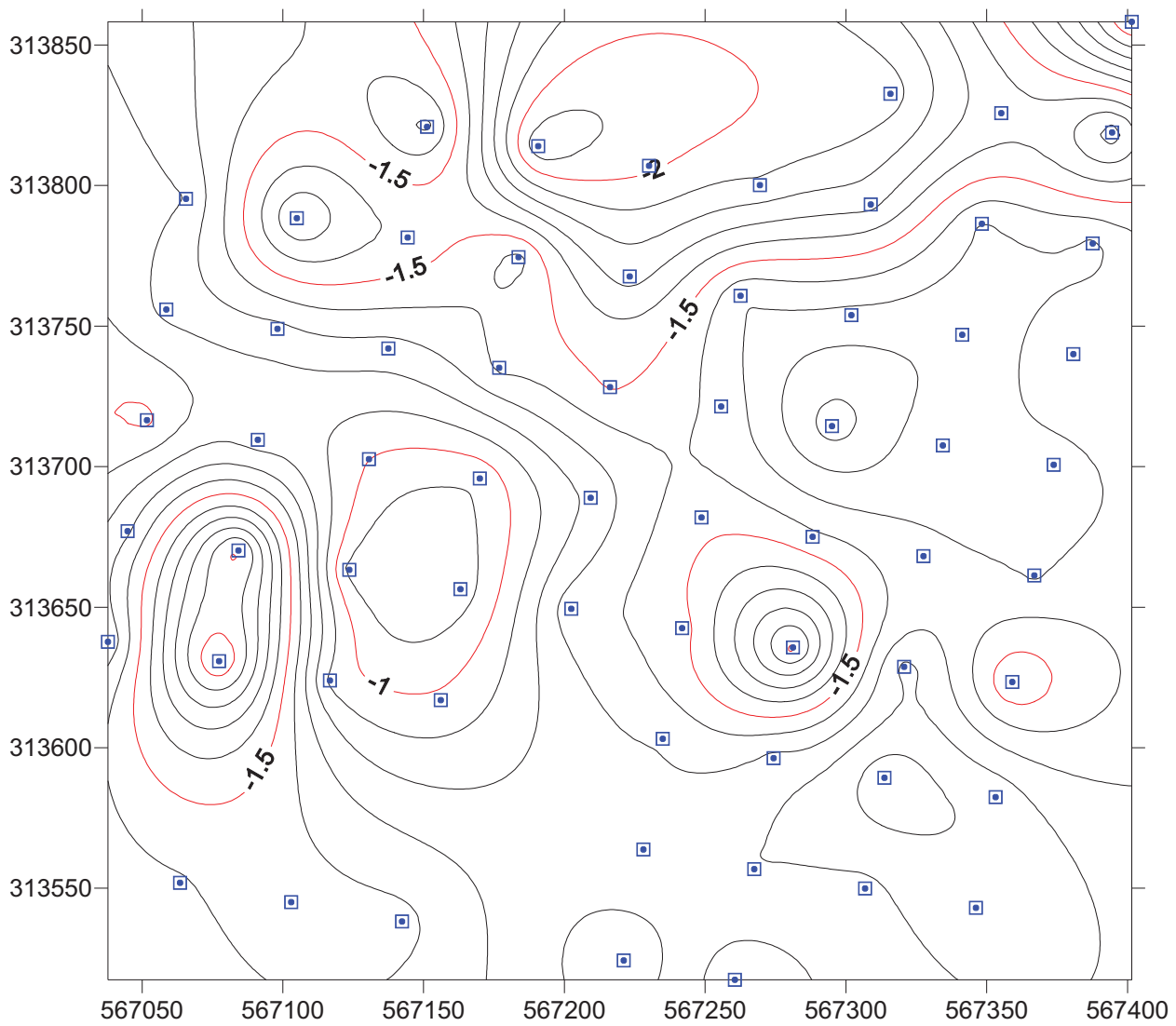


Figure 4. Contour map showing surface of sands and gravels. Scale 1:250

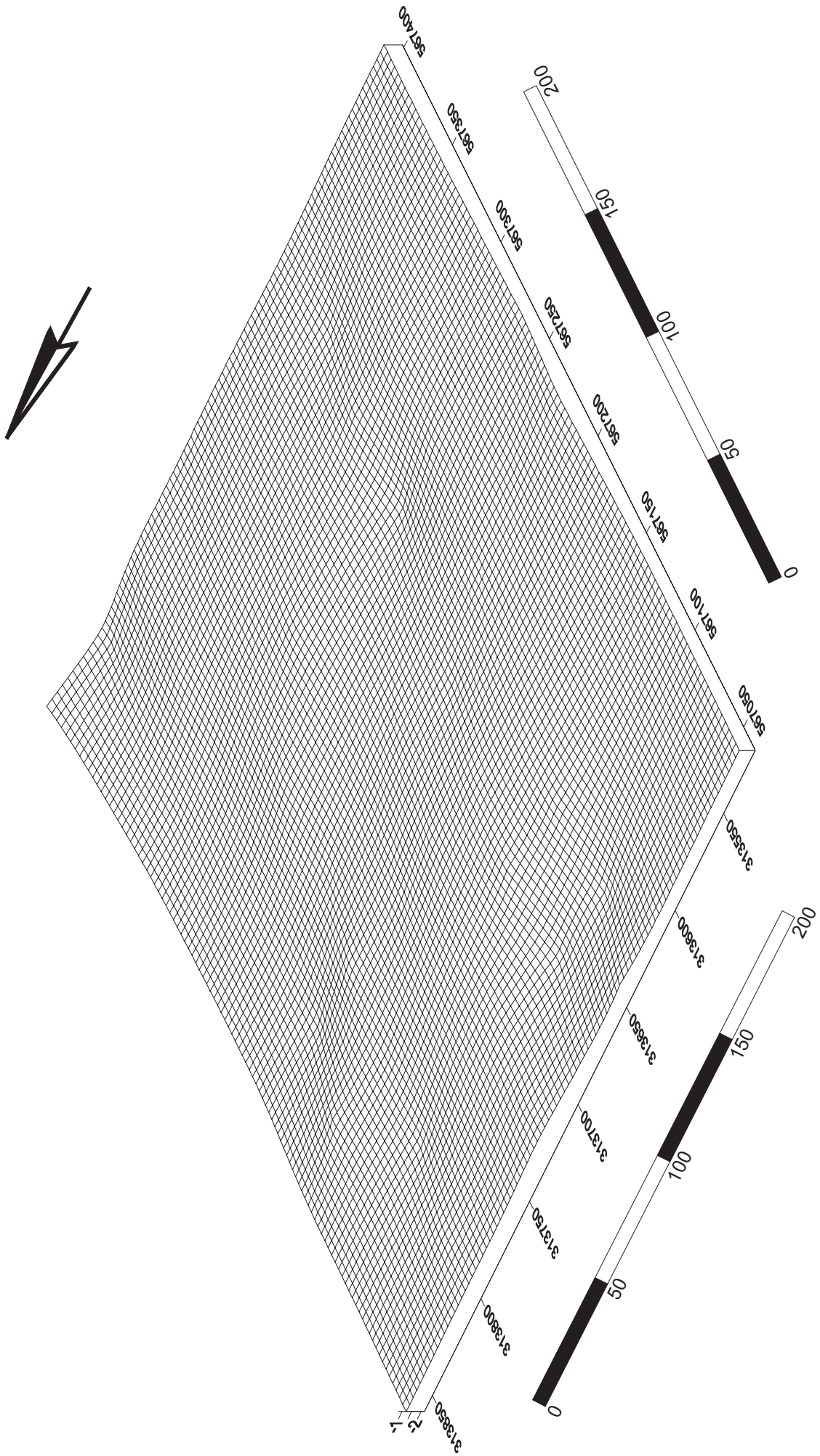


Figure 5. Wireframe showing surface of sands and gravels. X and Y scale 1:75

