

**SUMMARY REPORT ON ARCHAEOLOGICAL EVALUATION OF
CROPMARK FEATURES AT GLEADTHORPE FARM, WARSOP,
NOTTS.**

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Summary report on archaeological evaluation of cropmark features at Gleadthorpe Farm, Warsop, Notts.

Summary

Neither geophysics nor fieldwalking proved capable of identifying settlement areas or buried features.

The location, alignment, form and contents of most of the features within the reservoir area which were identified in the aerial photograph plot have been established by excavation. Features showed quite clearly after machine stripping, and at all points lay immediately beneath the topsoil. Feature depths were about 30-50cm below subsoil top. Ditch **d** extended further south than the extent suggested by the aerial photograph showing that further features not seen in the aerial photographs could exist within the field.

Ditch **b/d** and the later re-cut of ditch **c** have been securely dated to the Romano-British period by associated finds. The quantity of finds in ditch **c** suggests that a settlement focus exists in the vicinity of areas 08-10, although the lesser quantity at the south end of **d** suggests that it is mainly concentrated north of the 33kv power line. Remaining ditches within the field produced no dateable funds but are probably also to be attributed to the Roman period on the basis of similarity of form, and proximity to other systems of the 'Brickwork-plan' field system immediately due west (as suggested in the Desk-top Assessment).

Trench 07 indicated that disturbance from mining subsidence remediation extends to a depth of at least 70cm below subsoil top in the northern field, at least at that point, although it has not been possible to establish the extent of this disturbance from documentation.

Excavation in trench 14 revealed no deposits of environmental potential and showed that the flood-plain of the river lies south of the current channel at this point. A thin deposit of possible colluvium was exposed, but was undated. A medieval tile fragment from topsoil in this trench reflects the proximity to the supposed site of the medieval grange beneath the existing farm buildings but no features were recorded..

Introduction

This evaluation was commissioned by Davis Blackburn on behalf of their client, ADAS, to a design agreed with the County Archaeologist on 4th June 1997. The archaeological background was set out in a Desk-top Assessment, completed by TPAT on 25th April 1997. Fieldwork was carried out in three stages, during June and July 1997 (fig. 1).

- 1 an assessment of the potential for magnetic geophysical survey on the site
- 2 all excavation works that could be carried out without damage to the experimental barley crop in the main field (01-05)
- 3 remaining excavation (06-13) following the removal of the barley.

Results

Aerial photograph plot

In the desk-top assessment, a plot of cropmark features provided by the Royal Commission on Historic Monuments (England) was used. Checking of this revealed major dimensional errors (100m+) in plotting and the photograph was replotted by TPAT. The RCHME interpretation of content seemed generally acceptable, with the exception of ditch **e/l**, represented on the photograph by a hazy mark and whose existence seemed questionable. Christine Cox, who did the original plotting for RCHME, was also contacted and she confirmed that air-photo NMR no. SK5969-15 and further vertical photos held by Notts County Council were consulted for the plot; TPAT have inspected all these photographs and verified that all features shown in the RCHME plot, are derived from SK5969-15. Excavation results indicated errors of up to 7m in the TPAT plot, which has itself been corrected to the version given in fig. 1.

Geophysical Survey Assessment

Oxford Archaeotechnics provided an assessment of the effectiveness of magnetic survey techniques on

the site, with the following conclusions.

An exposed section in a cable trench adjacent to area 05 was sampled at 20cm vertical intervals showing that the topsoil has a significantly greater magnetic reading than the subsoil. However, little lateral variation was found in the surface magnetic susceptibility of the topsoil throughout the site.

Three areas were surveyed by gradiometer, selected to overlie the projected courses of ditches seen in aerial photographs (dashed areas 1-3 in figure 1). The magnetometry failed to locate these features, although agricultural striations were revealed; subsequent excavation has verified the general accuracy of the projections, sufficient to verify that the features pass through the areas surveyed.

Magnetic anomalies at specific points were found in areas 2 and 3; one of these in area 3 was augered to establish the nature of the underlying fill/subsoil, and a charcoal fragment was recovered at a depth of about 1.0m. Subsequent excavation of a small trench (06 on figure 1) 1.5x0.7m across the edge of this feature identified a firm light-yellow-brown sand within a deposit of loose red sand subsoil. Similar sediments occur extensively in other excavation areas, the red sand forming a general deposit containing pockets of the lighter sand and other similar clean pebbly sediments, apparently geomorphological features intruding into the general pebbly sand subsoil. Towards the base of the excavation (1.0m below surface) a pale grey sand deposit containing charcoal flecks occurred in an irregular band: apparently an animal burrow. No fills resembling the certain feature fills later recognised in excavation were seen. There was thus no clear evidence of the presence of an archaeological feature at the point of the anomaly, and the enhanced magnetic reading obtained could reflect the presence of a geomorphological feature.

In conclusion, no certain buried archaeological features or significant topsoil variations in magnetic susceptibility across the area were located in the assessment. However, there is still possibility of locating features if they contain substantial amounts of topsoil or anthropogenically modified material (for example if derived from occupation or industrial activities).

Excavation of cropmark features

With the agreement of the County Archaeologist, trench locations for 01-05 were altered from the original proposals in the project design, in order to avoid disturbance to the experimental crops present in the field whilst achieving the same results (Fig. 1). More trenches were excavated than had originally been planned, as the magnetometry had failed to provide locations of buried archaeological features, and the trench locations were necessarily based on the rectified oblique aerial photograph with the inevitable inaccuracies which that entailed.

Throughout, the ditches were characteristically filled with mid-red-brown or mid-brown silty sand and pebbles, visually similar to the surrounding subsoil, U-shaped or curved-V-shaped in profile with no clear re-cuts, and cut from the subsoil top to a depth of about 30-50cm below the subsoil top. They showed quite clearly without cleaning, after machine stripping. Pebble concentrations towards the centres of the fills of some were noted and suggest natural silting (eroded pebbles rolling to the centre of the fill). Topsoil thickness was generally about 40cm. The ditches have produced no finds other than occasional fire-cracked pebbles (except b/c/d below).

Trackway ditches g, h/m (trench 05, 13)

One length of ditch defining the north side of the trackway (ditches g & h/m) was recorded in phase I in trench 05; a further trench (13) spaced further east has located both ditches.

Boundary ditch f (trench 05)

The location and alignment of ditch f was established in this trench.

Boundary ditch a (trenches 01-04, 11, 12)

The location and character of this ditch in the west side of the field was established in the first phase of fieldwork (trenches 01-04). A further check in the centre and east side of the field was provided by trenches 11 and 12, while 11 consisted of a 20m long strip along its length to identify its intersection with supposed ditch e/l. No trace of ditch e/l was found, despite the clearance of 10m to either side of its projected course, and it may be concluded that it was a mistaken identification by RCHME. A pair of parallel linear features was however recorded orientated roughly east/west, the more southerly

apparently cutting ditch a. These ditches are perpendicular with the hedge and do not show as cropmarks suggesting that they may be of recent agricultural origin. 04 contained an intersection between ditch a and another feature, possibly a continuation of ditch f, though the extent of excavation could not be sufficiently increased to verify this at the time due to the presence of the experimental barley crop.

Boundary ditches b/c/d (trenches 07-10)

The Y-shaped arrangement of ditches **b/c/d** seen as cropmarks has been located in the trenches at the northern limit of the field. Ditch c has proved to be two ditches diverging to the south, the more northerly cutting the more southerly. Ditches **b/d** appear to be a single continuous ditch; the intersection between c and **b/d** has been excavated but no clear relationship between them could be identified. In contrast to all the other excavated and/or exposed ditches, ditch c produced 16 sherds of Roman pot and a bone fragment from cleaning over its surface, and a further 24 sherds and eight fire-cracked pebbles (but no bone) from its fill, suggesting occupation in the vicinity. The lack of bone from the fill suggests that the bone fragment from the surface may have been of recent deposition. Ditch d was located in trench 10 cut from the base of the ploughsoil indicating that it continues south beyond the extent indicated by the cropmark plot. This area is darker on the photo and clearly not conducive to cropmark formation (at least at the time when the source photo was taken) although ditch a just shows within it. The exposed subsoil is more silty than elsewhere confirming that the termination of the cropmark is due to subsoil change rather than a buildup of colluvium at the base of the slope, as had previously been suspected. Two sherds of Roman pot came from its fill. Trench 07 investigated the potential continuation of ditch b into the riverside field to the north, but disturbed ground including tin cans, etc., was encountered to at least 70cm below the depth of the topsoil base projected from the main field to the south. Peter Blundell, farm manager, informed us that this area has been subject to mining subsidence remediation works which explains the drop in ground level along the north edge of the field (erroneously interpreted as a lynchet in the desk-top assessment).

Excavation adjacent to the pumping station

Trench 14 comprised a total length of 13m excavated to a depth of 1.2m by machine adjacent to the site of the proposed new pumping station, immediately adjacent to the south-west side of the existing one. A series of service trenches occupied the area beyond the north-west end of the trench, and a further service forced a split of the trench into two parts roughly at the middle. In both trenches a sequence of c.30cm of topsoil over 10cm of mid-brown loamy sand (possibly of colluvial origin to judge from its character) over pebbly sand (a possible periglacial feature) over sand and pebbles (Sherwood Sandstones). A substantial modern intrusion (containing plastic twine) was identified at the riverbank end of the trench but as the base of the trench coincided with the water table (1.2m below surface) further augering was waterlogged and failed to verify conclusively the total depth of this feature. The intrusion may well result from the insertion of the existing water pipes feeding the pumping station. No deposits of environmental potential were revealed. This latter result supports the impression from the lie of the land that the floodplain of the river Meden lies entirely to the north of the current river channel at this point along its length.

No features were recorded in this trench, but from the topsoil came a sherd of tile with green glaze on one surface indicating either a ridge or floor tile of medieval date. Other 18th/19th century potsherds and undated tile fragments came from the same deposit, and the medieval sherd is doubtless in a secondary context, but it reflects the proximity to the medieval grange which probably lies under the current farm buildings 40m to the north (Desk-top Assessment, p. 5).

Fieldwalking

No ground within the reservoir area was in a suitable condition for fieldwalking, but that between the more northerly experimental crop and the north edge of the main field was well weathered, although rutted in places, and accordingly was fieldwalked. This was carried out on 10m transects, with the aim of recovering artefacts of medieval or earlier date and thus possibly detecting the extent of the assumed settlement focus represented by the pottery concentration in ditch c. No finds were recovered, and indeed very few sherds even of post-medieval date were observed.

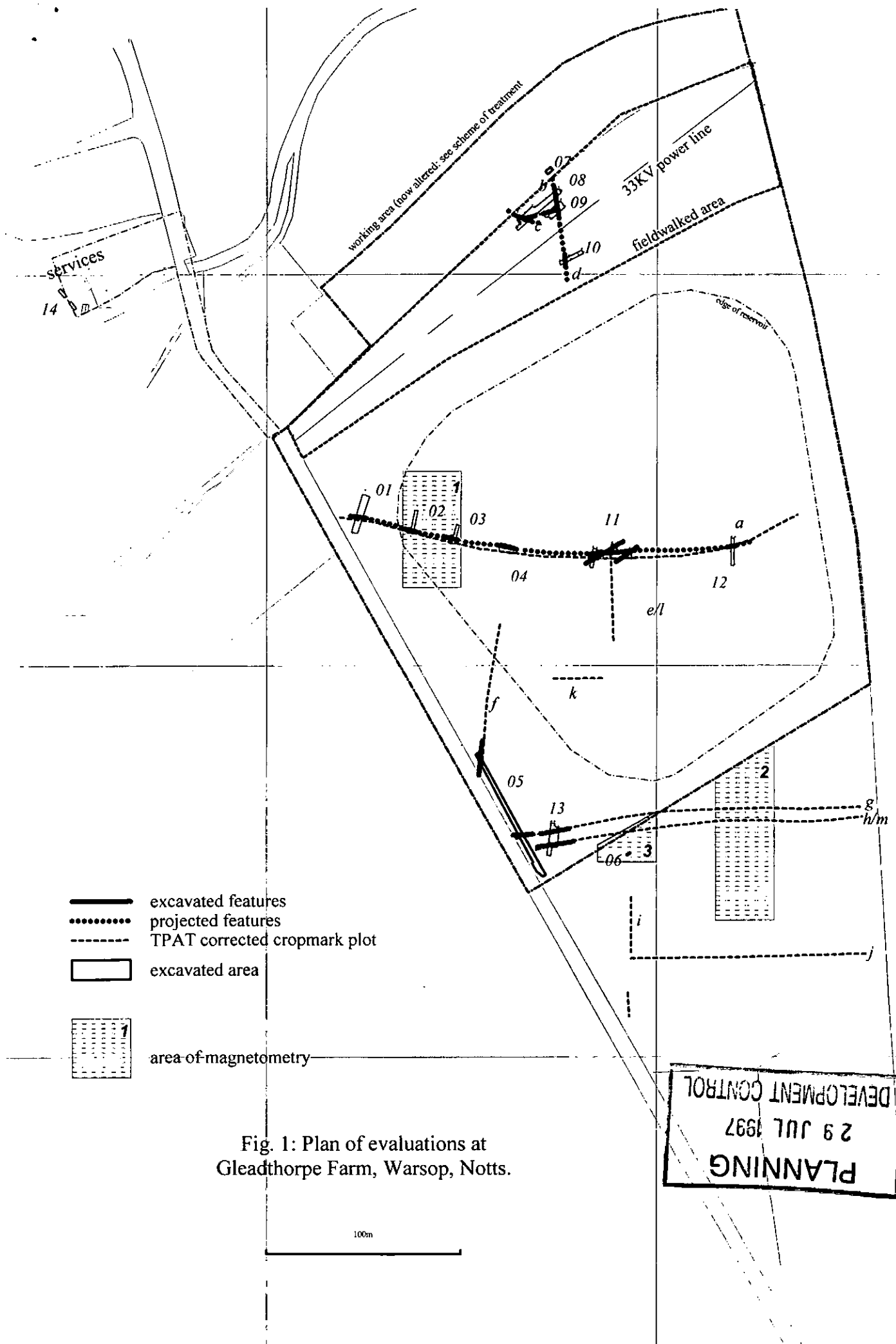


Fig. 1: Plan of evaluations at Gleadthorpe Farm, Warsop, Notts.