Moor Pond Wood – Nottinghamshire Community Archaeology and Friends of Moor Pond Wood Project
Test Pitting 2005 – 2006

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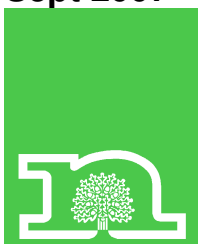

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1. Introduction

This report describes the work undertaken by archaeologists from Nottinghamshire Community Archaeology working with volunteers from local communities to clarify some specific aspects of the creation of the water management system at Moor Pond Wood, Papplewick.

2. Background to this phase of work.

The Moor Pond Wood Project is focussed on land containing an extensive series of earthworks in the parish of Papplewick, Nottinghamshire. This is an linear site lying between NGR co-ordinates SK 544 513 and SK 550 504. The earthworks relate to an extensive water management system created by the Robinson family to power a series of mills along the course of the River Leen. This phase of work is separate from, but linked to previous and ongoing investigations undertaken by Richard Sheppard of Trent and Peak Archaeological Unit. Previous reports from Trent and Peak covered the extent of the earthworks, while there is also a desk based assessment, and aspects of previous excavations undertaken in different parts of the site (Sheppard 2001, 2002, 2003, 2004, 2005, inter alia). For detailed background to and development of the project the reader is directed to these reports.

3. Objectives

Casual observation of patches of erosion on the banks of the earthworks in Moor Pond Wood indicates that the bank material where exposed through erosion is generally of a sandy composition with frequent pebbles. However, observation of the material exposed in the root plates of fallen trees within areas that had been ponds shows the presence of mudstones. Mudstones are generally impermeable, and their impermeability can be improved by puddling. Their water retentiveness makes them suitable for pond linings, unlike the sands and gravels that are visible in the earthwork banks. The purpose of this part of the archaeological investigation was to start to assess how the earthworks were created. Were the leats and ponds created by digging down to and into the natural mudstones, with the banks created by piling up the excavated material, or mixing the excavated mudstone with the locally occurring but freely draining silts, sands and gravels, or was the observed mudstone within the ponds an imported lining? These were the questions it was hoped could be answered through a programme of test pitting along the main leat and in a selection of areas beyond the main leat.

4. Geology

The site is generally aligned along the boundary of two different geologies. The boundary runs north south through the northern part of Dam Banks. To the east of this line there are the mudstones and sandstones of the Edlington formation and to the west the bedrock is lower magnesian limestone of the Cadeby formation. Over the bedrocks lie the Leen sands and gravels, with a strip of alluvial silts, sands, clays and gravels along the course of the river.

5. Methodology

Twelve test pits were dug between December 2005 and April 2006. The work was carried out by Nottinghamshire Community Archaeology volunteers supervised by archaeologists from Nottinghamshire County Council. Each pit was dug by two members of the volunteer team, supervised by an NCC archaeologist. The first three pits (100, 200, 300) were dug on 6th December 2005. Pits 400 to 700 were dug on 7th March 2006, and pits 800 to 1200 on 28th March. The weather on the two latter dates was poor, with showers, and rain the previous night on each occasion; while this was certainly of relevance to the volunteers at the time, it also has an unexpected relevance for the outcome of this phase of work.

Each test pit was 1m^2 and was excavated to the top of the mudstone. Each different soil layer encountered was individually recorded on context sheets, one section of each pit was drawn (with the exceptions of 500 and 800, as these flooded immediately after excavation), the pits were photographed and samples of selected soil layers were retained. These latter proved invaluable in the post excavation analysis of the site. In pits 200, 400, 600, 700, 900 and 1100 sondages (a small area of additional excavation) investigated the depth of mudstone, but no pit exceeded a metre in depth.

The locations of the test pits are shown on Fig 2. Pits 100 to 500, 800, 1100, and 1200 were dug in the main leat to compare and contrast deposits encountered.
Pits 600, 700 and 900 were dug in the area known as Dam Banks, downslope from the main leat.

Pit 1000 was dug in a ditch that runs along the hedgeline in the west of the area. This was possibly a drainage channel.

The archive consists of context sheets, photographs, samples and drawings, and is currently being held by Nottinghamshire Community Archaeologists at Rufford Abbey.

6. Discussion of the test pits along the leats.

The results of this work probably raise more questions than they answer. Firstly, mudstone was encountered at the base of each test pit, which was as expected. Where sondages were excavated these confirmed that the mudstone continued up to the limit of the depth of excavation. It can be extremely difficult to identify redeposited mudstone from undisturbed natural, a point which will be returned to later. In most of the test pits there were only three contexts, the topsoil, the mudstone and a middle layer, which was generally between 10 and 30cm in depth. These middle contexts were of particular interest. Each had a clay fraction, but this was mixed to a greater or lesser extent with sands and silts. As has been noted, the weather was poor at the time the testpitting was undertaken. Indeed, pits 5 and 8 were not

recorded because they filled immediately with water. At the time of excavation the middle contexts generally looked very similar, seemed to be of a similar colour, and seemingly varying most in terms of their sand and silt fraction. Even when the samples that were taken from these deposits dried out they looked relatively similar, and it was only after these were rewetted that the very real differences of colour and texture were revealed. The two test pits that flooded, 500 and 800, were both amongst the sandiest of all the deposits.

It would seem that the damp conditions under which the test pitting was undertaken had actually limited the extent to which the variability of the deposits could be determined. This is not to imply that there may have been more discrete contexts present than were actually recorded. Rather, it is likely that these deposits result from a specific set of processes.

As a result of the narrowness of the leats, the test pits dug in these were never far from the banks on either side. The silts, sands and gravels that are the superficial geology here would tend not to have characteristics conducive to remaining as banks, unless bound with a suitable material such as clay or a mudstone. It is likely that the deposits overlying the mudstone reflect episodes of the banks slumping, and the deposits may have formed relatively rapidly after the bank was thrown up. This is said on the basis of the fact that at no point in the test pits were deposits typical of water courses visible interleaved within the overall context. The variability of that slumped material reflects the variability of the superficial geology, to which has been added varying amounts of mudstone.

Deposits that clearly showed signs of resulting from sediments deposited by water action were few. There was no apparent sign of water sorted stones, or organic deposits. Neither was there a single trace of swan mussel shells. This may indicate a number of possibilities;

- The leats were not used to store water, but were used for fast flowing water, or
- The leats were cleared out regularly, or
- Both of the above.

The greatest diversity in contexts along the leats was seen in T1100, but this is likely to reflect modifications to the system, as T1100 lies at the junction of a number of unusual earthworks the purpose of which is unclear but would warrant further investigation.

It can be extremely difficult to identify redeposited mudstone, particularly within the limits of a test pit. However, in T1100, T1200, and T900 and T1000, further downslope in Dam Banks, river pebbles were visible within the mudstone context, giving a high likelihood that in this area at least, the material was re-deposited.

7. Discussion of the test pits T600, T700, T900 and T1000.

These test pits were all away from the course of the main leat, and were as one might expect produced very different results. Here the upper context was much thinner than it had been in the leats, possibly reflecting the fact that the more open area traps less leaf litter. The layer below this was variable between the pits, but each pit showed deposits indicating the presence of water. T1000 differed from all the test pits, with the middle context that appears to have been cut into possibly relatively recently (years rather than centuries). Mudstone was visible at the base of each pit, although as has already been discussed, in T900 and T1000 the material here seems likely to have been re-deposited. In none of the test pits were swan mussel shells present, which may indicate that the area was used only for temporary or short term water storage.

8. Conclusions

Mercia mudstones were encountered in the base of each test pit and in some cases there was evidence to suggest the material had been redeposited. The lack of evidence for water deposited material, swan mussel shells, indeed the overall lack of molluscan material raises the unexpected possibility that the leats and ponds were regularly emptied and cleaned out. The specific questions raised at the outset of the project have not been completely answered, but the project has been highly successful in introducing new questions about the actual management of the system when in use.

9. Acknowledgements

The fieldwork was lead by NCC staff who included; Emily Gillott, Ali Bush, James Wright, and Cathy Block. Our thanks go to the volunteers who took part who included Michael Harrison, Andy, Gaunt, Andy Cocker, Tony Platt, Sandra Cutts, Harry Cutts, Geraldine Chalk, Alan Webb, and David Connah. Apologies to any others whom we have not included here. Our thanks also go to all of the Friends of Moor Pond Wood for their continued support.

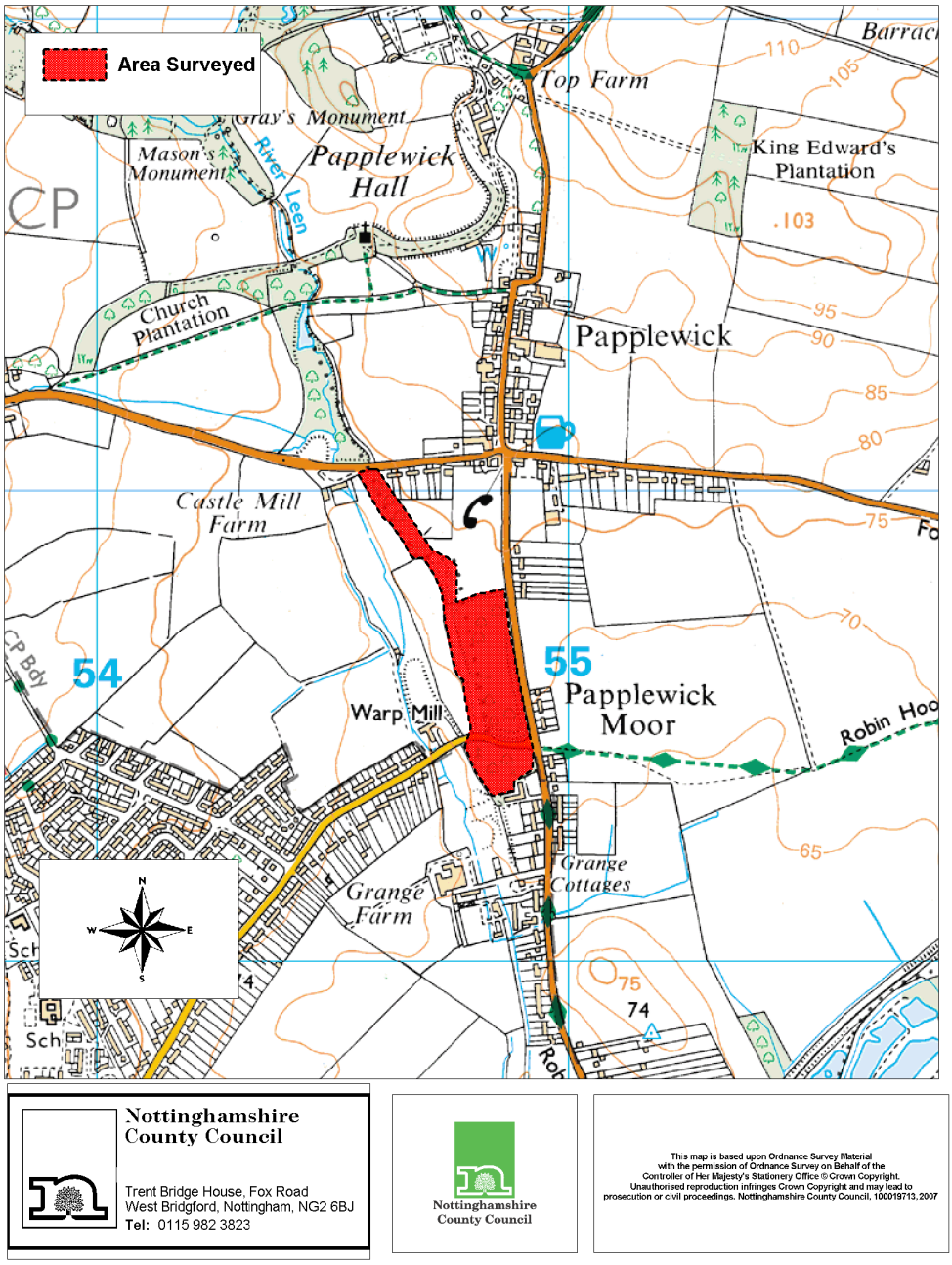


Fig. 1 Site Location

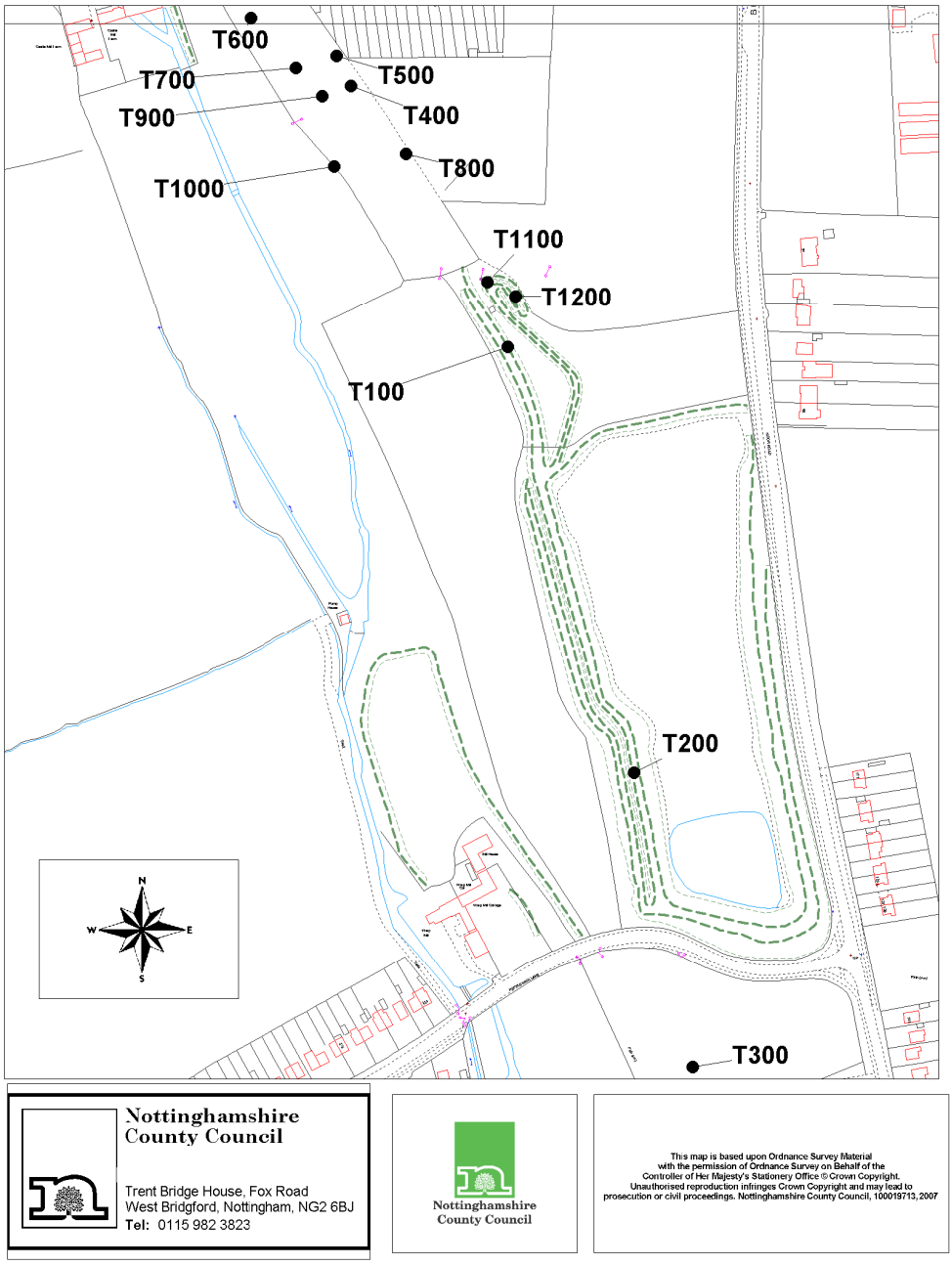
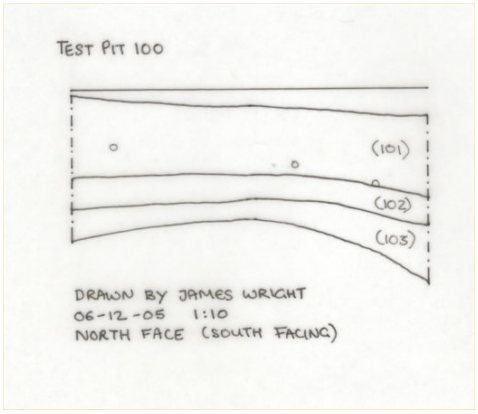
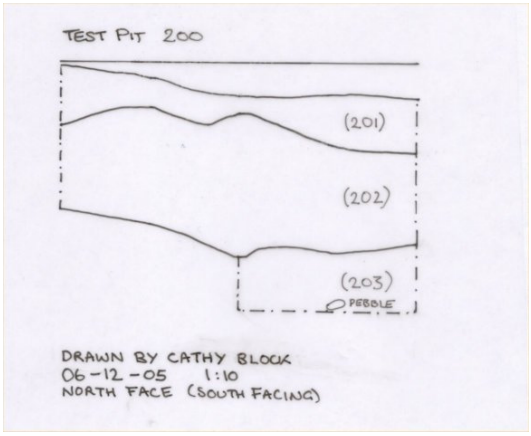


Fig 2. Location of Test Pits





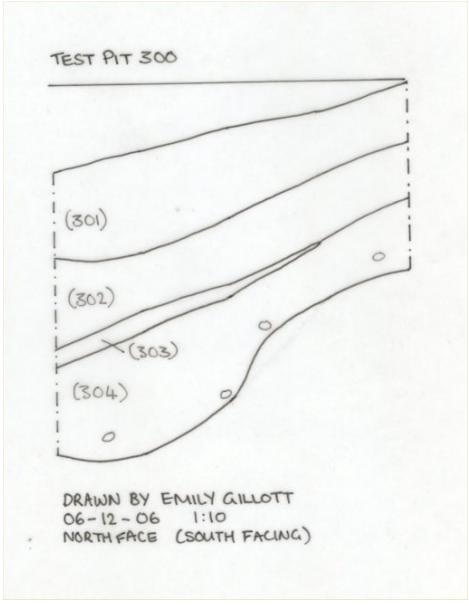
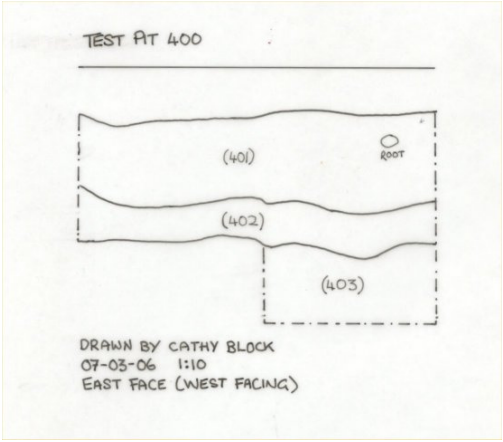
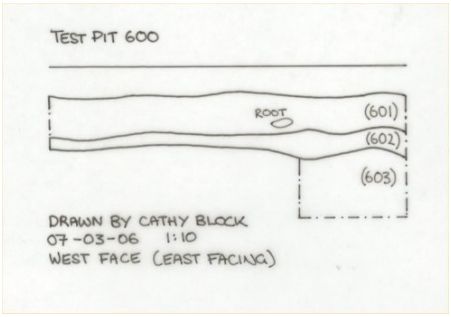


Fig 3. Test Pits T100, T200, T300





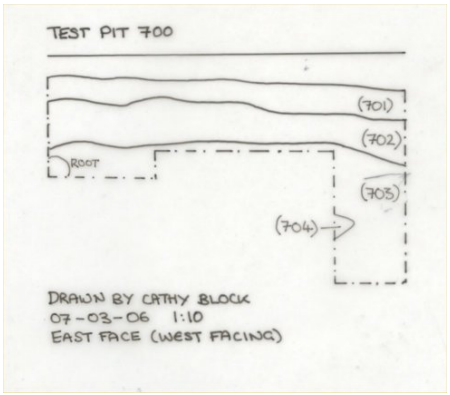
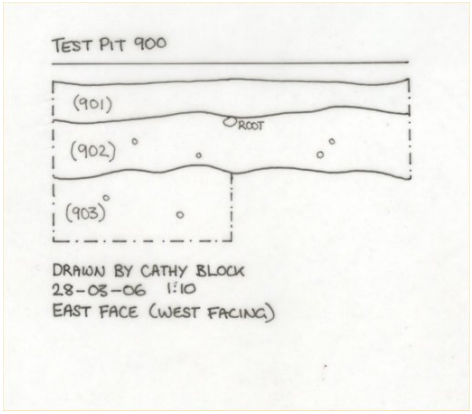
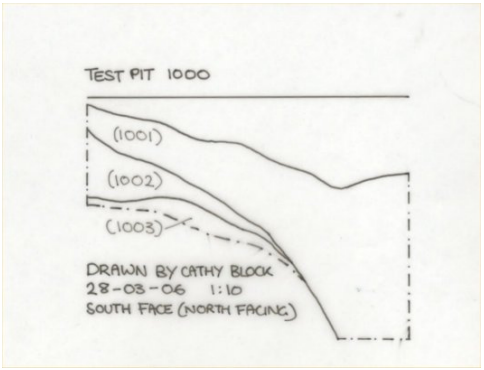


Fig 4. Test Pits T400, T600 and T700





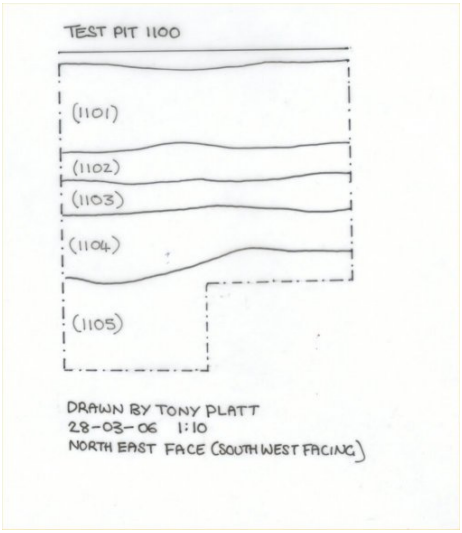


Fig 5. Test Pits T900, T1000, and T1100

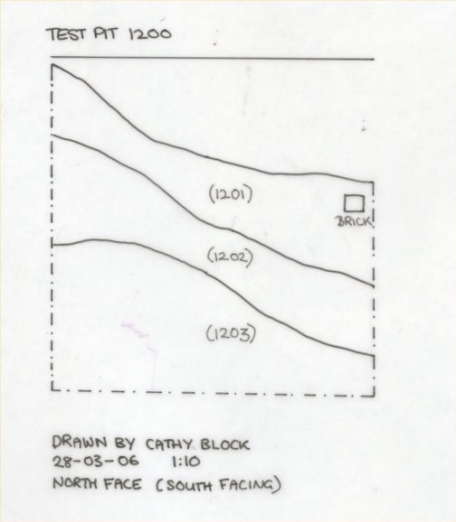


Fig 6. Test Pit T1200.