

P_{alaeoecology} R_{esearch} S_{ervices}

**Evaluation of biological remains from a
watching brief at Burn Lane Hexham,
Northumberland (site code: BLH03)**

PRS 2003/69

**Evaluation of biological remains from a watching brief at Burn Lane Hexham,
Northumberland (site code: BLH03)**

by

Allan Hall, Harry Kenward, John Carrott and Kathryn Johnson

Summary

Two sediment samples and a squared timber, recovered from deposits encountered during a watching brief at Burn Lane, Hexham, Northumberland, were submitted for an evaluation of their bioarchaeological potential. The submitted material was all associated with tanning pits of a ?18th and 19th century tannery.

This fairly large squared timber (Context 100) was of oak (Quercus). The ash sample (Context 102) was almost devoid of biological remains. It was not possible to determine whether the source of the ash was domestic or industrial—though the lack of domestic waste and the presence of a few ‘beads’ of metallic slag may suggest the latter. The subsample from Context 103 gave a large residue of about two litres of flaky tree bark. The identification of the bark could not be easily made, though an origin in a coniferous tree seems most likely. Invertebrate remains in the large flot (which was mostly of small bark flakes) were restricted to traces of earthworm egg capsules and a few other remains of no interpretative significance.

No further study of the timber (Context 100) or of the sample from Context 102 is warranted. The material from Context 103 is of some interest and some further investigation would be worthwhile. Apart from its unusual nature, this material is potentially interesting for comparison with that from other sites where there are concentrations of bark but no very good evidence for its use in tanning.

KEYWORDS: BURN LANE; HEXHAM; NORTHUMBERLAND; WATCHING BRIEF; EVALUATION; ?18TH AND 19TH CENTURY TANNERY; PLANT REMAINS; TIMBER; INVERTEBRATE REMAINS; TANNING PITS

Contact address for authors:

Palaeoecology Research Services
Unit 8
Dabble Duck Industrial Estate
Shildon
County Durham DL4 2RA

Prepared for:

Northern Archaeological Associates
15 Redwell Court
Harmire Road
Barnard Castle
County Durham DL12 8BN

10 September 2003

Evaluation of biological remains from a watching brief at Burn Lane Hexham, Northumberland (site code: BLH03)

Introduction

An archaeological watching brief was carried out by Northern Archaeological Associates at Burn Lane, Hexham, Northumberland (NGR NY 933 649), between the 22nd and the 27th of May 2003.

The site was of a 18th and 19th century tannery which largely survives below ground. The samples were recovered during a watching brief for the cutting of a new sewer pipe trench.

Two sediment samples and a squared timber were recovered from the deposits ('GBA'/'BS' *sensu* Dobney *et al.* 1992) and submitted to PRS for an evaluation of their bioarchaeological potential.

Methods

The sediment samples were inspected in the laboratory. The lithologies of both samples were recorded using a standard *pro forma*. A subsample from each was processed, following the procedures of Kenward *et al.* (1980; 1986), for the recovery of plant and invertebrate macrofossils.

The flot resulting from processing was examined for plant and invertebrate macrofossils. The residues were examined for larger plant macrofossils and other biological and artefactual remains.

The timber was examined to identify the wood.

Results

The results are presented in context number order. Archaeological information, provided by the excavator, is given in square brackets. A brief summary of the examination or processing method and an estimate of the remaining volume of unprocessed sediment follows (in round brackets, where applicable) after the sample number.

Context 100 [corner post from early 19th century tanning pit]
Sample 100AA (species identification only)

This fairly large (approximately 100 x 100 mm square by 0.75 m long) squared timber was of oak (*Quercus*).

Context 102 [ash dump within backfill of tanning pit]
Sample 102AA (1 kg sieved to 300 microns; approximately 2 litres of unprocessed sediment remain)

More or less dry, mid to dark grey to black, mostly cinder and ash, with a little clinker, a few lumps of light grey-brown ash and occasional pieces of coal (to 15 mm). There were also small amounts of uncharred plant remains (?modern/intrusive), 'beads' of metallic slag, and a few pieces of rotted ?mortar (to 25 mm). The sample was contaminated with oil.

Washing of the sample removed a small amount of fine ash but otherwise the sample was unchanged from the description given above.

The excavator's accompanying notes suggested that there might be small fish bones within this deposit but this was not the case.

Context 103 [primary fill within tanning pit]
Sample 103AA (1 kg sieved to 300 microns with paraffin flotation; approximately 2 litres of unprocessed sediment remain)

Moist, very dark grey-brown, mostly ?bark fragments in a silt matrix. The sample was very heavily contaminated with oil.

This subsample yielded a huge residue of about two litres of flaky tree bark (to about 35 mm). Amongst the

finer fractions were moderate numbers of spicules (to about 1-2 mm) which were thought to be phloem fibres and these, and some small (less than 5 mm) fragments of bast, are likely to have eroded from fragments of bark. The identification of the bark is not easily made, though it can be remarked that on morphological grounds, and in the absence of rounded 'sclereids' it is *not* likely to be oak (*Quercus*). An origin in a coniferous tree seems very likely on the basis of the flaky character of the fragments and the presence of bud-scale of pine (*Pinus*) and needles of a conifer (though the latter seemed to be too small to be pine). These, and the few other plant remains may represent material blown into the pit during use or disuse, of course, or have arrived as contaminants of the bark. Invertebrate remains in the large flot (which was mostly of small bark flakes) were restricted to traces of earthworm egg capsules and a few other remains of no interpretative significance.

Discussion and statement of potential

The squared timber corner post (from Context 100) proved to be of oak.

The ash sample (Context 102) was almost devoid of biological remains. It was not possible to determine whether the source of the ash was domestic or industrial—though the lack of domestic waste (e.g. bone) and the presence of a few 'beads' of metallic slag may suggest the latter.

The material from Context 103 is of some interest. Apart from its unusual nature (there are few documented examples of tanning pit fills with what is clearly the material actually used in them), this material is potentially interesting for comparison with that from other sites where there are concentrations of bark but no very good evidence for its use in tanning.

Elsewhere a characteristic group of remains, including the beetle *Trox scaber* (Linnaeus), has been identified as likely to indicate tanning waste (an 'indicator group', see Hall and Kenward 2003); further analysis of the material from Burn Lane, including examination of more of the flot than could be worked through in the time allotted for assessment, might reveal the presence of this

or other invertebrates consistent with the storing and tanning of hides in confirmation of the 'indicator group'. *Trox* larvae have now been recognised from a sample from early medieval Viborg, Denmark, in which bark was abundant (Kenward, unpublished). However, a considerable amount of time might be required to check the material. Unfortunately, attempts to remove with detergent the oil with which the sediment is impregnated may well reduce the efficiency with which insect remains could be extracted by paraffin flotation; it may be that a further subsample could be 'floated' using the contaminant oil as a substitute for paraffin by simply floating without other treatment.

Recommendations

No further study of the timber (Context 100) or of the sample from Context 102 is warranted.

Further investigation of the sample from Context 103 for plant and invertebrate remains is recommended.

Retention and disposal

The sample from Context 103, and the fossils extracted from it, should be retained. The other remains considered here may be discarded unless required for some other aspect of study.

Archive

All material is currently stored by Palaeoecology Research Services (Unit 8, Dabble Duck Industrial Estate, Shildon, County Durham), along with paper and electronic records pertaining to the work described here.

Acknowledgements

The authors are grateful to Greg Speed and Richard Fraser of Northern Archaeological Associates, for providing the material and the archaeological information.

References

Dobney, K., Hall, A. R., Kenward, H. K. and Milles, A. (1992). A working classification of sample types for environmental archaeology. *Circaea, the Journal of the Association for Environmental Archaeology* **9** (for 1991), 24-6.

Hall, A. and Kenward, H. (2003). *Can we identify biological indicator groups for craft, industry and other activities?*, pp. 114-30 in Murphy, P. and Wiltshire, P. E. J. (eds.), *The environmental archaeology of industry. Symposia of the Association for Environmental Archaeology* **20**. Oxford: Oxbow.

Kenward, H. K., Hall, A. R. and Jones, A. K. G. (1980). A tested set of techniques for the extraction of plant and animal macrofossils from waterlogged archaeological deposits. *Science and Archaeology* **22**, 3-15.

Kenward, H. K., Engleman, C., Robertson, A. and Large, F. (1986). Rapid scanning of urban archaeological deposits for insect remains. *Circaea* **3**, 163-172.