Palaeoecology Research Services

Evaluation of biological remains from a watching brief at Burlington Rivers Fields Development, Walney Island, Barrow-in-Furness, Cumbria (site code: BRF03)

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by

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Summary

Eight sediment samples, recovered from deposits encountered during a watching brief at Burlington Rivers Fields Development, Walney Island, Barrow-in-Furness, Cumbria, were submitted to PRS for an evaluation of their bioarchaeological potential. The samples were from two palaeochannels, ditches associated with four medieval banks and an area containing gullies, pits and bands of 'plough scar-like' features.

Most of the small amount of biological remains recovered appeared to be either of recent origin or reworked from older deposits. These deposits offer very little prospect for recovering interpretatively meaningful assemblages of plant or invertebrate remains or, given the possibility of reworking, suitable material for radiocarbon dating.

In spite of these limited results, future excavations at this site should certainly be accompanied by a programme of sampling and assessment of suitable deposits to establish whether more substantial levels of preservation have not occurred elsewhere in the area.

KEYWORDS: BURLINGTON RIVERS FIELDS DEVELOPMENT; WALNEY ISLAND; BARROW-IN-FURNESS; CUMBRIA; EVALUATION; PALAEOCHANNELS; MEDIEVAL; PLANT REMAINS; CHARRED PLANT REMAINS; MODERN PLANT REMAINS; INVERTEBRATE REMAINS

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Introduction

An archaeological watching brief was carried out by Northern Archaeological Associates during topsoil stripping and the excavation of a pipe trench at the Burlington Rivers Fields Development, Walney Island, Barrow-in-Furness, Cumbria (NGR NY 2050 6360).

The watching brief identified two palaeochannels. Ditches associated with four medieval banks and an area containing gullies, pits and bands of 'plough scar-like' features were also investigated.

Eight sediment samples ('GBA'/'BS' *sensu* Dobney *et al*. 1992), of seventeen recovered, were submitted to PRS for an evaluation of their bioarchaeological potential.

Methods

The sediment samples were inspected in the laboratory and four were selected for evaluation. The lithologies of the selected samples were recorded using a standard *pro forma*. Subsamples were processed, following the procedures of Kenward *et al*. (1980; 1986), for the recovery of biological remains.

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

Results

Archaeological information, provided by the excavator, is given in square brackets. A brief summary of the processing method and an estimate of the remaining volume of unprocessed sediment follows (in round brackets) after the sample numbers (created by PRS for internal record keeping purposes).

Context 27 [fill of pit 26]
Sample 2701/T (3 kg sieved to 300 microns with washover; approximately 24 litres of unprocessed sediment remain)

Just moist, mostly light to mid grey-brown and mid to dark grey (with some areas of pale grey and pale brown), stiff to crumbly (working plastic), ?slightly silty clay. Some modern rootlets were present.

There was a very small washover of about 20 ml of modern roots with some flecks of charcoal (to 2 mm) and two small (less than 5 mm) charred root/rhizome fragments, the last of these perhaps originating in burnt peat or turves. The small residue (dry weight 0.21 kg) was of sand and a few stones (to 12 mm).

Context 140 [primary fill of ditch 139]
Sample 14001/T (3 kg sieved to 300 microns with washover; approximately 15 litres of unprocessed sediment remain)

Just moist, light to mid grey-brown (to light to mid orange-brown in places), stiff to crumbly (working plastic), slightly silty clay. Some modern rootlets were present.

The small washover of a few ml of modern roots included a little coal (to 3 mm), cinder (to 5 mm) and charcoal (to 2 mm) with a few very pale 'waterlogged' *Rubus* seeds (both blackberry, *R. fruticosus* agg., and raspberry, *R. idaeus* L., being represented). The seeds are, in the absence of other taxa, perhaps best interpreted as being of recent origin. The tiny residue (dry weight 0.03 kg) was mostly sand, with a few stones (to 15 mm).

Context 166 [fill in palaeochannel 163]
Sample 16601/T (1 kg sieved to 300 microns with paraffin flotation; approximately 17 litres of unprocessed sediment remain)

A mix of moist, dark brown, brittle to crumbly (working soft), amorphous organic sediment and fine and coarse herbaceous detritus, with a little silt. Fragments of wood and roots were present.

There was a modest 'flot' with several large herbaceous roots and some clasts of blackish sediment (less than 2 mm), but otherwise barren. The residue was moderately large (200 ml) with some roundwood fragments (probably actually coarse woody roots), and further herbaceous root fragments, but mostly undisaggregated silt and some very small lumps (to 5 mm) of what appeared to be very decayed peat (both these inclusions might represent older reworked material being deposited within the channel).

Context 169 [fill in palaeochannel 167]
Sample 16901/T (3 kg sieved to 300 microns with washover; approximately 5 litres of unprocessed sediment remain)

Waterlogged, light grey-brown, sticky, silt.

The small washover of about 20 ml comprised 'grassy' herbaceous detritus, including uncharred root/rhizome material (to 5 mm) amongst which a single (unidentifiable) beetle fragment was noted. The tiny residue (dry weight 0.06 kg) was mostly concreted sediment (earthworm burrow or root trace 'casts'), with a little plant detritus.

Discussion and statement of potential

These deposits appear to offer very little prospect for recovering interpretatively meaningful assemblages of plant or invertebrate remains—somewhat unexpectedly in view of the nature of the contexts. It is possible that ancient remains are simply extremely sparse in these alluvial sediments and that extremely large samples would need to be processed to obtain sufficient remains to offer evidence for palaeoenvironments.

The recovered remains do not include material suitable for submission for radiocarbon dating as most appear to be either recent or probably reworked from older deposits (or at least not reliably contemporaneous with the formation of the deposits).

Recommendations

In spite of these limited results, future excavations at this site should certainly be accompanied by a programme of sampling and assessment of suitable deposits to establish whether more substantial levels of preservation have not occurred elsewhere in the area. No further analysis of the current sediment samples or the remains recovered is warranted, however.

Retention and disposal

Any remaining sediment from the deposits considered here may be discarded unless it is to be processed for the recovery of non-biological remains.

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.

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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.

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.