

Palaeoecology Research Services

**Evaluation of biological remains from excavations at the site of the proposed Heighington Lane West Industrial Area, Newton Aycliffe, County Durham (site code: HLW02)**

by

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**Summary**

*Eighteen sediment samples, recovered from excavations of deposits of later Iron Age (probably pre-1<sup>st</sup> century AD) date at Heighington Lane, Newton Aycliffe, County Durham, were submitted to PRS for an evaluation of their bioarchaeological potential.*

*Subsamples from six of the samples were processed and each yielded large residues of sand and gravel, usually with no other components. Ancient plant remains in the small or very small washovers were confined to small amounts of charred material (mostly wood charcoal). Amongst the charred remains were small amounts of a number of components currently thought likely to represent material from the burning of heathland/grassland turves*

*The potential of these deposits for addressing questions concerning the economy and environment of the site is extremely limited given the very low concentrations of charred material. However, the consistent presence of small amounts of charred material that seems likely to have originated in burnt turves adds usefully to the growing number of records for such remains. No animal remains were recovered from the samples.*

*No further work on the samples investigated here can be justified, but subsamples from other sampled primary contexts not as yet examined should be processed to explore the distribution of the 'turf' component through different kinds of deposits. Any further excavation at the site should be accompanied by sampling of primary contexts.*

**KEYWORDS:** HEIGHTINGTON LANE WEST INDUSTRIAL AREA; NEWTON AYCLIFFE; COUNTY DURHAM; EVALUATION; LATER IRON AGE (PROBABLY PRE-1<sup>ST</sup> CENTURY AD); CHARRED PLANT REMAINS; BURNT TURVES

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## Evaluation of biological remains from excavations at the site of the proposed Heighington Lane West Industrial Area, Newton Aycliffe, County Durham (site code: HLW02)

### Introduction

An archaeological evaluation excavation was carried out by Northern Archaeological Associates at the site of the proposed Heighington Lane West Industrial Area, Newton Aycliffe, County Durham (an area of 50 hectares centred on NGR NZ 2680 2212), between May and July 2002.

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

All of the deposits considered in this report were provisionally dated (from the small pottery assemblage recovered) as later Iron Age (probably pre-1<sup>st</sup> century AD).

### Methods

All eighteen of the submitted sediment samples were inspected in the laboratory. Six were selected for evaluation and their lithologies were recorded, using a standard *pro forma*, prior to processing, following the procedures of Kenward *et al.* (1980; 1986), for recovery of plant and invertebrate macrofossils.

The washovers resulting from processing were dried and examined for plant and invertebrate macrofossils. The residues were also dried prior to being scanned for larger plant macrofossils, bone, and other biological and artefactual remains.

### Results

The results of the examinations are presented in Table 1. Archaeological information, provided by the excavator, is given in the row titled 'Context type' in the table. A brief summary of the processing method and an estimate of the remaining volume of unprocessed sediment is also included. Sample numbers were derived from the context numbers by PRS for internal record keeping purposes.

The sediment descriptions for each of the samples were almost identical: Just moist, mid to mid-dark grey-brown (with an orange-brown cast in places), brittle to crumbly (working soft and sticky when wetted), ?slightly sandy clay silt (to silty clay). Stones (2 to 60 mm) and modern rootlets were present. Flecks, and occasionally larger pieces, of charcoal were apparent in most of the samples, and coal was noted in the sample from Context 702.

All the subsamples processed yielded large residues of sand and gravel, usually with no other components. Plant remains in the small or very small washovers were confined to small amounts of charred material (mostly wood charcoal), with a very few uncharred seeds and some roots (all thought to be of recent origin) and a little coal (no doubt from the local drift).

No animal remains were recovered from the samples.

### Discussion and statement of potential

Amongst the charred plant remains were small amounts of a number of components currently thought likely to represent material from the burning of heathland/grassland turves (cf. Hall forthcoming). These were small fragments of

both aerial and subterranean herbaceous plant material and tentatively identified basal twig/root fragments of heather, a group recorded frequently from (mainly late) prehistoric and early historic occupation sites in the north-east of England (the single charred sedge nutlet may belong with them, too). A single unidentified charred wheat grain was recorded from one context (702) and there were a very few weed seeds; no remains of chaff were noted.

The potential of these deposits for addressing questions concerning the economy and environment of the site is extremely limited given the very low concentrations of charred material. However, the consistent presence of small amounts of charred material that seems likely to have originated in burnt turves adds usefully to the growing number of records for such remains.

## Recommendations

No further work on the samples investigated here can be justified, but subsamples from other sampled primary contexts not as yet examined should be processed to explore the distribution of the 'turf' component through different kinds of deposits. Given the low concentrations of the remains recovered from the deposits examined so far, larger subsamples of 5 kg to 10 kg should be processed.

Any further excavation at the site should be accompanied by sampling of primary contexts (especially where charred plant remains can be detected in the field).

## Retention and disposal

All of the current material should be retained for the present.

## 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

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## References

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Table 1. Plant remains and other components of the residues and washovers from Heighington Lane (HLW02). Abundance is recorded on a four-point scale from + (one or a few remains or a trace) to ++++ (abundant remains or a major component). Figures in parentheses indicate actual numbers of remains observed; numbers in square brackets indicate the maximum size (in mm) of the largest specimens.

Trench	6	7	7	9	10	10
Context	626	702	706	916	1007	1025
Context type	fill of ditch 625	primary fill of ditch 703	fill of ditch 707	upper fill of ditch 915	fill of ditch 1006	fill of pit 1025
Sample	62601	70201	70601	91601	100701	102501
Subsample weight (kg)	3	3	3	3	3	3
Processing summary	sieved to 300 microns with washover	sieved to 300 microns with washover	sieved to 300 microns with washover	sieved to 300 microns with washover	sieved to 300 microns with washover	sieved to 300 microns with washover
unprocessed sediment remaining (litres)	17	15	15	14	4	5
Residue volume (ml)	300	350	300	250	300	225
Washover volume (ml)	<10	<10	<10	<10	<10	~30
<b>Charred plant remains</b>						
cf. <i>Calluna vulgaris</i> (L.) Hull (heather/ling: root/basal twig fragments)		+ [2]	+ [5]	+ [5]	+ [5]	
<i>Carex</i> sp(p). (sedge: nutlet)						+ (1)
<i>Galium aparine</i> L. (goosegrass: fruit)			+ (1)			
<i>Polygonum persicaria</i> L. (persicaria: nutlet)					+ (1)	
<i>Triticum</i> sp(p). (wheat: caryopsis)		+ (1)				
unidentified herbaceous stem material (probably grass/rush)			+ [3]	+ [3]		+ [5]
unidentified herbaceous root/rhizome material	+ [2]		+ [5]	+ [2]	+ [5]	+ [5]
<b>Uncharred plant remains (probably modern)</b>						
<i>Atriplex</i> sp(p).		+		+		
<i>Fumaria</i> sp(p).				+		
root/rootlet fragments						
<b>Other components</b>						
charcoal	+ [5]	+ [10]	+ [10]	+ [5]	+ [10]	+ [10]
coal	+ [2]	+ [5]	+ [5]	+ [5]		+ [2]
gravel	++ [25]	+++ [40]	+ [30]	+++ [55]	++ [25]	++ [30]
sand	+++	+++	+++	++	+++	+++
?mor humus						+ [5]
undisaggregated sediment			++ [5]			