Reports from the Environmental Archaeology Unit, York

An assessment of biological remains from excavations at Gallowgate Middle School and 16-18 Netherkirkgate, Aberdeen (site codes E34 and E35)

by

Allan Hall, Michael Issitt, Harry Kenward and Frances Large

Report **94/2**

Environmental Archaeology Unit
University of York
Heslington
York YO1 5DD

(0904) 433846/51
Fax: 433850

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Summary

Four samples of pit fills from a site at Gallowgate Middle School and six samples, from five layers and one pit fill, from 16-18 Netherkirkgate were examined for their content of plant and invertebrate remains. All contained at least some fossils and most were quite rich.

Five samples were designated as being of `high priority' and requiring further examination of plant remains, two for parasite eggs and five for insect remains. Survey of further samples from these sites is recommended.

Authors' address:

Environmental Archaeology Unit
University of York
Heslington
York YO1 5DD

Telephone: (0904) 433843-51
Fax: (0904) 433850

Prepared for:

City of Aberdeen Arts
and Recreation Division
Arts and Museums Services
Art Gallery
Schoolhill
Aberdeen AB9 1FQ
Scotland

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Introduction and methods

In advance of more detailed investigation a series of ten samples from excavations at Gallowgate Middle School (E34) and in Netherkirkgate (E35), Aberdeen, were assessed for their content of plant and invertebrate remains.

The samples submitted were examined in the laboratory and the lithology described using a standard *pro forma*. For each sample, 1 kg `test' subsamples were processed following methods outlined by Kenward *et al.* (1980; 1986) and `squashes' for parasite eggs made following methods of Dainton (1992).

The contexts represented by the samples examined were as follows:

E34	84	top layer of large pit CT
E34	104	middle fill of pit CT
E34	107	bottom fill of pit CT
E34	233	fill of pit EU
E35	27	organic layer
E35	37	organic layer
E35	108	organic loam layer
E35	410	organic layer
E35	430	organic layer in pit KM

Results

The results of the assessment of plant remains, parasites and insects (and other invertebrates) are summarised in Tables 1-3.

There were five Priority 1 plant macrofossil assemblages, two first priority samples for parasite eggs and five P1 insect groups (the remainder being Priority 2 on the basis of the beetles; most included modest to large numbers of fly puparia, identification of which would be very time consuming but perhaps useful in interpreting the nature of the deposits).

Statement of potential: implications for further work

The samples designated P1 for any category of material are considered to have potential to elucidate the nature of the deposits and to give information concerning the human activities that led to their formation. The P2 material may give such information, although for the plant remains the existing record may suffice and it is by no means certain that the P2 insect assemblages would in fact repay fuller recording, beyond providing useful records in space and time. There is no justification for work on the P3 parasite samples. The P1 parasite samples may help in determining whether the cereal remains accompanying them entered via human or animal faeces.

The macrofossils in the assessed samples indicate that it may be worthwhile to investigate further samples from these sites providing their archaeological integrity is established.

The samples from Gallowgate Middle School and Netherkirkgate also provide information and records of biota of value in wider synthesis of our understanding of medieval urban environmental archaeology.

Recommendations

Further work

All the P1 material should be recorded to an appropriate level. This, together with the work to date, will use about half of the available resources.

The remaining resources should be employed to review a selection of further samples (chosen by the excavator). It would be worthwhile to attempt to identify a selection of the fly puparia, which will probably give information about the nature of the material contributing to the deposits,

but this would be expensive and might require some input from an outside specialist.

Retention and disposal

All the material should be retained in the short term.

Archive

All extracted fossils from the test subsamples, and the residues and flots are currently stored in the Environmental Archaeology Unit, University of York, along with paper and electronic records pertaining to the work described here.

Acknowledgements

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References

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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 archaeo-logical deposits. *Science and Archaeology* **22**, 3-15.

Table 1. Plant remains and other components from samples from Gallowgate Middle School and 16-18 Netherkirkgate, Aberdeen. Assessment notes, recording time and priority.

Most of the samples contained wood fragments (including worked 'chips') and usually also remains of heather and other peatland taxa and some evidence for grass or cereal remains probably from hay and straw; there was a rather restricted range of weeds of waste places and cultivated soils. Note: for the P2 samples, the information recorded during the assessment may suffice for interpretative purposes.

Site code	Context number	Sample number	Notes	Time to record (minutes)	Priority
E34	84	18	Moderately large plant assemblage, quite well preserved but not very diagnostic	90	P2
E34	104	26	A large and well-preserved assemblage of plant remains; subsample also contains many animal hairs and small leather scraps	120	P1
E34	107	14	Moderately large plant assemblage with rather a lot of well-preserved uncharred cereal chaff and some bog myrtle twigs and leaves and cereal `bran'	120	P1
E34	233	1233	Preservation rather poor and material fragmentary, but assemblage may have straightforward interpretation (?turf)	60	P1
E35	27	6	Identifiable plant remains sparse in a large matrix of what is probably peat	60	P1
E35	37	5	A moderately large assemblage of plant remains including uncharred cereal chaff and probable 'litter' plants	90	P2
E35	108	3	Moderately large assemblage, quite well preserved, rich in uncharred cereal chaff; probably similar material to **37**	90	P1
E35	410	2	Moderate numbers of plant remains, moderately well preserved, including some uncharred cereal chaff as in **37** and **108**	90	P2
E35	430	14	Moderately rich plant assemblage with generally good preservation but interpretation not very clear	90	P2
E35	442	13	Rather small plant assemblage with moderate preservation and perhaps smaller interpretative potential than other samples in this series	60	P2

Table 2. Survey for parasite eggs. Assessment notes, recording time and priority

Site code	Context number	Sample number	Notes	Time to record (minutes)	Priority
E34	84	18	none	-	-
E34	104	26	none	-	-
E34	107	14	1 *Trichuris*	30	P1
E34	233	1233	none	-	-
E35	27	6	1 *Trichuris*	30	P3
E35	37	5	1 *Trichuris*	30	P3
E35	108	3	none	-	-
E35	410	2	none	-	-
E35	430	14	1 *Trichuris*	30	P1
E35	442	13	none	-	-

Table 3. Insect remains. Assessment notes, recording time and priority. Most groups included numerous fly puparia (see text).

Site code	Context number	Sample number	Notes	Time to record beetles (minutes)	Priority
E34	84	18	Small beetle group of limited interpretative value, but fly puparia may be informative	20	P2
E34	104	26	Small beetle group, limited interpretative value, perhaps included imported remains; flies may be useful	30	P2
E34	107	14	Small beetle group, probably invading decomposers; unlikely to give definitive interpretation; flies may be informative	15	P2
E34	233	1233	Rather distinctive group of uncertain implications; needs recording and further consideration	30	P1
E35	27	6	Rather small group, implications not immediately obvious	60	P1
E35	37	5	Modest-sized group, probably indicating foul matter	60	P1
E35	108	3	Mixed insect group, implications not immediately obvious	35	P1
E35	410	2	Small but rather interesting group, perhaps imported with moss or other plant material	30	P1
E35	430	14	Small mixed group of insects of uncertain origin	45	P2
E35	442	13	Small group of limited interpretative potential	10 (+15 for louse)	P2