



Assessment of Palaeoenvironmental Evidence from 86562 Outseats Farm, Alfreton - Archaeological Trial Trench Evaluation

Acknowledgements

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1 INTRODUCTION

1.1.1 Seven bulk samples were taken from a range of medieval ditches and were processed for the recovery and assessment of charred plant remains and charcoal. The size of the samples varied between 33 and 40 litres, and on average was around 38 litres.

2 AIMS AND METHODS

2.1 Charred plant remains

1.1.2 The purpose of this assessment is the evaluation of the quality of plant remains preserved at the site and the potential for further analysis to address specific site archaeological issues and to provide archaeobotanical data valuable for wider research frameworks.

1.1.3 The bulk samples were processed by standard flotation methods; the flot retained on a 0.25 mm mesh, residues fractionated into 5.6 mm and 1 mm fractions and dried. The coarse fractions (>5.6 mm) were sorted, weighed and discarded. A rifle box was used to split large flots into smaller flot subsamples when appropriate. The flots were scanned using a stereo incident light microscopy at magnifications of up to x40 using a Leica MS5 microscope for the identification of environmental remains. Different bioturbation indicators were considered, including the percentage of roots, the abundance of modern seeds and the presence of mycorrhizal fungi sclerotia (e.g. *Cenococcum geophilum*) and animal remains which would not be preserved unless anoxic conditions were detected, such as earthworm eggs and insects. The preservation and nature of the charred plant and wood charcoal remains, as well as the presence/absence of other environmental remains such as molluscs, animal bone and insects (if anoxic conditions for their preservation are present), is recorded in Table XXX.

1.1.4 Preliminary identifications of dominant or important taxa are noted below, following the nomenclature of Stace (1997) for wild plants, and traditional nomenclature, as provided by Zohary and Hopf (2000, Tables 3, page 28 and 5, page 65), for cereals. Abundance of remains is qualitatively quantified (A*** = exceptional, A** = 100+, A* = 30-99, A = >10, B = 9-5, C = <5) as an estimation of the minimum number of individuals and not the number of remains per taxa.

3 RESULTS

1.1.5 The flots were generally small and there were high numbers of roots, fungi sclerotia and modern seeds that may be indicative of stratigraphic movement and the possibility of contamination by later intrusive elements.

1.1.6 Charred material was very rare and comprised varying degrees of preservation. The plant remains included grass (Poaceae) grain fragments (one from an indeterminate cereal) and culm fragments, a vetch (Viciaeae) and a plantain (*Plantago lanceolata*) seed.

1.1.7 Wood charcoal was noted in small quantities and all fragments belonged to mature wood.



4 DISCUSSION AND FURTHER POTENTIAL

- 1.1.8 The assemblages are not significant given the rarity of environmental evidence preserved in the area. This is consistent with the results from previous phases of work in the site.
- 1.1.9 The assemblages recovered so far have little potential and require no further analysis and are therefore recommended for discard. However, the results of this assessment should be included in prospective reports and publications since the absence of environmental evidence, despite appropriate sampling strategies, is an interesting fact in itself.

5 REFERENCES

5.1 Bibliography

- Stace, C, 1997, *New flora of the British Isles* (2nd edition), Cambridge: Cambridge University Press.
- Zohary, D, and Hopf, M, 2000, *Domestication of plants in the Old World: the origin and spread of cultivated plants in West Asia, Europe, and the Nile Valley*, 3rd edition, Clarendon Press, Oxford.



6 APPENDICES

6.1 Appendix 1: Environmental Data

Table 1: Assessment of the charred plant remains and charcoal

Feature	Context	Sample	Vol (L)	Flot (ml)	Bioturbation proxies	Grain	Chaff	Cereal Notes	Charred Other	Charred Other Notes	Charcoal > 4/2mm	Charcoal	Other	Comments
104	105	101	36	25	90%, F	-	-	-	-	-	<1 ml	Mature	-	
106	107	102	33	30	90%, F	-	-	-	C	<i>Plantago lanceolata</i> , indet. root	10 ml	Mature	-	Fair
205	204	201	34	60	90%, F	C	-	Triticeae grain fragment	C	Poaceae, Viciae, indet.	<1 ml	Mature	-	Poor
304	305	301	34	45	90%, C, E, F	-	-	-	C	Poaceae culm and grain	<5 ml	Mature	-	Fair (grain probably intrusive)
1004	1005	1001	40	50	90%, F	-	-	-	A	Indet. tissue	<5 ml	Mature	-	Fair
1204	1205	1201	35	40	90%, F	-	-	-	C	Poaceae grain fragment	<1 ml	Mature	-	Poor
1206	1207	1202	39	50	90%, F	-	-	-	C	Poaceae grain fragments	<1 ml	Mature	-	Poor

Key: A*** = exceptional, A** = 100+, A* = 30-99, A = >10, B = 9-5, C = <5; Bioturbation proxies: Roots (%), Uncharred seeds (scale of abundance), F = mycorrhizal fungi sclerotia, E = earthworm eggs, I = insects; Sab/f/c = small animal/fish bones/charred faecal pellets, Moll-t = terrestrial molluscs, Moll-f = aquatic molluscs; Analysis: C = charcoal, P = plant, M = molluscs, C14 = radiocarbon