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**Assessment of biological remains from excavations at
Newbridge Quarry, Pickering, North Yorkshire (site code: NBQ99)**

by

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Summary

Samples of sediment, of Late Bronze Age/Iron Age date, recovered from excavations at Newbridge Quarry, Pickering, North Yorkshire, have been assessed for their potential for bioarchaeological analysis.

Ancient biological remains were restricted to charcoal and other charred plant material. However, biological remains from Bronze Age deposits in the north of England are rare so that the one of the four processed samples (Sample 9, Context 1164) examined which gave a few charred plant remains (including barley) should be recorded in more detail (especially if more material is available), provided that the dating of the feature can be confirmed.

It is possible that at least one or two of the samples not selected for examination as part of this assessment may also yield interpretatively useful plant remains but probably no especially strong case can be made for their examination unless, like the material from Context 1146, they can be securely dated.

KEYWORDS: NEWBRIDGE QUARRY; PICKERING; NORTH YORKSHIRE; LATE BRONZE AGE; IRON AGE; CHARRED PLANT REMAINS; CHARRED BARLEY

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Introduction

Continuous archaeological observation of topsoil and upper subsoil stripping was carried out by MAP Archaeological Consultancy Ltd. on land to the west of Newbridge Quarry, Pickering, North Yorkshire (NGR: SE 7950 8570), between 21 September and 20 October 1999. Nine sediment samples ('GBA'/'BS' *sensu* Dobney *et al.* 1992) from nine contexts were recovered from the deposits. Dating of the deposits currently rests on two groups of pottery. Mackey's (1999) site report states that 'A quantity of pottery recovered from one of the larger pits (1090) during trial trenching gave a fairly secure Late Bronze Age date, whilst a shard from a pit (1001) close to the northern edge of the site belongs to the Iron Age'.

All of the samples were submitted to the EAU for assessment of their bioarchaeological potential.

Methods

The submitted sediment samples were inspected in the laboratory. None of the samples were thought likely to yield large quantities of biological remains but, in view of their early date, those with an obvious content of charred material were selected for further investigation. The lithologies of these four samples 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.

Plant macrofossils were examined from the residues and washovers resulting from processing. The residues were also examined for other biological and artefactual remains.

Table 1 shows a list of the submitted samples and notes on their treatment.

Results

The results are presented in context number order.

On a general point, none of what has been described in Mackey's report as limestone was, to judge from the samples, at least, strictly speaking *limestone* (with the possible exceptions noted below); it was non-calcareous (no reaction to dilute hydrochloric acid) gritstone, presumably from the Middle Oolite in this area.

Two pieces of light grey, fairly soft, rounded, material were removed from the samples during processing (1 each from contexts 1003 and 1046, samples 3 and 1 respectively). These were initially thought to be pot but were found to effervesce when tested with dilute hydrochloric acid and appeared to contain 'tube-like' fossils in places—this suggested that they were, perhaps, some form of limestone.

Context 1003 [Fill of small subcircular post hole]

Sample 3 (11 kg bulk-sieved to 300 microns and washover)

Moist, mid grey-brown, crumbly to unconsolidated (working just soft), sandy silt. Very small to large (2 to 60+ mm) stones, charcoal and modern rootlets were present in the sample.

A washover of about 100 cm³, mainly of charcoal (up to 15 mm in maximum dimension) was obtained from this sample, the residue consisting of a moderate amount (about 2.2 litres) of subangular to subrounded gritstone (to 90 mm). The charcoal included (but was not all) oak (*Quercus*). There were very small numbers of charred and uncharred plant remains, mostly weeds of cultivated soils. The uncharred material is likely to be of recent origin (as were some rootlet fragments also present in the washover).

Context 1046 [Fill of substantial post hole]

Sample 1 (10 kg bulk-sieved to 300 microns, with washover)

Moist, mid grey-brown, unconsolidated to crumbly (working just soft), sandy silt with small to medium-sized (6 to 60 mm) stones, fine charcoal and modern rootlets present.

The small residue of about 1 litre consisted of subangular to subrounded gritstone (to 70 mm), with occasional reddened (probably ferruginous rather than burnt) fragments and some sand. The washover of about 100 cm³ was of charcoal (to 10 mm, but mostly less than 5 mm) and sand with some modern earthworm egg capsules and a few charred and uncharred weed seed, the latter certainly modern. There were also rather large numbers of modern soil nematodes and some modern rootlets. Some scraps of insect cuticle observed in the washover might be ancient but they were few and not interpretatively useful. No oak was seen amongst the charcoal but the material could only be examined quickly for the purposes of assessment.

Context 1164 [Fill of small subcircular post hole]

Sample 9 (9 kg bulk-sieved to 300 microns, with washover)

Moist, mid to dark grey-brown (with mm-scale mottling, more grey and more brown), unconsolidated to crumbly (working just soft), slightly clay, sandy silt with occasional lumps of light orange-brown silty sand (to 40 mm). Medium-sized and large stones (20 to 60+ mm), charcoal and modern rootlets.

The washover of about 120 cm³ comprised charcoal (to 10 mm) with some sand; the small residue of about 1 litre comprised subangular to subrounded gritstone (to 65 mm) and some sand. Amongst the charred remains in the washover were a few barley (*Hordeum*) grains (some well enough preserved to show that they were hulled) and a few fragments of rachis which might well permit closer identification of the barley material. Also present were a few weed seeds and fragments of charred herbaceous detritus which could not be identified but which was probably largely from rushes or grasses.

Context 1301 [Primary pit fill]

Sample 8 (13 kg bulk-sieved to 300 microns)

Dry, light to mid grey-brown, indurated to crumbly (working soft and slightly sticky when wet), slightly clay, sandy silt with some charcoal present.

The washover of about 60 cm³ was about 30% charcoal, the rest sand; the small residue of about 1.8 litres was of subangular to subrounded gritstone (to 65 mm) with some sand. Amongst the charcoal were fragments determined as oak and ash (*Fraxinus*). The only other plant remains recorded were traces of charred fat hen (*Chenopodium album* L.) seeds.

Discussion and statement of potential

Biological remains from the Bronze Age are quite rare and, as such, the one of the four samples (Sample 9, Context 1164) examined which gave a few charred plant remains should be recorded in more detail (especially if more material is available) provided that the dating of the feature can be confirmed—though given that these remains were in a post-hole fill, it may, in fact, be worth considering AMS dating of plant material to provide a date.

Recommendations

It is possible that at least one or two of the samples not selected for examination as part of this assessment may also yield interpretatively useful plant remains but probably no especially strong case can be made for their examination unless, like the material from Context 1146, they can be securely dated (to the Bronze Age) by one means or another.

Retention and disposal

All samples and material extracted from them should be retained for the present.

Archive

All material is currently stored in the Environmental Archaeology Unit, University of York, along with paper and electronic records pertaining to the work described here.

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Table 1. List of sediment samples from excavations at Newbridge Quarry, Pickering, North Yorkshire, with notes on their treatment.

Context	Sample	Notes
1002	2	Sample examined. No further action.
1003	3	Sample description. 11 kg bulk sieved to 300 microns and washover.
1004	4	Sample examined. No further action.
1046	1	Sample description. 10 kg bulk sieved to 300 microns and washover.
1164	9	Sample description. 9 kg bulk sieved to 300 microns and washover.
1187	7	Sample examined. No further action.
1271	5	Sample examined. No further action.
1301	8	Sample description. 13 kg bulk sieved to 300 microns and washover.
1334	6	Sample examined. No further action.