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**Marfield Quarry
Masham
North Yorkshire
Quarry Extension
PHASE 1**

Archaeological Watching Brief

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**MAP Archaeological Consultancy Ltd
October 1999**

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Archaeological Watching Brief

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Archaeological Watching Brief

1. Introduction

An Archaeological Watching Brief was conducted by MAP Archaeological Consultancy Ltd, on behalf of Lafarge Redland Aggregates Ltd to fulfill a condition attached to planning consent 500/32G/CMA for mineral extraction on land to the north and north-west of the present quarry workings at Marfield Quarry, near Masham, North Yorkshire (Fig. 1).

A pre-planning evaluation of the quarry extension was commissioned by Redland Aggregates Ltd. This was carried out between April 1995 to December 1996. The evaluation followed a staged format and was composed of a number of different techniques. The initial stage of work was a Desktop Study of the proposed quarry extension area (Areas 1-14 : MAP 1995i - Fig. 2). This was subsequently followed up with further work consisting of Geophysical Survey (GSB 1995- Areas 6, 9, 12 & 1996 - Areas 8, 13), fieldwalking (MAP 1995ii - Areas 6, 9, 12) and Trial and Sample Excavations in Areas 6, 9, 12 & 14 (MAP 1996 i-iv).

The extension to the present workings at Marfield is to be undertaken in five phases (Fig. 3). A Written Scheme of Works (MAP 1999i) detailed the programme of archaeological work to be undertaken during the development of Phase 1 of the quarry extension (formerly Area 8 of the pre-planning evaluation).

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2. Site Description

Marfield Quarry is situated in the parish of Ellington High and Low, North Yorkshire, to the north-west of the town of Masham (SE 8277 2110 : Fig. 1). Phase I of the quarry extension is located to the north of the existing quarry working and approximately 0.9 kilometres south-east of Low Ellington village (SE 8322 2109). The area of the Phase I works was previously a pasture field, with an area of 5.4 hectares, and at heights between 103m OD and 115m OD.

3. Geology

The soils in the areas are typical brown earths of the East Keswick Association formed over a parent of drift from Palaeozoic and Mesozoic sandstones and shales. Such soils are usually well drained fine or coarse loams, sometimes with slowly permeable subsoils and subject to slight seasonal waterlogging (Mackney et al 1983). Augering in Area 12 found that the soils were coarse loamy typical brown earths. The profile comprised a scatter of angular and subangular mainly sandstone clasts, this overlay an Ap (0-0.25m) horizon of dark red brown

coarse loams. Augering beyond 0.3m was prevented by the stoniness of the B/C horizon. The shallowness of the soils may be a local variation peculiar to the site and/or it may be due to topsoil erosion and ploughing (GSB 1995).

4. Historical and Archaeological Background

Desktop Study

The Desktop Study considered an area of land to the north of the existing quarry, consisting of approximately 85 hectares (MAP 1995i). The report evaluated the known archaeological and historical resource, describing and illustrating land use, previous archaeological information, earthwork analysis, a walk over survey and historical summaries of the village of Low Ellington and the lost village of Swarthorpe.

Historical records and the hedgerow survey illustrated how the landscape had changed over the past 1000 years. The known archaeological data for the area was limited to a gold torque found in Swinton Park in 1815 and the two stone coffins found in Nunneries Field, Marfield in 1835 and 1836. Aerial photographic data was restricted to the earthwork features still present in the landscape. Information derived from the walkover survey provided detail on the range, date and survival of earthworks.

Earthwork sites included the village earthworks of Low Ellington, lynchets and ridge and furrow, hedge banks with and without associated stone walls, ponds, trackways and clearance cairns. In addition the discovery of two elongated mounds in Areas 6 and 9 which may represent pillow mounds.

Recent Watching Briefs at Marfield Quarry have provided poor artefact assemblages with finds ranging in date from the Roman period through to modern times (MAP 1994 & 1995ii). In addition features interpreted as storage pits of Iron Age date have been recorded during the working of the present quarry (WYAS 1988). Even so the well drained soils, reliable supplies of water from both the River Ure and becks such as Broad Beck, and the local topography suggests that this area would be an ideal location for Prehistoric and possibly later settlement.

Pre-Conquest settlement was recorded in Domesday in the villages of Swaythorpe and Ellington and this continued into at least the 12th century at Swaythorpe and to the present day at Low Ellington. The impact of man on the landscape was also evident from the surviving earthworks.

Geophysical Survey

As part of the pre-planning evaluation, Area 8 was assessed by geophysical survey (a total area scan, followed up with a 50% magnetometer survey : GSB 1996). The survey in Area 8 located some anomalies which appeared to be pit like responses and others that could be geological. Some lengths of linear anomalies were also noted along with a number of burnt/fired remains

Earthwork Survey

An earthwork survey was conducted in Phase I/Area 8 concentrated on the hedge bank with associated wall and lynchets features (MAP 1999ii).

5. Methods

The Geophysical Survey had suggested the presence of archaeological features within Phase 1. As the exact nature of these anomalies was presently unknown it is suggested that works commenced in Phase I under a Watching Brief programme but that this should be upgraded to a Recording Brief, if necessary.

The topsoil and subsoil was removed by mechanical excavator using a toothless ditching bucket. An Archaeologist was present to supervise the topsoil and subsoil stripping. All archaeological deposits were hand excavated. A written record of all deposits was made on proforma record sheets, using a single context recording system (Appendix 1). All artefacts disturbed were recovered and recorded (Appendix 2). In addition, all deposits were drawn at scales of 1:10 and 1:20 (Appendix 3), and photographed using colour and monochrome print (Appendix 4).

6. Results

The Watching Brief was conducted between June and August 1999. In July, a kiln was partially uncovered in the southern part of the Phase I (Pl. 1 : Fig. 2). This kiln lay to the north of a track and was cut into a bank or lynchet. The northern two thirds of the kiln were fully excavated, the southern third lay outside the stripped area.

The Structure (Pls. 2 & 3 : Figs. 3 & 5)

The kiln was composed of three elements: a stoke/raking out hole, kiln pot and flue (context 6011). All three were constructed at the same time. The walls of the kiln pot and flue had been exposed to intense heat and the natural clayey subsoil, context 6008, had been oxidised during firing. Archaeomagnetic dating of this deposit produced a date of 1760 - 1790 A D for the last firing of the kiln (Appendix 5).

The stoke hole was located on the western side of the kiln, and was aligned south-east to north-west. It measured 1.8m long, 0.8m wide and 1m deep. The cut was steep sided, with a base which was gently inclined towards the kiln pot. There was no sign of intense operating temperatures within the stoke hole.

The kiln pot and flue were on the same alignment as the stoke hole, south-east to north-west, with the flue on the south-eastern side of the kiln pot, opposite the stoke hole. The kiln pot measured 2.4m across and was 1.1m deep, and the flue was 0.25m by 0.25m and 0.37m deep, and was a steep sided flat based circular hollow.

The Fills

Seven deposits filled the kiln and stoke hole. All post date the working life of the structure, and represent the abandonment and backfilling of the kiln. A different sequence of deposits were encountered in kiln and stoke hole.

The primary fill of the stoke hole, context 6008, comprised large cobbles in a silty sand matrix (Pl. 4 : Fig. 4). Some of the large stones were embedded in the base and side of the stoke hole indicating deliberate backfilling. Above this was a mixed layer, context 6007, of clayey silt which contained fragments of burnt clay, coal and lime.

The primary fill of the kiln, context 6006, was a deposit of large burnt sandstone fragments, ash, burnt clay and lime in a loose silty clay matrix (Pl. 4 : Fig. 4). This was sealed by context 6005, a deposit of fired clay, burnt cobbles, flat fragments of sandstone, coal and lime in a silty clay matrix, which lay at the junction of the kiln and stoke hole. It seems likely context 6005 was the remains of a collapsed or demolished stoke hole arch.

Context 6004, a rich, damp deposit of sandy silt with some coal, lime and burnt clay inclusions, was found in both kiln and stoke hole. Large stones were present in 6004 where it extended into the stoke hole. These stones may be structural in origin. A small fragment of Cistercian Ware was recovered from context 6004.

The latest fill of the kiln was context 6003, a mixed clayey silty sand deposit with frequent cobbles (Pl. 1). Seven artefacts were found in this deposit, these included abraded medieval pottery, post medieval slipware and bottle? glass, and a bent strip of copper alloy. The mixed nature and small quantity of artefacts suggests that they were derived from manuring spreads rather than deliberate dumping of domestic refuse.

7. Conclusions

The lime kiln uncovered during the Phase I works was similar to those excavated in Area 6 and 12 during the archaeological evaluation (MAP 1996 i & iii). A burnt pit was excavated in Area 9 but it lacked a flue or stoke hole and was sub-rectangular rather than oval, and was dated between 1585-1650 AD (MAP 1996 ii). The kilns in Areas 6 and 12 were also dated by archaeomagnetic samples, in Area 6 to 1680-1730 AD and in Area 12 between 1650 and 1740.

The kiln was probably back filled soon after its last firing. The most likely use of this kiln, as with the others recorded close by in Areas 6 and 12, was to produce lime in the form of local materials during agricultural improvements. The production of lime for use in the construction of local farm buildings is a further possibility.

The Archaeomagnetic dating has shown that lime manufacture, although on a small scale, continued over a considerable period of time, mid seventeenth to late eighteenth centuries.

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