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**Marfield Quarry - Masham
North Yorkshire
Quarry Extension
Phase 1**

Written Scheme of Works

May 1999

MAP Archaeological Consultancy Ltd

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North Yorkshire
Quarry Extension
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Written Scheme of Works

1. Introduction

This Written Scheme of Works has been prepared 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, 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 1995 - 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 1995i - 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). This Written Scheme of Works details the programme of archaeological work to be undertaken prior to and 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 (SE 8322 2109), approximately 0.9 kilometres south-east of Low Ellington village and covers an area of 5.4 hectares.

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 reddy 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 of approximately 85 hectares. 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 Areas 6, 8, 9, 12, 13 and 14 were assessed by geophysical survey (a total area scan, followed up with a 50% magnetometer survey). The results of this survey are summarised as follows:

Area 6

The initial scan suggested that the majority of the area was relatively magnetically quiet. However, as a number of strong anomalies were noted. The detailed gradiometer survey located 18 anomalies possibly the result of fired remains. Further linear anomalies suggested either ditches or the remnants of ploughing

Area 8

The survey (Fig. 4) 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 (Fig. 5).

Area 9

Survey located a number of pit type anomalies along with linear features, which may represent ploughing of field divisions. The presence of strong anomalies suggested the presence of fired remains.

Area 12

Survey suggested the presence of fired material, i.e. kilns, along with linears which possibly represented geological rather than archaeological features.

Area 13

The survey located several linear features, which may represent old field boundaries. There as also several responses similar to small pit-like anomalies. The survey also located areas of discrete noise of either geological or archaeological explanation.

Area 14

Although this area is dominated by a modern metal pipe weaker anomalies were located. The north-south linear may be a ploughing remnant and to the south a sub circular feature of undetermined nature was recorded.

The majority of the anomalies located were weak but the exceptions occurred in Areas 6, 9, and 12 where stronger anomalies proved in Area 12 to be kilns. This information applied to Areas 6 and 9 suggested similar remains existed. The Geophysical Survey of Areas 6, 8, 9, 12, 13 and 14 has failed to clearly locate any foci for settlement activity.

Fieldwalking Results

A programme of fieldwalking in Areas 6, 9 and 12 was introduced to compliment the geophysical survey.

Area 6

The results of initial fieldwalking in early September 1995 were poor in that only 36 artefacts were recovered. The majority of the finds were of a post medieval or modern date. The presence of flint within the assemblage was interesting and perhaps suggests a prehistoric presence in the vicinity of the area, although its occurrence did not tie in with any of the geophysical anomalies detected within Area 6 .

Area 9

Area 9 was initially walked in three separate areas due to its size (Areas 9A, 9B and 9C : Fig. 6) and the results were variable. Areas B and C were generally poor, pottery was predominantly of post medieval and modern date, although two sherds of medieval pottery were observed in Area C. The quantity of flint observed was high, but of a natural nature with only one piece recorded as worked.

In contrast the occurrence of pottery, worked flint, and stone was much higher in Area A despite the fact that it was the second smallest area and approximately half the size of Area C. Distribution of finds categories pottery, and brick and tile in Area A showed no defined concentrations, but the distribution of flint and burnt stone showed a marked concentration in the north of Area 9 which also appears to correspond with geophysical anomalies in this area. Flint recorded in Areas 9B and 9C was unworked whereas in Area A there was a marked increase in the occurrence of worked pieces namely flakes. As a result of the initial fieldwalking a programme of intensive fieldwalking was conducted in Area 9A.

Area 9A

Intensive fieldwalking of Area 9A produced a varied collection of artefacts consisting of a small flint assemblage, pottery of medieval, post-medieval and modern date, brick and tile, post-medieval and modern glass, modern ironwork, animal bone and a quantity of burnt stone.

The aims of this phase of work were to define distribution patterns seen in the initial fieldwalking and to determine the presence of specific artefact clusters.

The results of the survey showed that artefacts and materials of recent date displayed a fairly even distribution across the area with no specific grouping or clustering. This applied to the distribution of pottery, glass, iron and brick and tile. The distribution of flint and more especially burnt stone showed a marked preference for the western and to a lesser degree the central areas of Area 9A. The occurrence of burnt sandstone along the western section of the survey area was very marked and may suggest activity.

Area 12

Intensive fieldwalking of Area 12 produced a varied collection of artefacts comprising of a small flint assemblage, pottery of medieval, post medieval and modern date, brick and tile, post medieval and modern glass, modern ironwork and animal bone. There were no indications in terms of quantity and concentrations of medieval pottery, stone and other artefacts to suggest the presence of the Swarthorpe vill: indeed the general distribution of material, particularly that of post-medieval and modern date is characteristic of manuring.

Apart from a random background incidence of flint, there is little evidence for any major pre-historic activity within the areas considered. Later Roman material is non-existent and only a small medieval assemblage was recovered suggesting that Areas 6 and 9 are only brought into cultivation within the post medieval period. The higher incidence of medieval pottery in Area 12 can be explained by its proximity to the road and village of Low Ellington.

Excavation

Excavation concentrated on Areas 6, 9, 12 and 14. Areas 6, 9, and 12 were arable and were excavated in between crop rotation. Area 14 was pasture. All the areas were sampled based on the geophysical data.

Area 6

Excavation in August 1996 of six trenches showed that a high number of the anomalies interpreted on the Geophysical Survey as possibly of an archaeological origin could in fact be accounted for by changes in the geology.

The exception to this was located in Trench 4 where a kiln was sectioned. Measuring 2.5m in diameter the kiln possessed both a firing chamber and a stokehole, but with no flue. Archaeomagnetic samples produced a date of 1680-1730 AD.

Area 9

A total of ten trenches were excavated in September 1996. The excavation of seven of the trenches (Trenches 1, 2, 3, 5, 6, 9 and 10) showed that the geophysical anomalies were the result of differences within the drift geology. In Trenches 7 and 8 the geophysical anomalies had been created by modern disturbance; only in Trench 4 were archaeological deposits revealed.

The burnt pit in Trench 4 was unlike the limekilns found in Areas 6 and 12 as it lacked the flue and stoke/raking-out hole, present in the previously excavated kilns. It was also sub-rectangular rather than circular or oval, and had a different west to east alignment. In addition, to judge from the thinness and generally discontinuous nature of the baked material forming its edges it had not been subjected to the same degree of burning.

Archaeomagnetic dating of the feature produced a date of 1585-1650 AD.

Area 12

The geophysical survey had suggested the presence of kilns in this area and as this area was also a possible site for the lost village of Swaythorpe it was decided to undertake in the first instance Trial Trenching to ascertain the nature of the anomalies located.

Trial Excavation

In early December 1995, nine trenches were excavated. All topsoil from each trench was mechanically removed and the underlying upper surface of the exposed drift was cleaned by hand. Trenches 5, 6, 7, 8 and 9 were located to cut across certain of the suspected linear anomalies located by the geophysical survey. Trenches 1, 2, 3 and 4 were located to assess anomalies with a high magnetic reading.

In all cases, the trenches across the linear features illustrated variations in the drift geology, and not of archaeological origin. Trenches 1, 2, 3, and 4 proved to contain kiln type structures all sealed beneath the topsoil.

Sample Excavation

The sample excavations in Area 12 concentrated on Trenches 1-4, where two of the kilns were fully excavated and two were half sectioned. All the four features were of the late medieval/post medieval tradition; small, horseshoe shaped in plan, single flue kilns, fired from a stokehole at one end. Archaeomagnetic dating of three of the kilns produced a date of between 1650 and 1740 .

This type of kiln was used for a variety of purposes from pottery production to agricultural activities. Pottery production sites are normally indicated by large amounts of waste pottery sherds but these did not appear in the record in any of the various stages of the evaluation of Area 12. The lack of any finds or associated features suggests that these features were used in the production of lime for agricultural practices.

5. Development Impact

Mineral extraction in Phase I (Area 8) will remove standing earthworks consisting of a hedge bank with associated wall and lynchets. In addition Geophysical Survey suggested the presence of pit like anomalies, linear features and possible burnt/fired remains within the defined area of Phase I extraction.

6. Work Programme

Earthwork Survey

Standing earthworks were located within the Phase I extraction area and should therefore be recorded prior to destruction.

1. The programme is to comprise of a hachured topographical earthwork survey with appropriate levels above Ordnance Datum.

2. The survey is to locate, describe, record and where possible interpret the earthworks encountered within the extraction zone. All earthworks are to be located on a plan at 1:500 scale with all complex relationships, specific features and sample profiles identified at a larger scale, as appropriate.

3. Drawn records are to be related to Ordnance Survey datum (grid references and spot heights) and to published boundaries, where appropriate.

Watching / Recording Brief

Geophysical Survey has suggested the presence of archaeological features within Phase 1. As the exact nature of these anomalies is presently unknown it is suggested that works commence in Phase I under a Watching Brief programme but that this should be upgraded to a Recording Brief with a further contingency clause (see section 7 below) should the need arise.

The archaeological works are detailed below :

1. The aim of the brief is to enable recording and recovery of archaeological remains which may be affected by the proposed development. The brief may require that construction work within the development site to be held up while archaeological investigation takes place and the developer should allow for this possibility.
2. Contractors removing overburden (i.e. loose vegetation, turf, loose stones, rubble, modern sterile infill materials, tarmac, concrete, hardcore, building debris and topsoil) shall be supervised by the archaeologist undertaking the brief.
3. Overburden should be removed by machine, using a back-acting excavator fitted with a **toothless ditching or grading bucket only**. Where overburden is exceptionally difficult to lift, a toothed bucket may be used temporarily. Subsoils and other soil materials below the overburden may be removed by machine but only in areas specified by the Archaeologist on site, and with constant archaeological supervision.
4. The contractors shall inform the Archaeologist of the correct timing and schedule of overburden removal, giving at least 10 working days. This information will then be passed onto the Sites and Monuments Record Officer (Heritage Unit, NYCC).
5. Where structures, soil features and finds of archaeological interest, are exposed or disturbed by construction works, the Archaeologist shall be provided with the opportunity to observe, clean, assess, hand excavate, sample and record these features and finds. Heavy plant or excavators shall not be operated in the near vicinity of archaeological remains until the

remains have been recorded and the Archaeologist on site has allowed operations to recommence at that location.

6. Upon completion of fieldwork, samples shall be processed and all finds shall be cleaned, identified, assessed, spot-dated and properly stored. A field archive shall be compiled consisting of all primary written documents, plans, sections and photographs. Arrangements shall be made to transfer the archive to a museum or records office.
7. A report will be produced containing planning details about the site, a summary of the works undertaken, a description and interpretation of the finds, an assessment of the importance of the archaeology, including its historical context, and a catalogue of finds, features and primary records. All excavated areas will be accurately mapped with respect to nearby buildings and roads. All significant features will be illustrated with conventional scaled plans, sections and photographs. Where few or no finds are made a scaled down report indicating the nature and results of the work with illustrative plans will be submitted.
8. Five copies of the final report will be produced, two for the developer, one for the County SMR, one for Harrogate Museum and one for Harrogate District Council.

7. Contingency Arrangements

Should the archaeology be demonstrated to be of a significantly unique regional or national character then a contingency must be in place to allow the full excavation of the area in question and post excavation analysis. The following would be immediately informed:

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