

Marfield Quarry - Masham
Archaeological Evaluation
Area 12

Sample Excavation

Marfield Quarry - Masham
Archaeological Evaluation
Area 12
Sample Excavation

Contents	Page
Figure List	2
Plate List	2
Introduction	3
Previous Archaeological Work	3
Archaeological Excavation	4
Summary	6
Discussion	7
Appendices	
1. Context Listing	8

Figure List

	Page
1. Site Location.	10
2. Area Location	10
3. Geophysical Survey - interpretation.	11
4. Kiln and waste dump locations.	12
5. Trench Location.	13
6. Feature 1003 - Kiln 1.	14
7. Feature 2003 - Kiln 2.	15
8. Feature 3003 - Kiln 3.	16
9. Feature 4003 - Kiln 4.	17

Plate List

1. Kiln 1. Facing east.	18
2. Kiln 3. Facing east.	18
3. Kiln site under excavation - Donyatt.	19

Marfield Quarry - Masham
Archaeological Evaluation
Area 12
Sample Excavations

Introduction

The area of the proposed extension to Marfield Quarry known as Area 12 comprises a hedge bounded field located to the north-west of the existing quarry, and immediately east of the A6108 road which forms the field's western boundary (SE 2085 8290 : Figs. 1 and 2).

The field is generally gently undulating, rising to the east but with a pronounced dip in the north-west corner. The soils at the site are brown earths of the East Keswick Association formed over a parent of drift derived from Palaeozoic and Mesozoic sandstones and shales.

All maps within this report are produced under License No. AL 50453A, with permission from the Controller of Her Majesty's Stationery Office, (C) Crown copyright.

All work has been funded by Redland Aggregates Ltd.

Previous Archaeological Work

As part of a pre-planning evaluation of the areas within the proposed Marfield Quarry extension, Area 12 had previously been assessed by:

- a. Desktop Evaluation
- b. Fieldwalking
- c. Geophysical Survey

a. Desktop Survey

The desktop survey had uncovered a number of historical references to the "lost village of Swarthorpe"; a vill recorded in the Domesday Survey of 1086, but not mentioned in the documentary sources since the late 12th century. Certain of the sources examined suggested that the site of Swarthorpe lay within Area 12, others that it may exist further to the north. Fieldwork subsequent to the desktop survey suggests that Swarthorpe is unlikely to lay within Area 12.

b. Fieldwalking

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 Swarthorpe vill, indeed the general distribution of material, particularly that of post-medieval and modern date is characteristic of distribution by manuring, with little clustering apparent.

c. Geophysical Survey

A geophysical survey of Area 12 was carried out by Geophysical surveys of Bradford, using a fluxgate gradiometer. The survey revealed a number of anomalies, the most substantial of which were considered likely to be indicative of kiln type structures (Figs.3 and 4). Lesser anomalies suggested the possibilities of a series of linear features. No evidence was found to suggest the presence of the vill of Swarthorpe.

Archaeological Excavation

In early December 1995, a series of nine archaeological evaluation trenches were excavated in Area 12 (Fig. 5). 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 so as to coincide with these anomalies whose high reading suggested possible kilns.

In all cases, the trenches across the linear features when examined proved that the anomalies were related merely to variations in the drift geology, probably being the result of peri-glacial processes, and not of archaeological origin. Trenches 1, 2, 3, and 4 proved to contain kiln type structures all sealed beneath the topsoil.

Trench 1

Trench 1 contained Feature 1003. This feature was sub circular in shape with an external diameter of 3m with a small projection, probably a flue, apparent at the east end; whilst an opening some 1.9m long by 1.30m wide was present to the west (Fig. 6 : Pl. 1).

The outer edges of the feature displayed three distinct bands of varying colours, contexts 1005, 1006 and 1007 (Fig. 6 : Pl. 1) which measured on average 0.20m in thickness. These differences possibly relate to the variable temperature and oxidizing conditions affecting the feature and the finer clay inner lining in particular (context 1005). The north side of the feature had a thin inner band of burnt material (context 1004).

The material inside the feature, a stony clayey silt (context 1008), was similar to that of the surrounding drift, though it is clear that some of this material at least is fill within the features structure's. Immediately west of the opening into Feature 1003, a silty material (context 1009) was noted. It is not certain how this relates to Feature 1003.

The general appearance and associated contexts suggest that Feature 1003 is a kiln, this interpretation compliments the initial interpretation of the geophysical survey and corresponds with similar known excavated features (Pl. 3). If this interpretation is accepted then deposit 1009 could conceivably be the fill of a small stokehole. Although no plough marks could be seen cutting through the exposed surface of the structure, it is apparent that the upper part of the kiln has been truncated, probably by ploughing. Plough soil in this area of the site was

recorded as being 0.35m deep.

Just to the south of the southern wall of Kiln 1 a single piece of vitrified clay was recovered (SF. 1).

Trench 2

Trench 2 contained Feature 2003 of a similar size, shape and construction to Feature 1003, it seems reasonable to assume that this feature also represents a kiln. Located 30m to the south (Fig. 3) it had an external diameter of 3m. A similar flue-type projection was noted at the east end of kiln 2 with a stokehole measuring 1.6m long and c. 1m wide in the west.

The shape of the kiln was delineated by a series of contexts averaging in total 0.20m in thickness (contexts 2004, 2005 and 2006). These deposits enclosed a deposit of silty clay-clay silt (context 2007: Fig. 7).

A break in the south-western wall close to the flue would appear to represent plough damage (context 2010). Plough soil covering Kiln 2 was recorded as 0.35m in depth.

Trench 3

Trench 3 was located directly over a feature suggested by geophysical survey to represent a kiln. Removal of the topsoil (context 3001) located a feature (context 3003) identical to Kilns 1 and 2, but of a slightly smaller size, measuring 2.3m in diameter (Pl. 2). The delineation of the structure was represented by contexts 3004, 3005, 3006 and 3007. Immediately to the east of these contexts on the eastern of the kiln was a deposit of silty clay with no stone (context 3012: Fig. 8). No flue was apparent although approximately 1m to the west of the structure a deposit of burnt clay (context 3009: Fig. 8) was recorded.

The interior of the kiln possessed a deposit identical to that recorded within Kilns 1 and 2 (context 3008).

Not only was this kiln smaller than the two previously described, it had also suffered more damage, plough scars were noted crossing the feature on a east-west alignment (contexts 3010 and 3011). The degree of damage is explained by a very shallow deposit of plough soil (context 3001) measuring only 0.25m in depth which covered and partially protected this feature.

Trench 4

Trench 4 was excavated to test the integrity of a subcircular geophysical anomaly which was initially interpreted as a ferrous deposit.

Excavation showed that in fact the feature (context 4003) represented another kiln measuring 2.8m in diameter. The form of the feature was identical to those previously described with delineation contexts 4004, 4005, 4006 and 4007, and an interior deposit of material (context 4008). A trace of a flue was noted to the east, and a deposit of burnt sandstone (context 4009)

was recorded immediately to the west of the kiln (Fig. 9).

Kiln 4 had also suffered plough damage, as shown by the plough scars (contexts 4009 and 4010) and only 0.20m of plough soil (context 4001) covered the feature.

The degree of damage to the feature would tend to explain why the magnetometer reading was less concentrated. Based on the results of the assessment in Trench 4 the interim geophysical survey results were re-assessed with the objective of locating further anomalies which may represent kilns within the surveyed area of Area 12 (Fig. 4).

Trenches 5-9

Trenches 5-9 were excavated to test the integrity of a number of linear anomalies (Fig. 3) which were believed to represent archaeological features.

Trench 5: situated in the eastern sector of Area 12. Geophysical survey had detected a sinuous linear aligned north to south with further linears aligned east west at right angles to the main linear. Removal of the topsoil (context 5001) and hand cleaning failed to locate any archaeological features within the trench, although it was noted that there were marked changes in the geology based on the varying quantities of cobbles in the subsoil which probably explains the anomalies located.

Trench 6: placed over a north-west south-east aligned linear and the western extent of a curvilinear feature, excavation showed only variations in the underlying subsoil and no archaeological features or finds were recovered from this trench.

Trench 7 : along the western boundary of the survey area is a north-east south-west aligned linear anomaly bisected in two places by east-west linears (Fig. 3). Trench 7 was placed at an intersection of a set of the linears to test their nature.

At the point excavated a change in the subsoil was noted from sand and cobbles to a much more clayey deposit with cobbles. There was no indication of archaeological features here, therefore it is suggested that the geophysical anomalies either represent changes in the subsoil or indicate ghost ridge and furrow.

Trenches 8 and 9: located over an east-west aligned linear, excavation in both trenches did not reveal any negative cut features within these trenches, although there was the suggestion that this linear may actually be the remnants of a lynchet.

Excavation in Trench 9 did not locate the circular anomaly believed to be a waste dump from the geophysical survey. As the location of the trenches were pre-determined by the Geophysical Contracts (Geophysical Surveys of Bradford), the nature of this anomaly is therefore called into question.

Summary

The sample excavations in Area 12 designed to test the interpretation of a number of geophysical anomalies showed that the majority of the linears located were of a geological rather than an archaeological origin. There is the suggestion that other linears may be ghost ridge and furrow or the remnants of lynchets. Perhaps of more importance is the discovery of four features, with the possibility of further similar features as shown by the geophysical survey, which appear on nature and form to represent kilns.

Discussion

Superficially the features appear to represent kilns in the late medieval/post medieval tradition; small, horseshoe shape in plan, single fire kilns, fired from a stokehole at one end.

This type of kiln was used for a variety of purposes from pottery production (Pl. 3) 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 makes identification of the kilns impossible; until further excavation occurs the possible function of the kilns can only be postulated.

APPENDIX 1

Context Listing

1000 - Trench 1

1001 - 10YR 3/2 sandy loam : plough soil

1002 - 10YR 5/4 clay silt - silty clay : subsoil

1003 - kiln

1004 - 10YR 2/1 - 3/1 sandy clay

1005 - 2.5YR 5/8 sandy clay

1006 - 5YR 3/2 sandy clay

1007 - 5YR 4/4 sandy clay

1008 - 10YR 5/4 clay silt - silty clay

1009 - 10YR 5/2 clay silt - silty clay

1010 - ?flue line

2000 - Trench 2

2001 - 10YR 3/2 sandy loam : plough soil

2002 - 10YR 5/4 clay silt - silty clay : subsoil

2003 - kiln

2004 - 2.5YR 5/8 sandy clay

2005 - 5YR 3/2 sandy clay

2006 - 5YR 4/4 sandy clay

2007 - 10YR 5/4 clay silt - silty clay

2008 - 10YR 5/2 clay silt - silty clay

2009 - ?flue line 10YR 5/2 clay silt - silty clay

2010 - plough scar

3000 - Trench 3

3001 - 10YR 3/2 sandy loam : plough soil

3002 - 10YR 5/4 clay silt - silty clay : subsoil

3003 - kiln

3004 - 2.5YR 4/6 sandy clay

3005 - 10YR 3/1 sandy clay

3006 - 5YR 3/3 sandy clay

3007 - 5YR 4/3 silty clay

3008 - 10YR 5/2 clay silt - silty clay

3009 - 2.5YR 5/8 clay

3010 - plough scar

3011 - plough scar

3012 - 10YR 6/4 silty clay

4000 - Trench 4

4001 - 10YR 3/2 sandy loam : plough soil

4002 - 10YR 5/4 clay silt - silty clay : subsoil

4003 - kiln

4004 - 2.5YR 4/6 sandy clay

4005 - 10YR 3/1 sandy clay

4006 - 5YR 3/3 sandy clay

4007 - 5YR 4/3 silty clay

4008 - 10YR 5/2 clay silt - silty clay
4009 - plough scar
4010 - plough scar
4011 - burnt sandstones

5000 - Trench 5
5001 - 10YR 3/2 sandy loam : plough soil
5002 - 10YR 5/4 clay silt - silty clay : subsoil

6000 - Trench 6
6001 - 10YR 3/2 sandy loam : plough soil
6002 - 10YR 5/4 clay silt - silty clay : subsoil

7000 - Trench 7
7001 - 10YR 3/2 sandy loam : plough soil
7002 - 10YR 5/4 clay silt - silty clay : subsoil

8000 - Trench 8
8001 - 10YR 3/2 sandy loam : plough soil
8002 - 10YR 5/4 clay silt - silty clay : subsoil

9000 - Trench 9
9001 - 10YR 3/2 sandy loam : plough soil
9002 - 10YR 5/4 clay silt - silty clay : subsoil

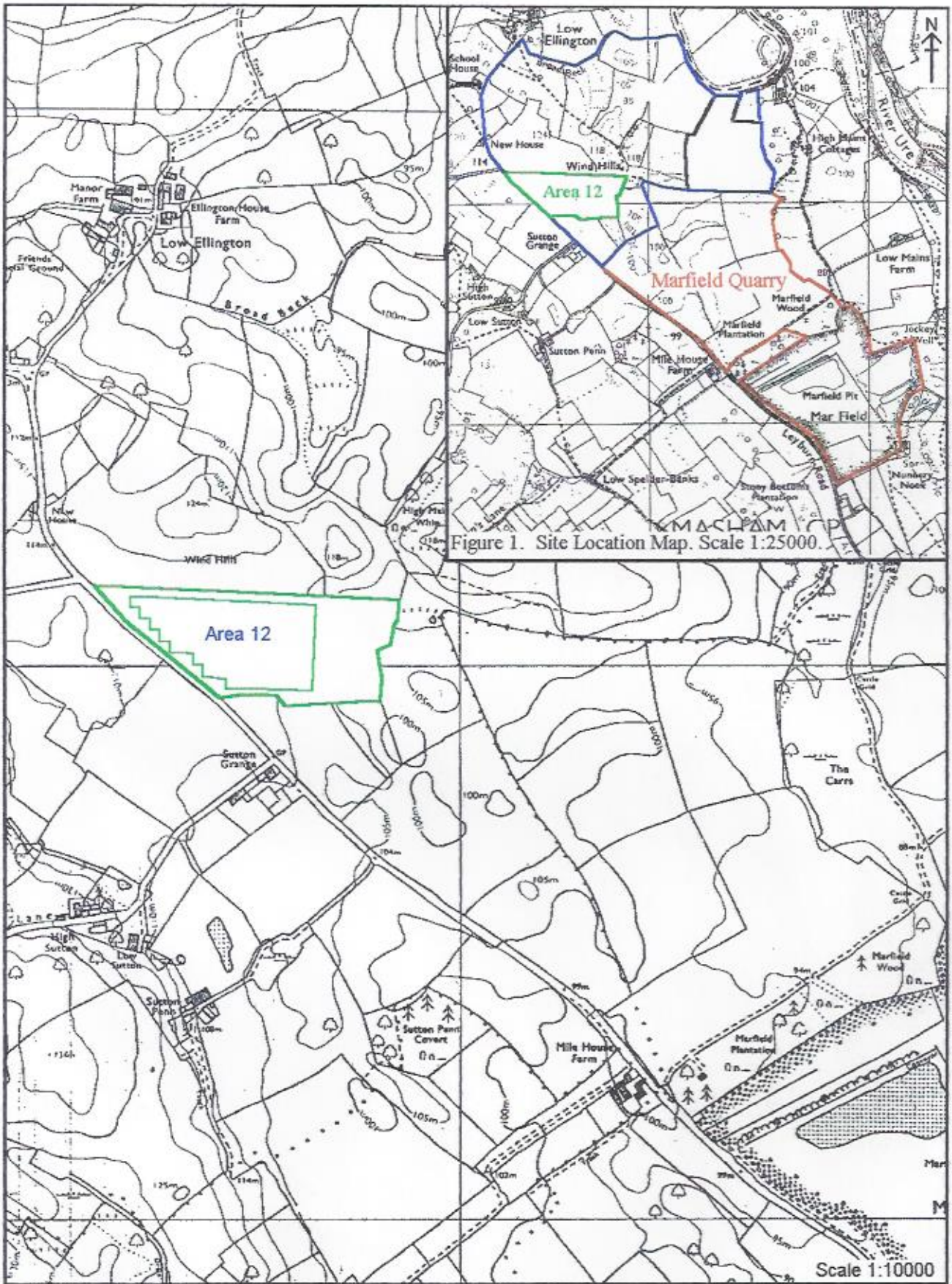


Figure 2. Location of Area 12.

Area 12
 Interpretative Plan of Geophysical Anomalies



Figure 3.

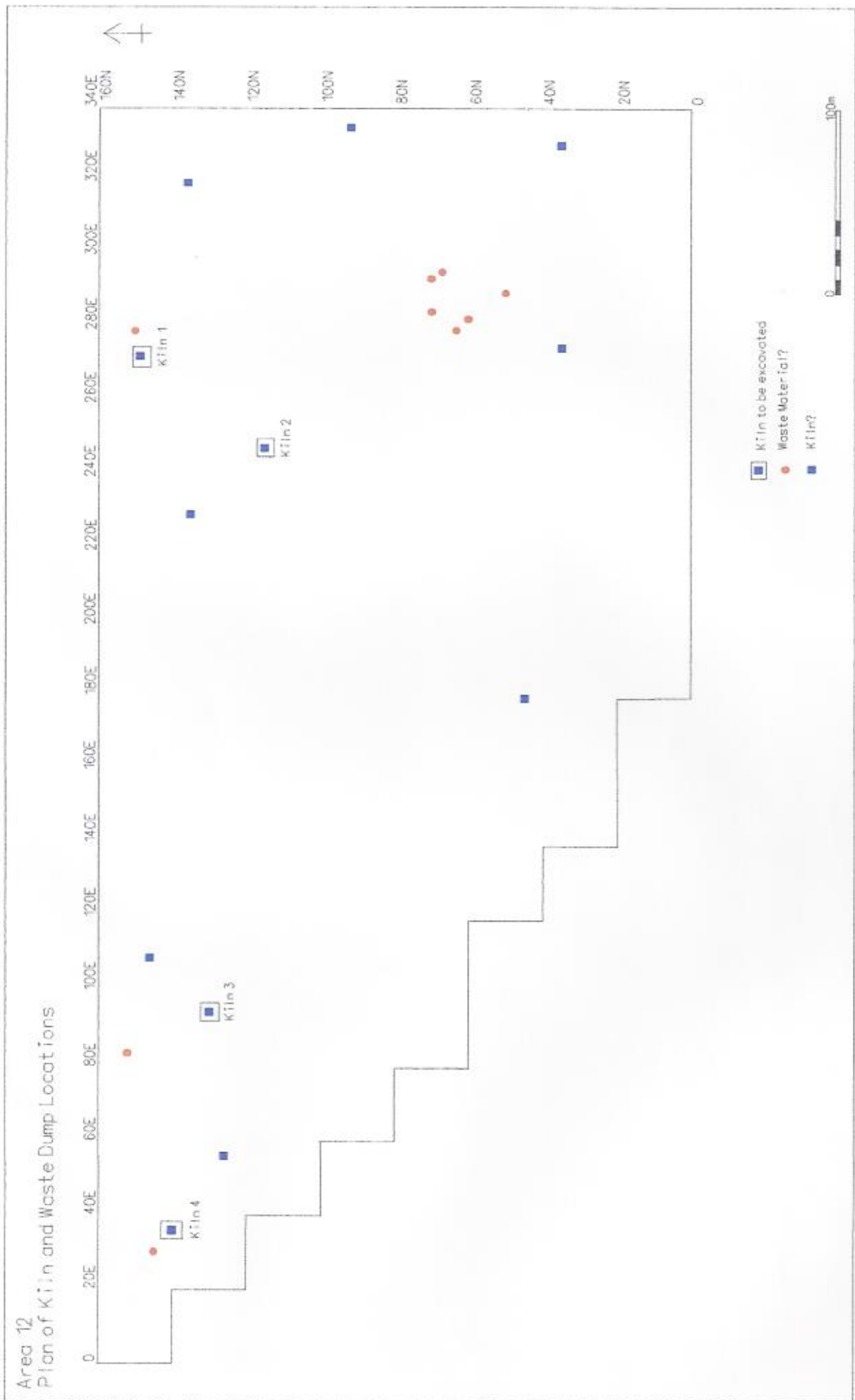


Figure 4.
12

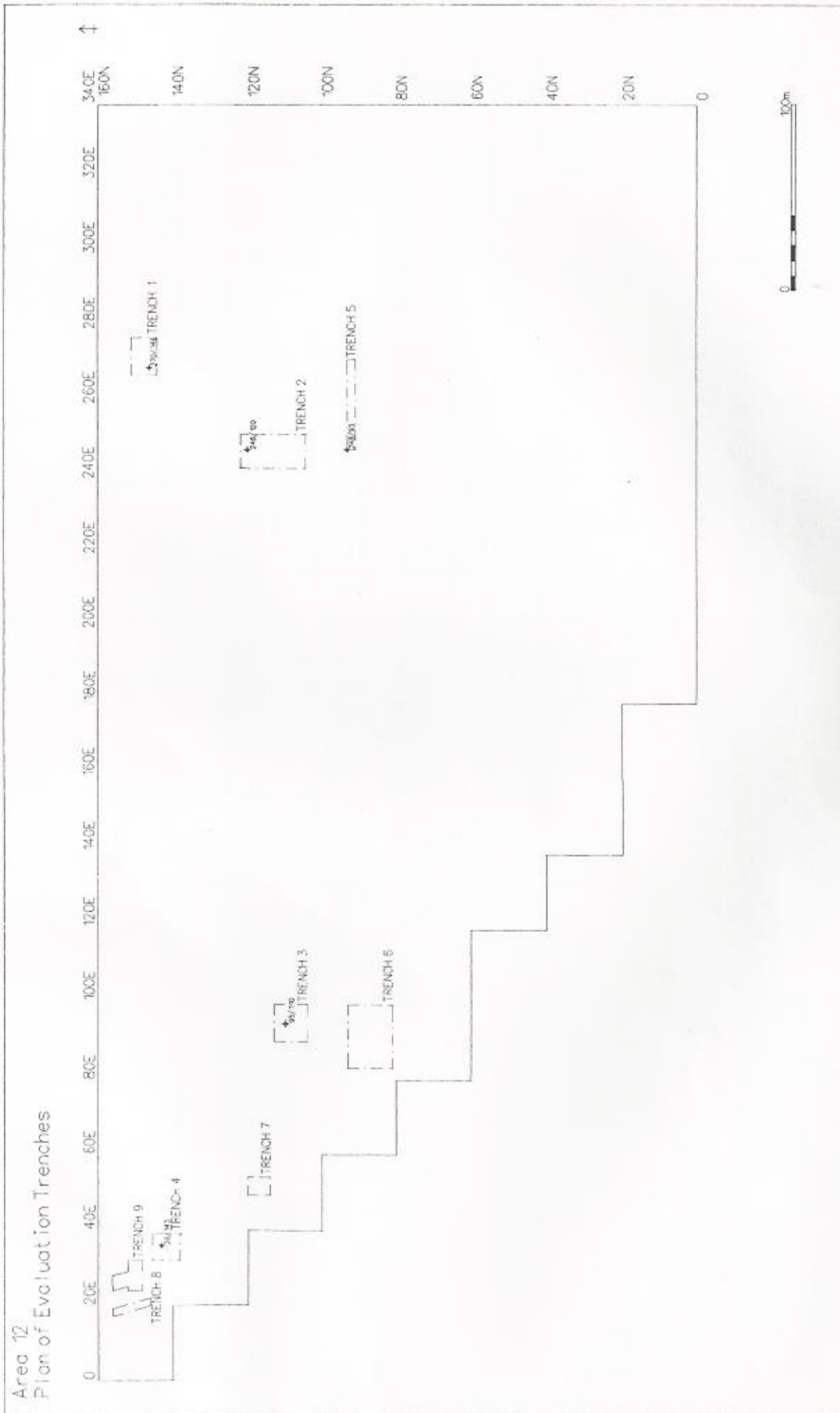


Figure 5.



Figure 6.



Figure 7.

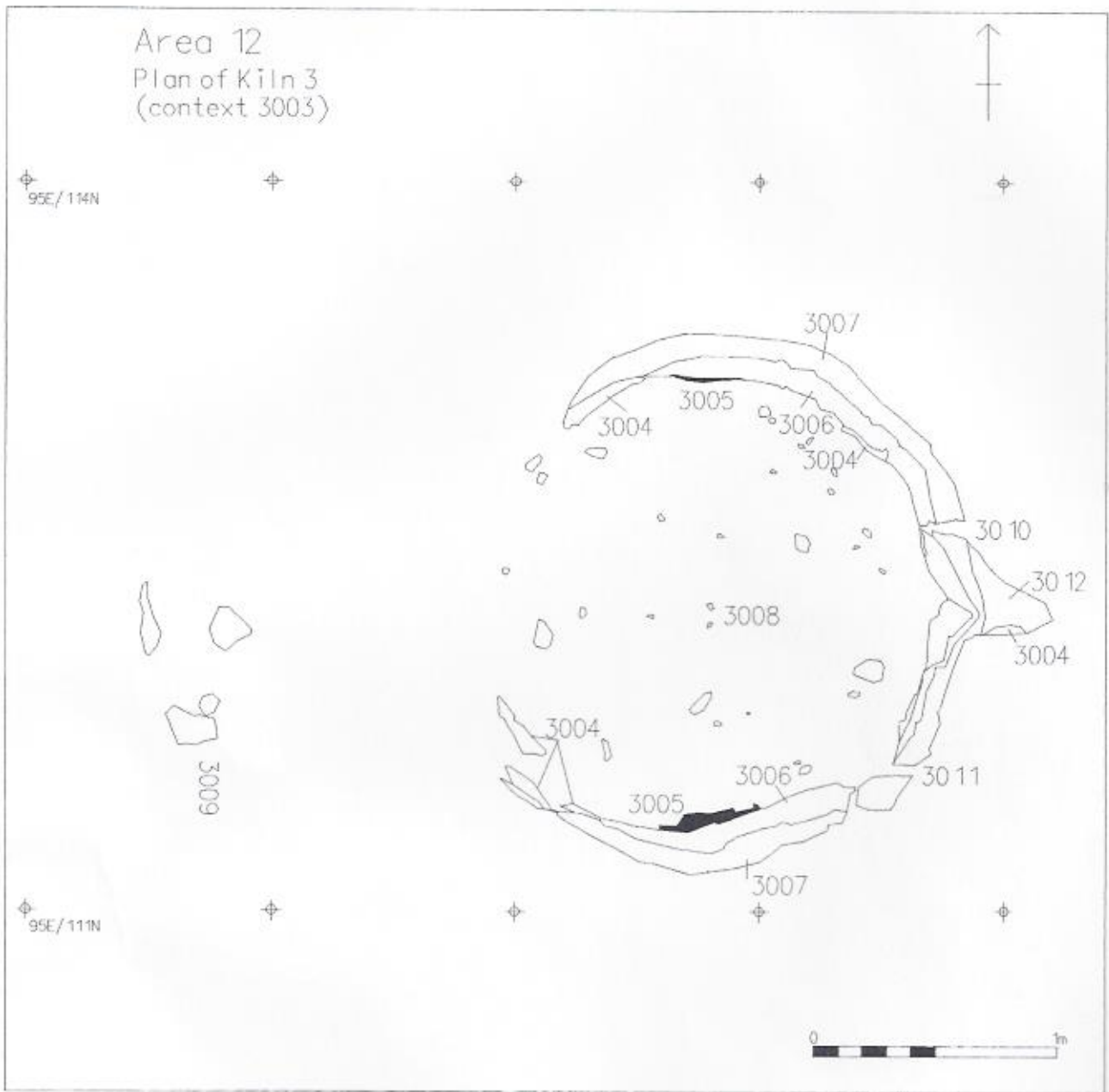


Figure 8.

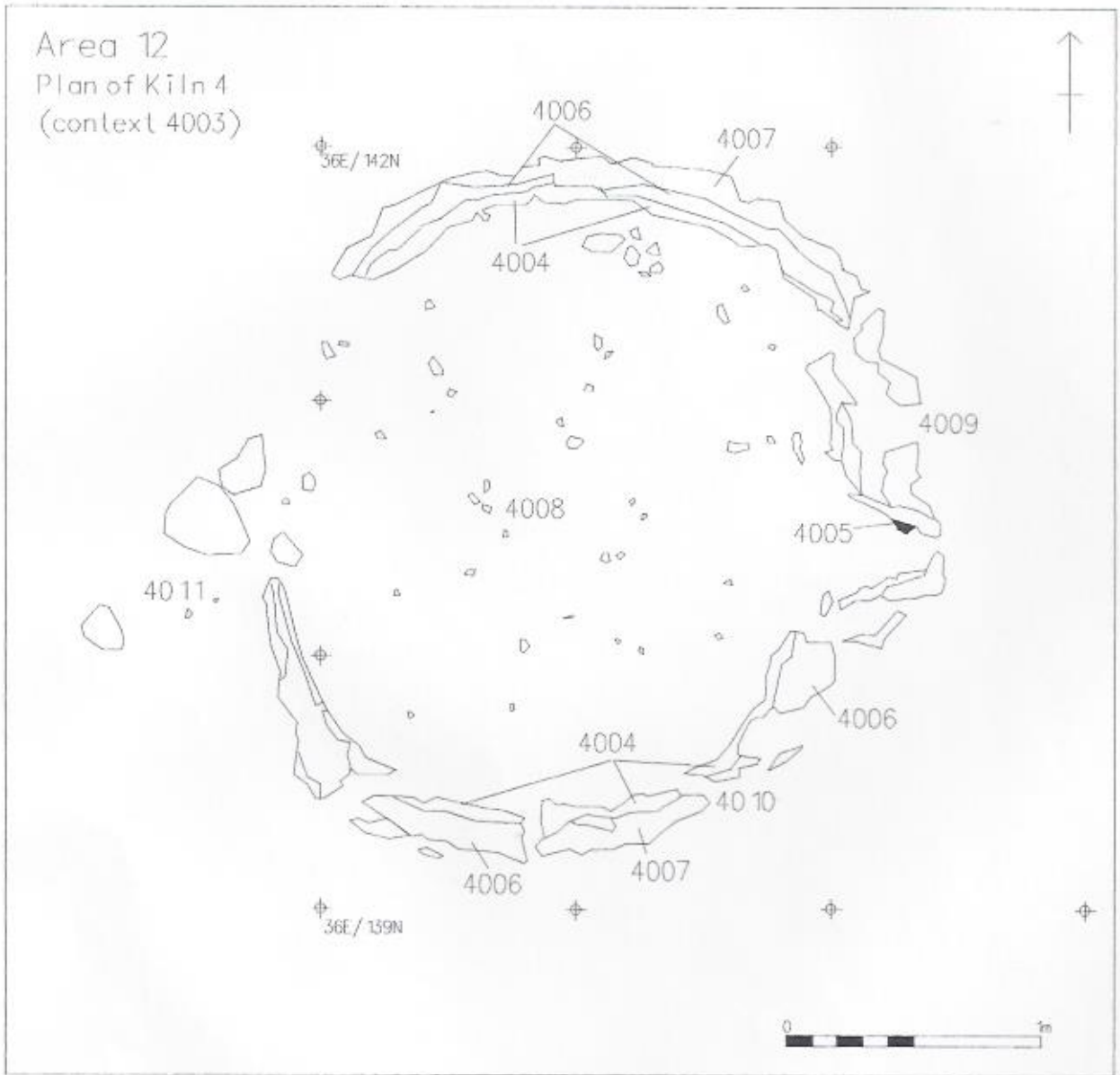


Figure 9.



Plate 1.
Kiln 1. Facing east.



Plate 2
Kiln 3. Facing east.

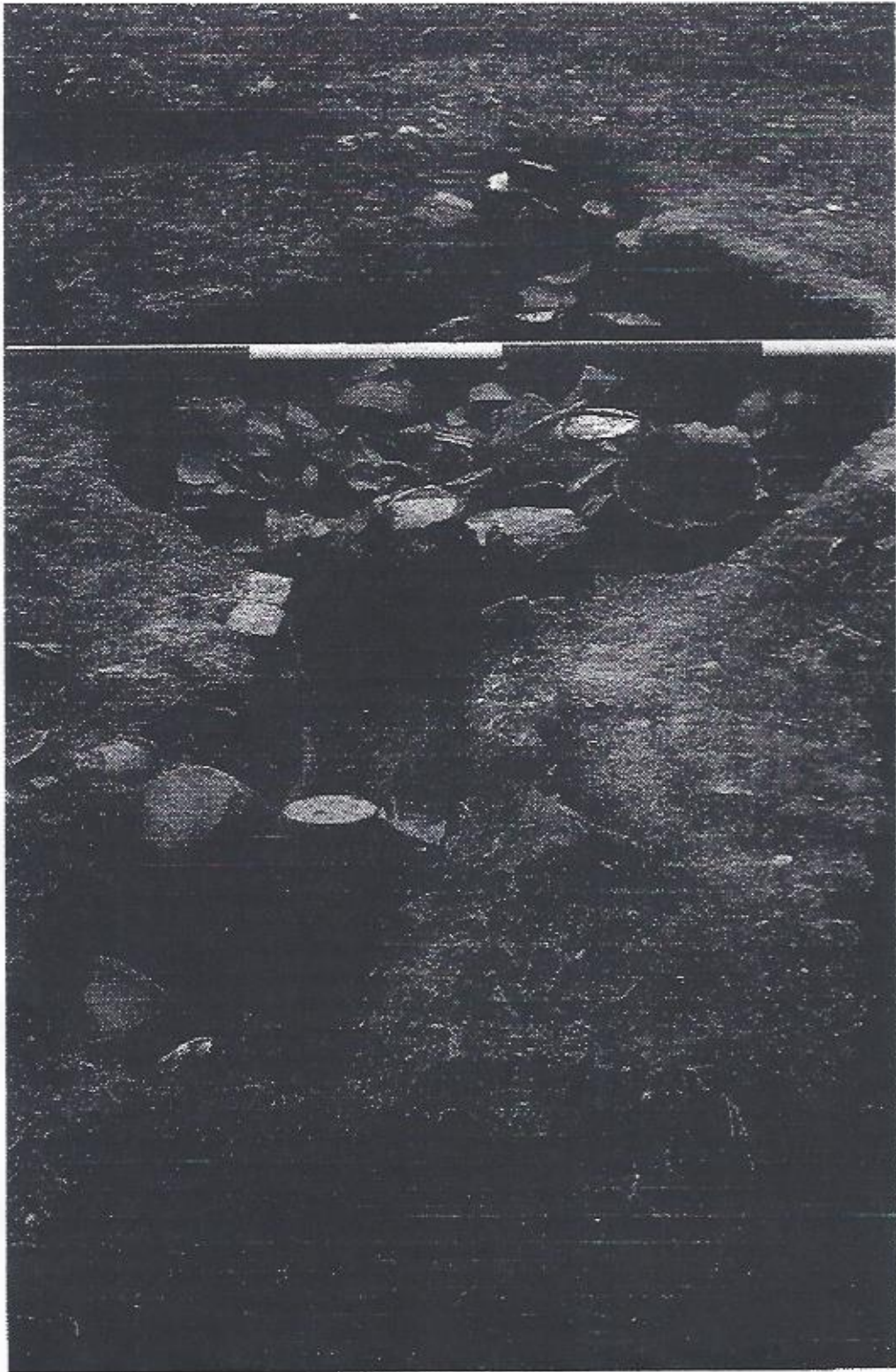


Plate 3. Kiln Site under Excavation - Donyatt.