# A Contour Survey and Archaeological Evaluation of Birchover Quarry, Matlock.

Excavation of a test pit at Birchover Quarry.

**ARS Ltd Report 2007/73**
November/December 2007

**Compiled By:**
**Jessika Shakarian and Brian Marshall**
Archaeological Research Services Ltd
Angel House,
Portland Square,
Bakewell,
Derbyshire,
DE45 1HB

admin@archaeologicalresearchservices.com
www.archaeologicalresearchservices.com

**Checked By:**
Dr. Richard Chatterton
Tel: 0191 477 5111
Fax: 0191 477 7687

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## EXECUTIVE SUMMARY

*In November and December 2007 Archaeological Research Services Ltd were commissioned by Birhchover Stone Ltd to undertake an archaeological contour survey and evaluation. The work was carried out during November and December 2007 prior to a possible 1 ha extension to the quarry. A Desk-Based Assessment had been undertaken by Trent and Peak Archaeological Unit (March 2007) which asserted that the land which is the subject of the proposed extension was probably a Post-Medieval intake from the Moor.*

*Birchover Quarry lies immediately to the south of Stanton Moor, a scheduled ancient monument due to the rich evidence of Bronze Age funerary and ceremonial monuments identified.*

*No features of archaeological significance or buried land surfaces were identified as a result of this programme of work*

## 1. INTRODUCTION

1.1 In November/December 2007 Archaeological Research Services Ltd were commissioned by Birchover Stone Ltd to undertake an archaeological contour survey and evaluation of land which was proposed to be an extension of Birchover Quarry (Fig. 1). A Desk- Based Assessment was undertaken by Trent and Peak (2007) which asserted that the land of the proposed extension was probably a Post-Medieval intake from the Moor (Fig. 1). The work was carried out prior to a proposed 1 ha extension to the quarry and included a three stage process which was intended to assess the presence, nature, horizontal extent and depth of potential archaeological remains in the proposed extraction/storage area.

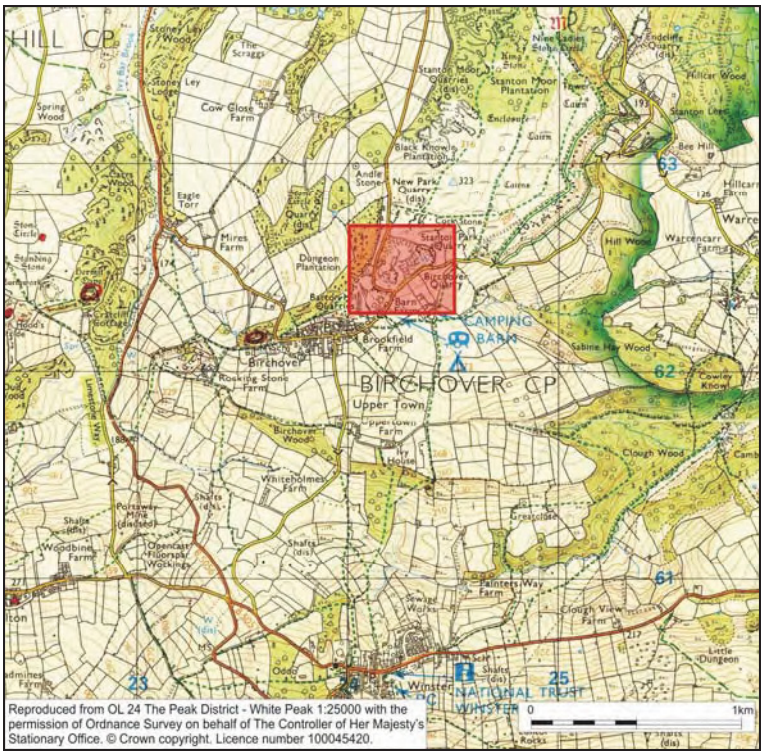



Fig. 1 Site location

## 2. LOCATION AND GEOLOGY

2.1 Birchover Quarry is located approximately six miles from Matlock, immediately south of Stanton Moor. The proposed area of extraction is centred on SK 24436255, lying within the parish of Stanton.

2.2 Stanton Moor is situated on an outcrop of sandstone. The solid geology of the site consists of sandstone that makes up part of the Millstone Grit Group (Aitkinhead, N. 2002).

## 3. BACKGROUND

Stanton Moor has widespread evidence of a pattern of Bronze Age burial and ceremonial monuments including ring cairns, barrows and four Bronze Age stone circles, of which the best known is Nine Ladies. The fieldwhich is the subject of the proposed extension of the quarry is part of a group of fields that may represent post-medieval encroachment, or intakes, of the moorland for pasture (Guilbert, 2007, 5). The field does not appear on the Stanton Enclosure Award of 1819 which suggests that the intakes were created sometime later possible between 1820 and 1864 (Guilbert, 2007, 5).

## 4. METHODOLOGY

4.1 A grid was laid out at 10m intervals over the extraction area, which is 0.88ha in extent (Fig.2). Spot heights were recorded on a 2m grid over the area (c.2, 200 points) using an EDM and from the recorded data a location plan was drawn which included contours to OD values at suitable intervals to depict the detailed topography.

4.2 Five test pits, measuring 1m x 1m, were selected to include the range of topographical locations present within the extraction area. The five pits were excavated by hand to the first natural horizon beneath which no archaeological deposits would be found. Excavation was in 5cm spits and finds were to be attributed to spit, and stratigraphic unit. Soil was broken down sufficiently to allow recovery of artefacts that could be less than 1cm in diameter. Following the discovery of any artefacts within a pit, and if the nature of the subsoil permitted, a 25% sample of the subsequently excavated material in that pit was sieved through a 7mm mesh. On the completion of the excavation of each pit, at least one section was recorded by photograph and a drawing at a scale of 1:10.

4.3 All five pits were left open until inspected by the Senior Conservation Archaeologist for the Peak District National Park Authority. At this point the number of remaining test pits and their location were determined by the Senior Conservation Archaeologist.

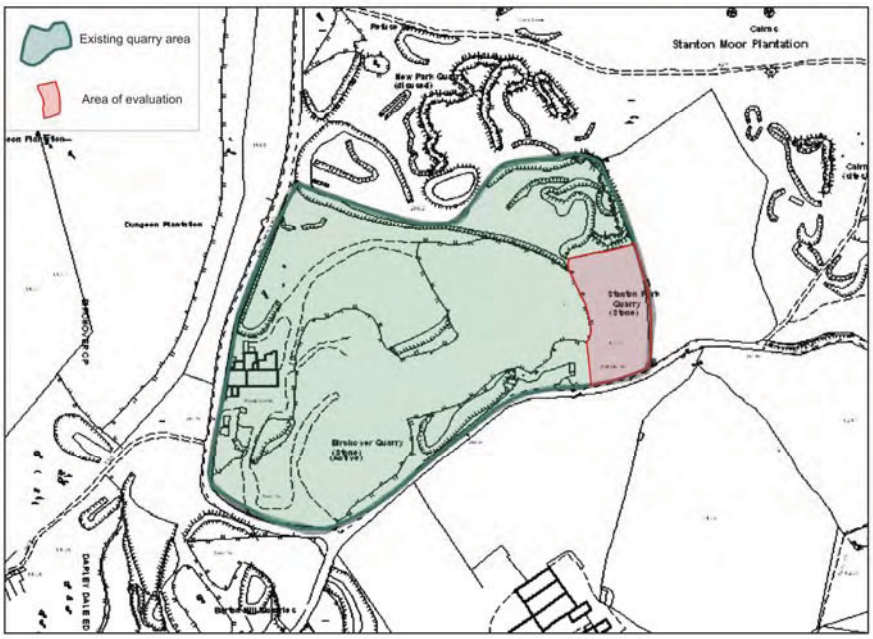



Fig. 2 Plan of the site showing the proposed extension area to be evaluated.

## 3. RESULTS

### 3.1 Contour Survey

3.1.1 The contour survey revealed the remains of two walls and a small building (Fig. 3) which were already known. One wall ran on a north south alignment down the eastern extent of the site, representing the field's old boundary wall. The building, described in the Desk-Based Assessment (Guilbert, 2007, 6), is positioned 27m south along this wall from its northern end at the top of the slope. The second wall runs in to the field from this building on an east west alignment. These structural remains represent old boundary walls and possibly a barn or byre (Guilbert, 2007, 6).

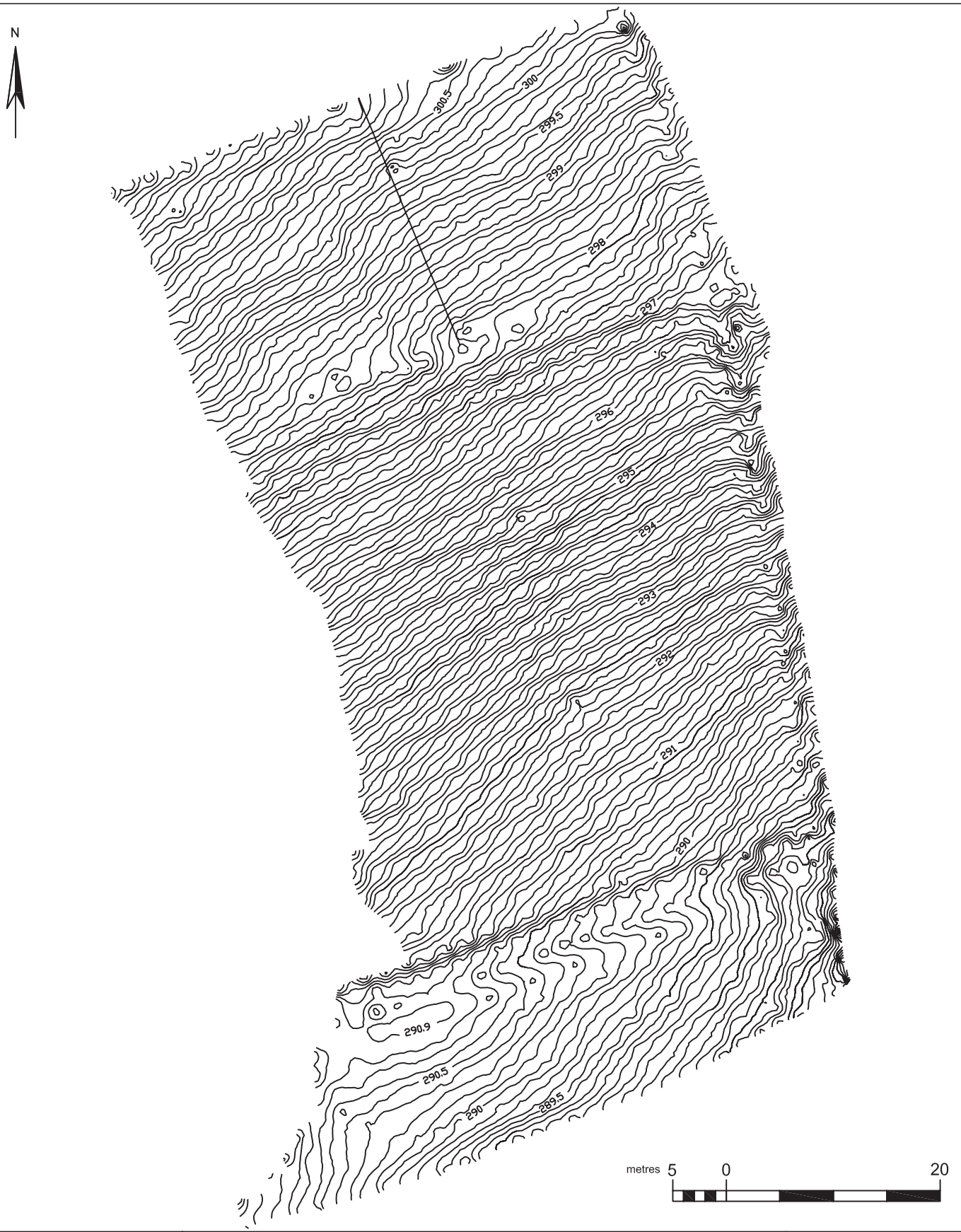
3.1.2 The contour survey also identified a ridge at the base of the slope where the site flattens out towards the road. Five test pits were excavated where the slope flattens out no archaeological remains were identified. It is believed that this area of the field represents the remains of a 1950s -60s spoil heap from quarrying activity around this time (Guilbert, 2007, 1). The regular tight banding in the contour survey found across the site has been interpreted as the remains of plough patterning. This is confirmed with the discovery of a plough mark found on a boulder within Test Pit 5D.

### 3.2 Test Pits

3.2.1 The first five test pits were opened by hand and the spoil was sieved for small finds. Each pit was located on a plan, drawn and recorded. There were no archaeological features, deposits, buried land surfaces or small finds located within the five pits. After consultation with the Senior Conservation

Archaeologist at the Peak District National Park Authority the decision was made to excavate a further 25 pits at regular intervals across the site. Due to the natural slope of the hillside it was decided that the more level ground at the top of the hill would be more likely to reveal archaeological features, and as a result the pits were concentrated in this area (Fig. 4).

3.2.2 The stratigraphy of the test pits did not vary significantly. The topsoil was mainly a fine, mid brown (710YR 4/3) sandy soil with a maximum thickness of 0.5m at the south of the site where it was deepest. The topsoil had sandstone inclusions throughout. The subsoil consisted of a mixture of the natural sand (004) and the topsoil (001) and had a maximum thickness of 0.1m. The natural alluvium consisted of a fine, brown mottled (7.5YR 4/6) sand (003) that had large sandstone blocks within it (Fig. 5), and an orange sand (5YR 5/8) that was compacted with sandstone inclusions (004) (Fig. 6). Both contexts (003) and (004) were found across the site.

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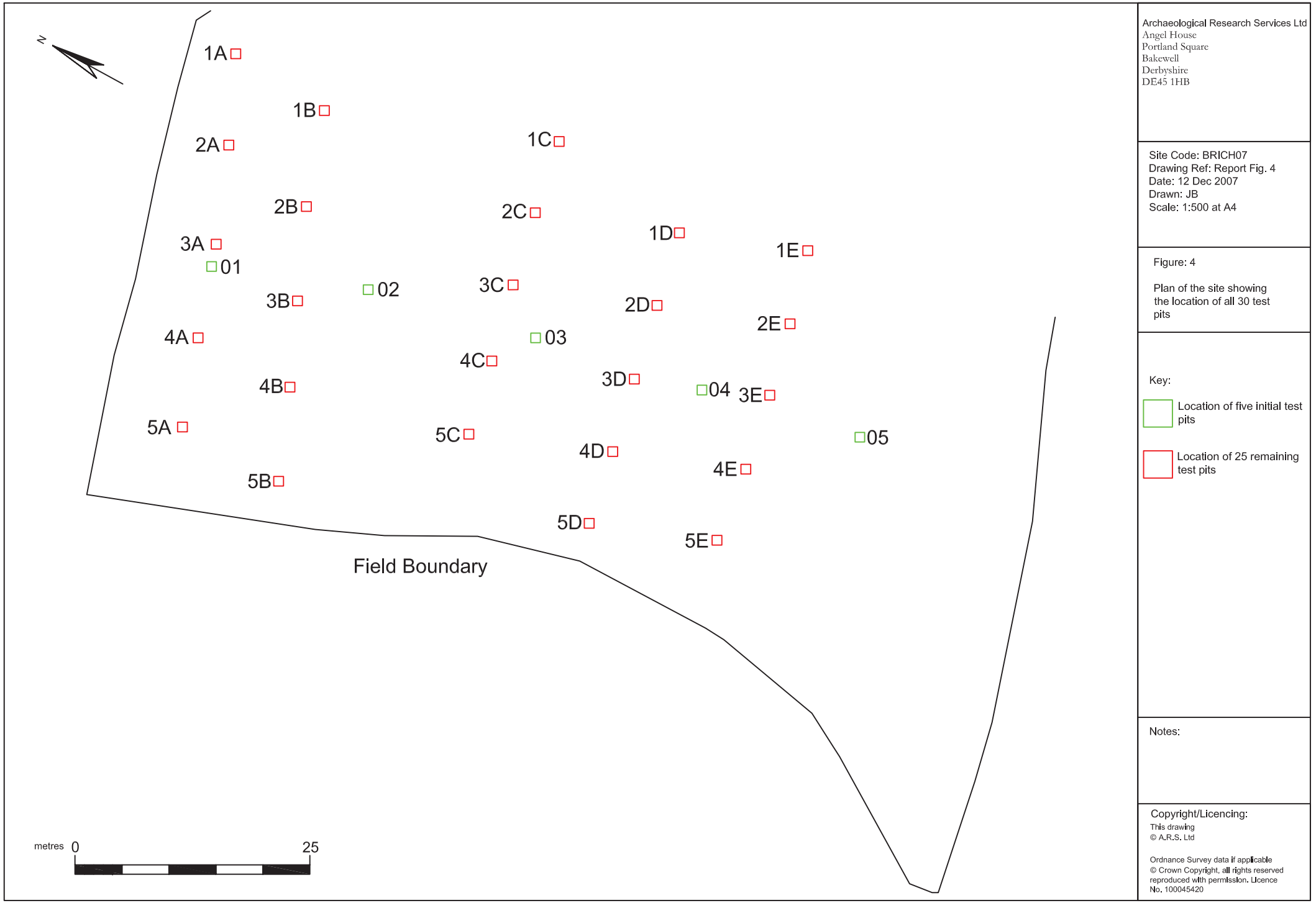
|---|---|---|---|
| Archaeological Research Services Ltd<br>Angel House<br>Portland Square<br>Bakewell<br>Derbyshire<br>DE45 1HB | Figure: 3<br><br>Contour plan of the study area at Birchover Quarry with contours at 0.1m intervals | Key: | |
| Site Code:<br>Drawing Ref: Rep Fig. 3<br>Date: 31st January 2008<br>Drawn: JB<br>Scale: 1:500 at A4 | Notes: | | Copyright/Licencing:<br>This drawing<br>© A.R.S. Ltd<br><br>Ordnance Survey data if applicable<br>© Crown Copyright, all rights reserved reproduced with permission. Licence No. 100045420 |

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Angel House
Portland Square
Bakewell
Derbyshire
DE45 1HB

Site Code: BRICH07
Drawing Ref: Report Fig. 4
Date: 12 Dec 2007
Drawn: JB
Scale: 1:500 at A4

Figure: 4

Plan of the site showing the location of all 30 test pits

Key:

Location of five initial test pits

Location of 25 remaining test pits

Notes:

Fig. 5 Test Pit 01, looking north west. (Scale: 1m).


Fig. 6 Test Pit 3C, looking north. (Scale: 1m).

3.2.3 The bases of the pits varied from being flat with no sandstone inclusions to being uneven and predominately made up of large to medium sized sandstone blocks (Figs. 7 and 8). The natural in the pits that contained sandstone blocks had often become discoloured from the stones causing dark patches within the natural.


Fig. 7 Test Pit 5A showing the uneven sandstone base, looking north west. (Scale: 1m).


Fig. 8 Test Pit 1A showing the size of the sandstone blocks, looking north west. (Scale: 1m).

3.2.4 The sandstone blocks uncovered in test pit 02 are probably the remains of a wall that runs on an east west alignment directly south of the test pit. The wall was picked up on the contour survey and probably represents the remains of a stone built farm structure (Figs. 9 and 3).


Fig. 9 Test pit 05

## 4. CONCLUSION

4.1. There were no archaeological features, deposits, buried land surfaces or small finds located within the pits.

## 5. PUBLICITY, CONFIDENTIALITY AND COPYRIGHT

5.1. Any publicity will be handled by the client.

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## 7. ACKNOWLEDGEMENTS

7.1. Archaeological Research Services Ltd would like to thank all those involved in this project, in particular

## 8. REFERENCES

Aitkinhead, N. *The Pennines and adjacent areas,* Fourth Ed., 2002, BGS.

Guilbert, G.C., *Birchover Quarry – Archaeological Assessment of Proposed Eastward Extension Of Stone Quarrying,* 2007, Trent and Peak Archaeological Unit.

## APPENDIX I: RESULTS OF THE TEST PITS

| Test Pit No. | Geology | Measurements | Description |
|---|---|---|---|
| 01 | Sandstone Colluvium | 1m x 1m x 0.54m | Stoney, sandy brown earth overlying sandy colluvium. Medium, angular sandstone blocks within topsoil. Colluvium patchy and mottled in colour due to staining from sandstone causing dark patches. Large angular stones within natural colluvium. |
| 02 | Sandstone Colluvium | 1m x 1m x 0.59m | Stoney, brown topsoil directly overlying sandy colluvium. Colluvium patchy and mottled in colour due to staining from sandstone causing dark patches. Large angular stones within natural colluvium. The sandstone blocks are likely to be associated with the wall running E/W directly to the south of the test pit. The wall is associated with a stone built structure to the east of the site. |
| 03 | Sandstone Colluvium | 1m x 1m x 0.35m | Sandy, brown earth overlying a lens of mixed topsoil and natural sand. Directly below is natural sandstone colluvium with angular sandstone blocks. |
| 04 | Sandstone Colluvium | 1m x 1m x 0.52m | A stoney, sandy brown earth which grades in to a natural sand below. A 0.1m lens interface between topsoil and natural sand exists where (001) and (004) mix and grade together. No sandstone blocks in the topsoil, unlike other test pits. |
| 05 | Sandstone Colluvium | 1m x 1m x 0.55 | A very sandy topsoil with large sandstone block inclusions. This sits directly above the natural sand which is very compacted. The sandstone blocks are pressing in to the top layer of the natural sand. |
| 1A | Sandstone Colluvium | 1m x 1m x 0.41m | Mid-brown sandy loose topsoil becomes sandier at 0.2m before natural sand at 0.24m. Occasional medium, sub-rounded sandstone cobbles in the topsoil. |
| 2A | Sandstone Colluvium | 1m x 1m x 0.5m | Dark brown sandy topsoil overlays natural sandstone blocks at east of pit and lens of friable sandstone at the west. All overlaying natural orange sand which is heavily stained from sandstone blocks. |
| 3A | Sandstone Colluvium | 1m x 1m x 0.39m | Fine, dark brown sandy topsoil with occasional sandstone pebbles sits above large sub-angular sandstone blocks up to 0.6m x0.4m. |
| 4A | Sandstone Colluvium | 1m x 1m x 0.51m | Fine, sandy brown topsoil below which are large sandstone blocks. Blocks are very weathered and sit above the natural sand. |
| 5A | Sandstone Colluvium | 1m x 1m x 0.38m | Fine, dark brown sandy topsoil with small pebble inclusions overlying compact orange sand and natural sandstone blocks. Sub-angular 0.12m x 0.8m x 0.6m to 0.28m x 0.2m 0.11m. |
| 1B | Sandstone Colluvium | 1m x 1m x 0.46m | Grey brown, fine sandy topsoil overlays natural sand. Some black weathering of the natural deposit, occasional sub-angular medium sandstone cobbles. |
| 2B | Sandstone Colluvium | 1m x 1m x 0.44m | Grey brown, fine sandy topsoil 0.39m deep overlays natural sandstone blocks and sand. Patches of pink sand (008) |

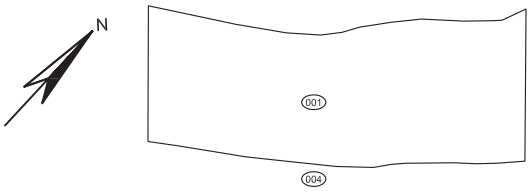
| | | | |
|---|---|---|---|
| | | | apparent in topsoil. Sandstone blocks range from 0.15m x 0.14m x 0.11m to 0.45m x 0.18m x 0.15m. |
| | | | |
| 3B | Sandstone Colluvium | 1m x 1m x 0.42m | Dark, grey brown topsoil overlies natural sand. Sand is weathered black in places with moderate, large, sub-angluar sandstone blocks (0.45m x 0.26m) lining the base of the pit. |
| 4B | Sandstone Colluvium | 1m x 1m x 0.31m | Sandy mid-brown topsoil overlaying even, homogenous orange sand. |
| 5B | Sandstone Colluvium | 1m x 1m x 0.42m | Sandy brown topsoil overlays natural orange sand which is weathered and disturbed by root action. Occasional large, angular sandstone blocks up to 0.3m wide. |
| 1C | Sandstone Colluvium | 1m x 1m x 0.45m | Fine, sandy brown topsoil overlays compacted sand. Base of pit is uneven with occasional moderate angular cobbles 0.08m x 0.18m. |
| 2C | Sandstone Colluvium | 1m x 1m x 0.31m | Mid brown topsoil overlies natural sand (with degraded black areas). Sand has occasional, medium, sub-angular cobbles (0.1m x 0.7m). |
| 3C | Sandstone Colluvium | 1m x 1m x 0.26m | Brown, sandy topsoil overlies yellow natural sand. Even base with few inclusions. |
| 4C | Sandstone Colluvium | 1m x 1m x 0.19m | Shallow layer of topsoil overlies natural sand with occasional large rounded sandstone boulders. |
| 5C | Sandstone Colluvium | 1m x 1m x 0.26m | Shallow mid-brown topsoil overlies mottled pink and orange natural sand. Base of pit slopes with the hillside. |
| 1D | Sandstone Colluvium | 1m x 1m x 0.26m | Shallow mid-brown topsoil overlies mottled pink and orange natural sand. Base of pit slopes with the hillside. |
| 2D | Sandstone Colluvium | 1m x 1m x 0.28m | Shallow mid-brown topsoil overlies mottled pink and orange natural sand. Base of pit slopes with the hillside and natural surface is uneven. Small hollows and rises in surface. |
| 3D | Sandstone Colluvium | 1m x 1m x 0.22m | Shallow mid-brown topsoil overlies mottled pink and orange natural sand. Base of pit slopes with the hillside. Single sandstone block in natural surface (0.27m x 0.16m x 0.09m). |
| 4D | Sandstone Colluvium | 1m x 1m x 0.3m | Fine, sandy brown topsoil with small patches of fine, dry sandy earth. Overlays natural sand stained brown from topsoil giving mottled appearance. No sandstone inclusions. |
| 5D | Sandstone Colluvium | 1m x 1m x 0.3m | A thin layer of pink sand (008) overlays the topsoil which has possibly been redeposited. Topsoil overlays natural sand with occasional large sub-angular cobbles and one large boulder with visible plough marks. |
| 1E | Sandstone Colluvium | 1m x 1m x 0.35 | Mid-brown stony topsoil contained small amounts of blue and white and red and black ceramic, probably 19th century. Overlays natural sand fairly even base. |
| 2E | Sandstone Colluvium | 1m x 1m x 0.4m | Fine, sandy earth overlays topsoil to a depth of 0.26m. Topsoil overlays natural sand. No sandstone inclusions. |
| 3E | Sandstone Colluvium | 1m x 1m x 0.32m | Mid-brown stony sandy soil overlies orange sand with two large boulders at the base. |
| 4E | Sandstone Colluvium | 1m x 1m x 0.46m | Lens of silty sand 0.07m thick overlies topsoil in west and south section. Topsoil then overlays natural sand. Pockets of fine dry earth seen in northern section. Hollow which maybe |

| | | | |
|---|---|---|---|
| | | | a pit in n-w of test pit. No finds in hollow. |
| 5E | Sandstone Colluvium | 1m x 1m x 0.42m | Topsoil over natural sand. North section of pit collection of large angular stone cobbles. |

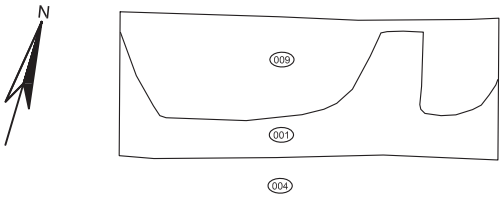
## APPENDIX II: CONTEXT REGISTER

| Context No. | Location | Description |
|---|---|---|
| 001 | Across site | Topsoil – 7.5YR 3/1. Deposit deepest at south of site. Sandy earth with sandstone inclusions. Loosely compacted. Clay pipe fragment and modern pottery in TP4. |
| 002 | Across site | Subsoil – 7.5YR 4/4. A lens of natural below the topsoil is a mix of natural sand and topsoil. Gradually grades in to natural sand. |
| 003 | Across site | Natural sand – 7.5YR 4/6. Mottled in colour due to staining from stones. Loosely compacted. Large sandstone blocks set in to top layer of the deposit. |
| 004 | Across site | Natural sand – 7.5YR 5/6. A very fine but compacted sand below the topsoil. Contains large and medium sandstone blocks sitting on the surface and pressed in to the top level. |
| 005 | TP 02 | Large sandstone blocks in the topsoil of TP 02. Probably associated with the stone wall immediately to the south of the pit running east west. |
| 006 | TP 01 | Topsoil – 10YR 4/6. Fine sandy soil |
| 007 | TP 2A | Layer of friable sandstone below topsoil (001) and overlaying heavily stained natural sand. |
| 008 | TP 5D | Lens of pink sand. 10R 5/6.very fine silt sand visible above the topsoil in TP 5D. |
| 009 | Various across each test pit | Fine dry topsoil (pockets). 5YR 3/1. Deposit intermittent patches within topsoil. |

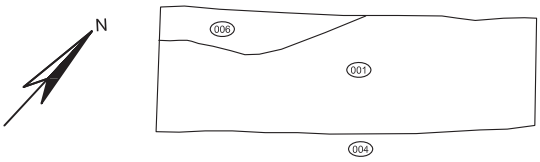
## APPENDIX III – SECTION DRAWINGS OF THE TEST PITS



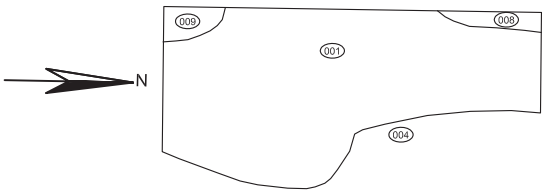

South east facing section
of Test Pit 1E



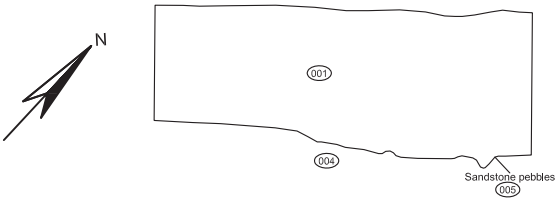

South west facing section
of Test Pit 2E




South east facing section
of Test Pit 3E




East facing section of
Test Pit 4E




South east facing section
of Test Pit 5E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Portland Square
Bakewell
Derbyshire
DE45 1HB

Figure 22

Sections of test pits 1E - 5E

Key:

Site Code: BIRCH 07
Drawing Ref: Rep Fig.15
Date: 31st January 2008
Drawn: JS
Scale: 1:20 at A4

Notes: