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Arnhall Quarry Phase 10 Edzell by Brechin, Aberdeenshire

Watching Brief
Report No. 3876

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**Arnhall Quarry Phase 10
Edzell by Brechin, Aberdeenshire**

Monitored Strip

Report No. 3876

CONTENTS

1.	Introduction	3
2.	Archaeological Methods	4
3.	Archaeological Results	5
4.	Conclusions	7
5.	References	8

APPENDICES

1.	Context Register	9
2.	Photograph Register	9
3.	Drawings Register	10

ILLUSTRATIONS (bound at rear)

Fig.1	Location Map	
Fig. 2	Post ex shot of first strip in North area	
Fig. 3	ESE-facing section of Pit 002 post ex	
Fig. 4	NNE-facing section of Pit 007 post ex	
Fig. 5	SW-facing section of Pit 005 post ex	
Fig. 6	Post-ex shot of stripped area adjacent to Phase 10/1	

1. INTRODUCTION

1.1 General

This report presents the results of a controlled topsoil strip undertaken by CFA Archaeology Ltd (CFA) in March 2019 at Arnhall Quarry, Edzell, Aberdeenshire (NO 60346 70597 centred) (Fig. 1). The work was commissioned by RPS Group on behalf of Breedon Aggregates.

A Written Scheme of Investigation (WSI) dated 01 September 2014 was produced by CGMS and approved by the Aberdeenshire Council Archaeology Service (ACAS) in advance of fieldwork.

1.2 Background

Planning consent (Reference APP/2004/4532) was granted by Aberdeenshire Council in 2005 for sand and gravel extraction (Phases 5-10) at Arnhall Quarry, Edzell, Aberdeenshire. The planning consent was subject to an archaeological condition consisting of a controlled topsoil strip.

An area of soil stripping within the Phase 10 area (Phase 10/2) was previously monitored by AOC Archaeology Ltd (AOC) in November and December 2017 (Watt 2017). However, due to on site constraints an isolated area towards the northern end was not stripped. This isolated area of ground was stripped during this programme of works along with a narrow strip of ground bordering the north-western edge of Phase 10/1. The Phase 10/1 works were monitored by CFA in May and August 2017 (Jenorowski and Suddaby 2017).

The 2017 works undertaken by AOC (Phase 10/2) identified twelve sporadically placed pits and a curvilinear feature. The pits measured up to 1.7m long, by 1.35m wide, by 0.2m deep, and were generally sub-circular in shape with gently sloping sides and a flat base. A number of the pits showed evidence of in-situ burning. Charcoal was present, but there were no finds.

The previous controlled topsoil strip undertaken by CFA in May and August 2017 (Phase 9/2 and 10/1) (Jenorowski and Suddaby 2017) identified forty-one pits, three cultivation furrows, and one linear ditch. Radiocarbon dates suggest that these were medieval features dating to the 13th or 14th century.

Previous phases of controlled topsoil stripping were undertaken between 2006 and 2009 (Bailey 2007 and Jones 2009). This work recorded plough truncated features cut into sand and gravel and sealed by topsoil. These features included a hearth, possible structure and several pits. Some artefacts were recovered from the pits and these included flint flakes and pottery of early and middle Neolithic date. Radiocarbon dating of charcoal fragments returned a date range of 3780BC-3640BC from one feature. A series of furrows were interpreted as deriving from post-medieval cultivation.

To the north of the Phase 10 area there is a cropmark interpreted as a possible enclosure (SMR NO67SW0008). This was recorded on aerial photographs taken in 1979 and is tentatively dated as prehistoric.

1.3 Objectives

The project's aims and objectives were, in general, to mitigate and offset adverse effects on historic environment assets. Specifically, it was:

- To monitor topsoil stripping in advance of extraction and identify any archaeological features that would be damaged or destroyed by the extraction or related works.
- To undertake archaeological recording where necessary of any archaeological features or finds identified.

2. ARCHAEOLOGICAL METHODS

2.1 General

CFA follows the Chartered Institute for Archaeologists' Standards and Guidance and Code of Conduct as appropriate.

2.2 Watching Brief

All ground-breaking work was undertaken by a machine equipped with a flat bladed ditching bucket under constant archaeological supervision. All excavation of archaeological features and deposits was undertaken using hand tools.

All excavation and on-site recording was carried out according to standard CFA procedures, principally by drawing, by photography and by completing standard CFA record forms. The positions of archaeological features were recorded using industry standard survey equipment.

3. ARCHAEOLOGICAL RESULTS

3.1 General

Numbers in bold refer to contexts, a full list of which is contained in Appendix 1.

Across the development area the soils generally consisted of 0.3m of dark brown clay silt topsoil (**000**) directly overlying free-draining orange-brown sandy gravel natural (**001**) (Figs. 2 & 6).

Three pit features were identified. Details of these are contained within the following section.

3.2 Archaeological Features

The features consisted of three pits (Fig.1). Details of each individual feature are given in the following text.

Pit 002

Pit **002** (Fig. 3) was sub-circular in plan with sloping sides and a concave base. It measured 1.7m long by 1.6m wide by 0.44m deep. The primary fill (**004**) of this pit consisted of black charcoal rich silt with a few fire cracked stones, while the upper fill (**003**) consisted of brown-grey sandy-silt containing charcoal. Between deposits **003** and **004** there was a thin lens of orange brown sandy silt (**009**). There were no finds recovered from this feature.

Pit 005

Pit **005** (Fig. 5) was sub-oval in plan with concave sides and a flat base. It measured 1m long (N-S) by 0.7m wide (E-W) by 0.1m deep. The primary fill (**010**) of this pit consisted of black charcoal rich silt, while the upper fill (**006**) consisted of mid-brown sandy-silt with flecks of charcoal. The charcoal rich primary fill combined with the presence of fire-cracked stones at its base indicate that this was a fire-pit. There were no finds recovered from this feature.

Pit 007

Pit **007** (Fig. 4) was circular in plan with sloping sides and a flat base. It had a diameter of 1.1m and a depth of 0.2m. The fill of this pit consisted of brown-grey silt containing some rounded stones. There were no finds recovered from this feature.

3.3 Environmental Sample Assessment

(by Mhairi Hastie BSc MSc FSA Scot MCIfA)

Methodology

Two bulk soil samples were retained during archaeological investigations at Arnhall Quarry.

Both samples were processed through a system of flotation. The floating debris (flot) was collected in a 250um sieve and the remaining material (retent) in the tank was washed through a 1mm mesh. Both the flot and retent fractions were then air-dried under controlled conditions.

The retents were sorted by eye for small finds and non-buoyant archaeobotanical remains and scanned with a magnet to pick up ferrous debris. Any archaeological significant material was removed and bagged. The flots were scanned using a binocular microscope (x10-x200 magnifications) and the presence of any charred plant remains recorded.

Identifications of archaeobotanical material were carried out with reference to seed atlases and in-house reference collection.

The results are summarised in Table 1 (Composition of Samples).

Results

The samples contain only large amounts of wood charcoal. No small finds or artefacts were recovered from the samples. The charcoal consisted principally of large oak fragments, although occasional small non-oak roundwood were noted in Sample 1, taken from the fill of Pit **005**.

Table 1. Composition of Samples

Sample number	Context number	Fill of	Context description	Approx. Flot vol (ml)	Wood charcoal	Comments
1	010	005	Fire pit	1000	++++	Principally large oak fragments, with occasional non-oak roundwood
2	004	002	Pit	500	++++	Oak charcoal

Recommendations

Small roundwood fragments suitable for AMS dating are available from the fill of Pit 005, if required. Identification of the wood species present should be carried out prior to AMS dating.

4. CONCLUSION

A controlled topsoil strip was carried out at Arnhall Quarry, Edzell. This programme of works identified three pit features. Previous work undertaken in 2017 identified twelve pit features within the adjoining Phase 10/2 area and forty-one pits within the Phase 9/2 and Phase 10/1 areas..

The three identified pits were very similar in nature to those identified during the earlier works some of which were dated to the medieval period. There is little reason to suspect that the pits identified in this phase are anything other than an extension of similar medieval activity.

A summary statement of the results of this programme of works will be submitted for publication in *Discovery and Excavation in Scotland* on completion of the project and an online *OASIS* entry will be completed.

The project archive, comprising all CFA record sheets, maps and reports, will be deposited with the NHRE and copies of reports will be lodged with the Aberdeenshire Council Sites and Monuments Record.

5. REFERENCES

Bailey, E. 2007 *Arnhall Quarry, Edzell, Aberdeenshire (Fettercairn parish), watching brief*, Discovery Excav Scot, Vol. 8 2007 Pages 17-18

Jones, E, 2009 *Arnhall Quarry, Edzell, Aberdeenshire (Fettercairn parish), watching brief*, Discovery Excav Scot, New Vol. 10 2009 Page 21

Jenorowski, T. and Suddaby, S. 2017, 2017 Arnhall Quarry Phases 9/2 & 10/1 Edzell by Brechin, Aberdeenshire Archaeological Watching Brief. CFA Data Structure Report No. 3564

Watt, S. 2017 Arnhall Quarry, Phase 10/2: Monitored Topsoil Strip. AOC Data Structure Report No.23852

APPENDIX 1: Context Register

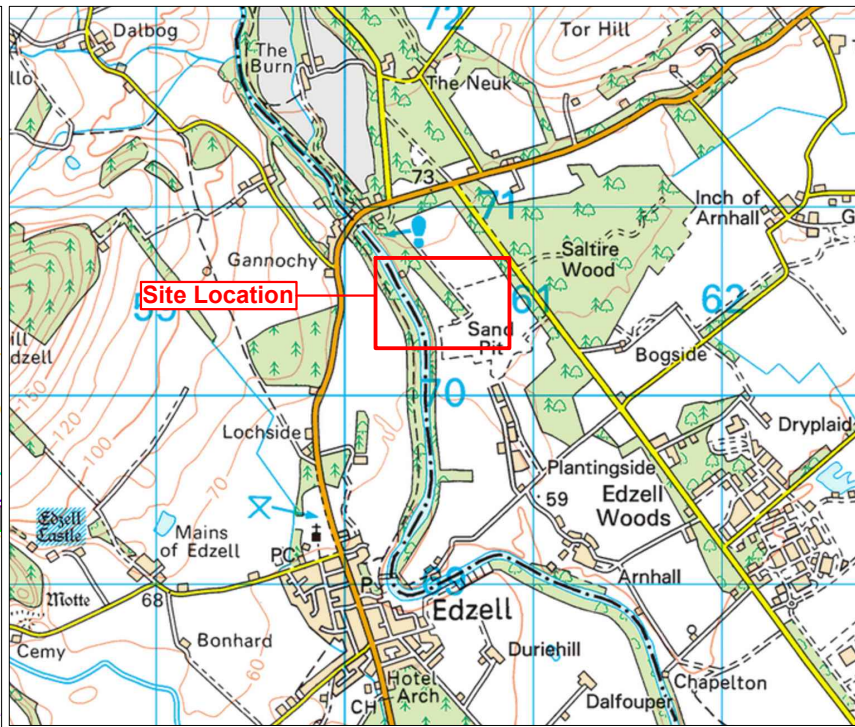
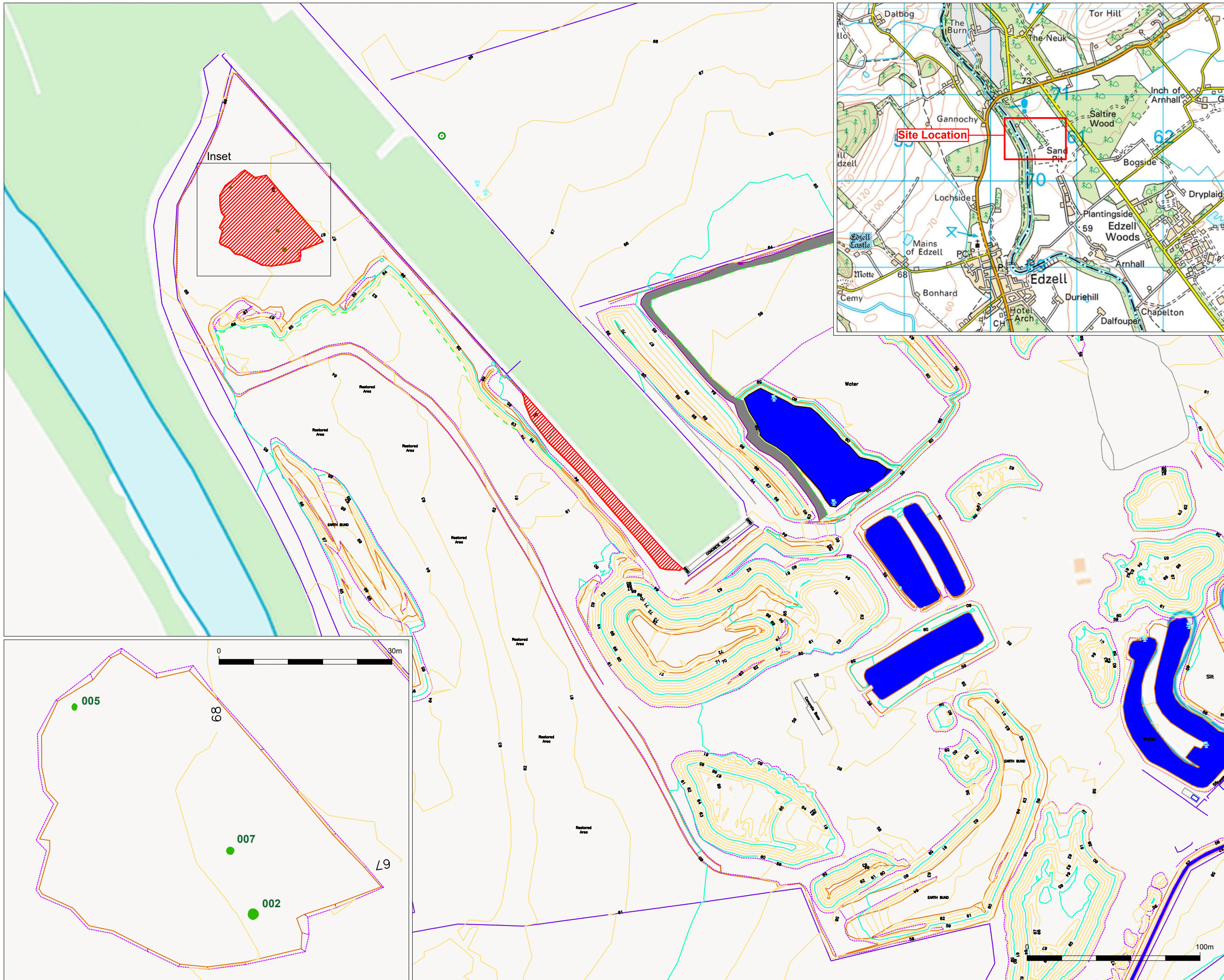
Context	Fill of	Description
000		Topsoil - brown clay silt.
001		Natural - orange rubbly sandy silt.
002		Cut of pit.
003	002	Grey-brown upper sandy silt fill of pit [002].
004	002	Lower black silty fill of pit [002].
005		Cut of pit.
006	005	Mottled silt fill of pit [006].
007		Cut of pit.
008	007	Fill of pit [007].
009	002	Fill of pit [002].
010	005	Charcoal fill of pit [005].

APPENDIX 2: Photograph Register

Number	Description	Taken from
1	Working shot of first strip.	NNW
2	General area shot.	SE
3	Pre-ex shot of first strip.	NNW
4	Post-ex shot of strip 1.	W
5	Post-ex shot of strip 1.	SW
6	Post-ex shot of strip 1.	NNW
7	General area shot of first strip.	NNW
8	Working shot of first strip.	NW
9	Working shot of first strip.	NNW
10	Post-ex shot of strip 1.	NW
11	Area shot of first strip.	NW
12	End of day shot of first strip.	N
13	Post-ex shot of strip 1.	SE
14	Plough marks in second strip.	N/A
15	Post-ex shot of second strip.	NW
16	Area view of second strip.	NW
17	Tree bowl with evidence of burning.	N/A
18	Pre-ex shot of pit [002].	N/A
19	Pre-ex shot of pit [005].	N/A
20	Post-ex shot of SW facing section of pit [005].	NE
21	Plan post-ex shot of pit [005].	N/A
22	Area view of pit [005] post-ex.	N
23	ESE facing section og [002] post-ex (shadow).	WNW
24	ESE facing section og [002] post-ex.	WNW
25	ESE facing section og [002] post-ex.	WNW
26	Area view of pit [002] post-ex.	NW
27	NNE facing section of pit [007] post-ex.	SSW
28	NNE facing section of pit [007] post-ex (awful light).	SSW
29	Area view of pit [007] post-ex.	W

APPENDIX 3: Drawings Register

Drawing Number	Sheet Number	Description	Sec/ Plan	Scale
1	1	East facing section of pit [002].	S	1:20
2	1	Plan of pit [002].	P	1:20
3	1	South facing section of pit [005].	S	1:20
4	1	Plan of pit [005].	P	1:20
5	1	North facing section of pit [007].	S	1:20
6	1	Plan of pit [007].	P	1:20



Key:

- Stripped area
- Archaeological Feature

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Title:
Location Map and Site Plan

Project:
**Arnhall Quarry Phase 10
 Monitored Strip**

Client:
**RPS Group on behalf of
 Breedon Aggregates**

Scale at A3:
1:2000; Insert 1:600

Drawn by: SW	Checked by: BG	Date: 06/08/2019
Report No: 3876	Fig. No: 1	



Fig. 2: Post-ex shot of first strip in North area



Fig. 3: ESE facing section of Pit [002] post-ex

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Report No: 3876		Fig. No: 2 - 3



Fig. 4: NNE facing section of Pit [007] post-ex



Fig. 5: Post-ex shot of SW facing section of Pit [005], post -ex

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Fig. 6: Post-ex shot of stripped area adjacent to Phase 10/1

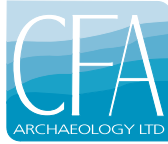
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