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*Geophysical Survey*

**Hillend Quarry  
(Phase 1 Extension)  
Caldercruix  
North Lanarkshire**

**Archaeological Evaluation**

**Report No. 3548**

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# **1. INTRODUCTION**

## **1.1 General**

This report presents the results of a programme of archaeological works carried out by CFA Archaeology Ltd (CFA) in April 2017 ahead of the first phase (Phase 1) of a proposed extension to Hillend Quarry, Caldercruix, North Lanarkshire (NGR: NS 8203 6704) (Fig. 1). The work was commissioned by Tillicoultry Quarries Ltd.

A Written Scheme of Investigation (WSI), dated May 2015 was produced by ARCHAS Cultural Heritage Ltd (ARCHAS) on behalf of Tillicoultry Quarries Ltd. The WSI was designed to fulfil the requirements of the archaeological advisor to North Lanarkshire Council.

## **1.2 Background**

Planning consent (Ref. TP/ED/16/0466) has been granted for the extension of the extraction area at Hillend Quarry into an area of the Moffat Hills lying to the west of the existing quarry workings. The planning consent was subject to a condition requiring a programme of archaeological works.

The extension to Hillend Quarry will be undertaken in a number of phases. This report covers Phase 1 of the proposed extension. Subsequent phases will be undertaken at a later date and the results of the archaeological findings will be produced under separate cover.

A desk-based-assessment and walkover survey undertaken by ARCHAS Ltd in 2013 (Rees 2013) identified three sites within the Phase 1 area. These consisted of an area of rig-and-furrow (Site 2) (Site ID NS86NW 36), and two spreads of large stones (Sites 3 and 4). The terms of the WSI (Rees 2015) required the topographic survey of Site 2 (rig-and-furrow), and the evaluation of Sites 3 and 4 (stone spreads), as well as a series of sample trenches focused on features such as summits and areas of high ground, areas of better quality grass, the area within close proximity to Sites 3 and 4, and any upstanding anomalies/features.

The Phase 1 area lies in close proximity to the former site of Braefoot Farm Cairn (Site 1), which was a Scheduled Monument. A programme of archaeological works undertaken by ARCHAS in relation to the quarry development confirmed that this cairn was prehistoric in date and it was fully excavated. The presence of a confirmed prehistoric burial cairn within the local raised the possibility that the Site 3 and 4 stone spreads may also have been prehistoric burial cairns.

When this evaluation was undertaken in April 2017, the Phase 1 area largely consisted of unimproved moorland utilized for the grazing of sheep. Vestigial traces of rig-and-furrow cultivation indicate that a degree of agricultural improvement had been carried out on the lower ground at the southern end of the area.

### **1.3 Objectives**

The aims and objectives were:

- To undertake a topographic survey of the Site 2 rig-and-furrow as it was located within the development area;
- To undertake the targeted trial trenching evaluation of Sites 3 and 4;
- To undertake a programme of sample evaluation trenches focused on features such as summits and areas of high ground, areas of better quality grass, the area within close proximity to Sites 3 and 4, and on any upstanding anomalies/features;
- To propose mitigation measures where appropriate to avoid, reduce or offset any predicted negative impacts on the archaeological resource.

## **2. WORKING METHODS**

### **2.1 General**

CFA Archaeology Ltd follows the Chartered Institute for Archaeologists' Code of Conduct, Standards and Guidance. Recording of all elements followed established CFA methods.

### **2.2 Survey of Rig-and-Furrow (Site 2)**

The Site 2 rig-and-furrow was surveyed, within the boundary of the development area (Fig. 2), using industry standard electronic surveying equipment and a written description was taken.

### **2.3 Evaluation**

Trench locations and extents were agreed in advance with the archaeological advisor to North Lanarkshire Council.

A single trench was excavated across the centre of each of the stone spreads (Site 3 and Site 4, Trenches 1 and 2 respectively) (Fig. 2).

In addition to the trenches evaluating Site 2 and Site 3, nine trenches (Trenches 3-11) (Fig. 2) totalling c. 443m<sup>2</sup> were excavated within the Phase 1 area. This included an additional trench (Trench 11), which was excavated to investigate a possible linear anomaly. The orientation of Trench 10 was altered from the pre-agreed trenching location so that it followed the line of a low ridge rather coming up over its steeply sloping sides.

All excavation and on-site recording was carried out according to standard CFA procedures, principally drawing, by photography and by completing standard CFA record forms.

Topsoil and subsoil were removed by a 360° tracked mechanical excavator equipped with a 1.8m wide, smooth-bladed ditching bucket. All the groundbreaking work was carried out under constant archaeological supervision. Any further excavations required to fulfil the objectives of the evaluation were carried out by hand.

The stratification of all excavated areas was recorded whether or not significant archaeological deposits were identified.

Trench positions were surveyed using industry standard electronic surveying equipment and all trenches were backfilled.

### **3. ARCHAEOLOGICAL RESULTS**

#### **3.1 General**

Numbers in bold refer to contexts, a full list of which is presented as Appendix 2.

#### **3.2 Survey of Rig-and-Furrow (Site 2)**

The rig-and-furrow ran in a south to north direction from the edge of a steep escarpment above the Lily Loch, terminating just inside the Phase 1 area at the edge of a shallow boggy gully (Figs. 2 & 5). It was defined by shallow c.0.3m wide furrows located between low rigs (c. 0.1m high) with widths of c. 6-7m. This type of broad rig with well spread furrow grooves and very little in the way of noticeable rig is known as grooved rig and was probably formed by being ploughed in brief episodes using a mouldboard plough. It may be as early as medieval in date, but generally dates to the post-medieval period.

#### **3.3 Evaluation**

##### *Site 3*

Site 3 consisted of a rather irregular spread of large stones (up to c.0.8m in size) measuring c. 7.3m north to south by c. 6.8m east to west (Fig.6). A single trench (Trench 1) measuring 18m by 1.8 was excavated from east to west across the centre of this feature. This trench (Figs .3 & 8) identified that the stones (**1/002**) forming the stone spread sat within the topsoil (**1/003**) and were partially overgrown by turf (**1/001**). Beneath the topsoil, there was a subsoil (**1/004**) consisting of very dark grey silty-peat. Some of the stones forming the spread sat on top of the surface of this subsoil, but none of them extended down into it. This indicated that the stone spread was comparatively recent in date and its position at the end of an area of cultivation rigs suggested that it was most likely to have been a clearance cairn associated with the Site 2 rig-and-furrow. The natural substratum (**1/005**) consisted of grey clay merging in to orange-brown sandy-clay. There were no features or deposits of archaeological significance associated with this stone spread.

#### *Site 4*

Site 4 consisted of a rather irregular spread of largely turf covered stones measuring c.10.2m north to south by 8.6m east to west. A single trench (Trench 2) measuring 13m by 1.8 was excavated from east to west across the centre of this feature. This trench (Figs .4 & 9) identified that the cairn was formed from a pile of stones (2/002) with a height of up to c.0.75m, which was made up of stones measuring up to 0.6m. The stones sat directly on top of orangey-brown sandy-silt subsoil (2/004) and were largely overgrown by turf and topsoil (2/001). Within the voids between the stones a loose mid-brown/grey silt (2/003) was present.

In common with Site 3, the fact that these stones sat on top of the subsoil rather than extending down to the natural substratum suggested that this cairn was of comparatively recent date. Again, this site was located right at the end of the Site 2 rig-and-furrow (Fig.2) and was likely to be field clearance associated with the aforementioned cultivation.

#### *Trial Trenches*

The sample trenches demonstrated a wide variation in deposit depths throughout the Phase 1 area. Those within Trench 3 consisted of up to c.1.2m of topsoil and peat overlying clay substratum (Fig. 10), whereas those on the higher ground at the northern and western end of the area (Trenches 7-11) had c. 0.1m - 0.45m of turf and topsoil directly overlying bedrock (Fig. 11). Trenches 4 and 5 both contained slopewash deposits, giving them a depth of c.0.5m to the natural sandy-clay substratum. A summary of the depth of all of the trenches is given in Appendix 3 and photographs of selected trenches are shown in Figs. 13-16.

One additional trench (Trench 11) was excavated in order to investigate a possible linear anomaly. This was proven to be a bedrock outcrop (Fig. 12).

There were no features, deposits or artefacts of archaeological significance identified within any of the sample trenches.

#### 4. CONCLUSIONS

A programme of archaeological work was undertaken for the Phase 1 extension to Hillend Quarry. The programme of works consisted of the survey of an area of rig-and-furrow, the evaluation of two stone spreads, and a sample trial trenching evaluation.

The rig-and-furrow appears to be of a type known as grooved broad-rig, which may be as early as medieval, but is more commonly post-medieval in date. Rig-and-furrow of this nature was probably formed by being ploughed in brief episodes using a mouldboard plough.

Although there was no dating evidence associated with the two stone spreads, they were located fairly high up in the soil deposits suggesting that they are fairly recent in date. Their location at the northern end of the rig-and-furrow suggests that they are most likely to be clearance cairns associated with the aforementioned cultivation.

The trial trenching evaluation suggests that the Phase 1 extension was located in fairly marginal land with the higher ground consisting of a thin layer of topsoil overlying bedrock and the lower ground being fairly boggy and containing pockets of deeper peat. There were no features, deposits or artefacts of archaeological significance identified in any of the trenches.

CFA does not recommend any further work in relation to the Phase 1 area. However, it is understood that the final decision regarding further mitigation lies with North Lanarkshire Council. Subsequent phases of extension will require archaeological mitigation measures as outlined in the WSI.

The project archive, comprising all CFA record sheets, maps and reports, will be deposited with the National Record of the Historic Environment and copies of reports will be lodged with the North Lanarkshire Council Sites and Monuments Record.

On completion of this project a summary statement will be submitted for publication in *Discovery and Excavation in Scotland* and will also be reported on through *OASIS Scotland*.

#### 5. REFERENCES

##### *Bibliographic*

Rees, A. 2013, *Hillend Quarry Extension, Archaeological Desk-Based-Assessment and Walk Over Survey*

Rees, A, 2015, *Hillend Quarry, Caldercruix, North Lanarkshire, Archaeological Scheme of Works: Written Scheme of Investigations*



## APPENDIX 1: Photographic Register

No	Context/ description	Taken from
1	Rig and furrow (Site 2) general	N
2	Rig and furrow (Site 2) general	N
3	Rig and furrow (Site 2) general	N
4	Rig and furrow (Site 2) general	N
5	Site 3 cairn, general pre- ex shots	S
6	Site 3 cairn, general pre- ex shots	S
7	Site 3 cairn, general pre- ex shots	S
8	Site 3 cairn, general pre- ex shots	S
9	Site 3 cairn, general pre- ex shots	S
10	Site 3 south facing section, general shot	S
11	Site 3 sequence of shots showing s facing section	S
12	Site 3 sequence of shots showing s facing section	S
13	Site 3 sequence of shots showing s facing section	S
14	Site 3 sequence of shots showing s facing section	S
15	Site 3 relocste of slot 11 with ranging rods	S
16	Trench 1 general shot	W
17	Trench 1 general shot	E
18	Trench 1 s- facing section through site 3	S
19	Site 4 cairn general pre- ex shots	S
20	Site 4 cairn general pre- ex shots	S
21	Site 4 cairn general pre- ex shots	S
22	Trench 3 general shot	W
23	Trench 3, soil profile	S
24	Trench 4, general shot	SW
25	Trench 4, soil profile	SE
26	Trench 5, general shot	NW
27	Trench 5, soil profile	SW
28	Trench 6, general shot	SE
29	Trench 6, soil profile	SW
30	Trench 7, general shot	SW
31	Trench 7, soil profile	NW
32	Trench 7, section across site 4	NE
33	Trench 2, site 4 n- facing section through cairn	N
34	Trench 2, site 4 n- facing section through cairn	N
35	Trench 2, site 4 n- facing section through cairn	N
36	Trench 2, site 4 n- facing section through cairn	N
37	Trench 2, site 4 n- facing section through cairn	N
38	Trench 2, site 4 n- facing section through cairn	N
39	Trench 2 general shot	W
40	Trench 2 general shot	E
41	Trench 8 general shot	W
42	Trench 9 general shot	W

43	Trench 11, general shot	N
44	Trench 11, line on natural bedrock outcrop	E
45	Trench 10 section shot	SE
46-50	Rig-and furrow cultivation	N
51	General shot of backfilled trenches	NE

## APPENDIX 2: Context Register

Context	Trench	Description
1/001	1	Turf
1/002	1	Stones forming, Site 3
1/003	1	Topsoil: dark brown sandy silt
1/004	1	Subsoil: dark grey- brown silty peat
1/005	1	Natural: Grey clay/orange sandy clay
2/001	2	Turf/ topsoil
2/002	2	Stones forming cairn
2/003	2	soil within voids of cairn
2/004	2	sandy silt subsoil
2/005	2	till/ NA
3/001	3	Turf/ topsoil
3/002	3	peat subsoil
3/003	3	Grey clay natural
4/001	4	turf/ topsoil
4/002	4	peat subsoil
4/003	4	Orange-brown sandy-clay natural
5/001	5	Grey-brown sandy-silt topsoil
5/002	5	Orange-brown silty sand subsoil
5/003	5	Orange-brown sandy clay natural
6/001	6	Grey-brown sandy-silt topsoil
6/002	6	Bedrock
7/001	7	Grey-brown sandy-silt topsoil
7/002	7	Orange-brown sandy clay natural and bedrock
8/001	8	Grey-brown sandy-silt topsoil
8/002	8	Orange-brown sandy clay natural and bedrock
9/001	9	Peaty silt topsoil
9/002	9	Orange-brown sandy clay natural and bedrock
10/001	10	Peaty silt topsoil
10/002	10	Orange-brown silty sand subsoil
10/003	10	Orange-brown sand natural and bedrock
11/001	11	Black peaty-silt topsoil
11/002	11	Orange-brown silty sand subsoil
11/003	11	Orange-brown sandy-clay and bedrock outcrop

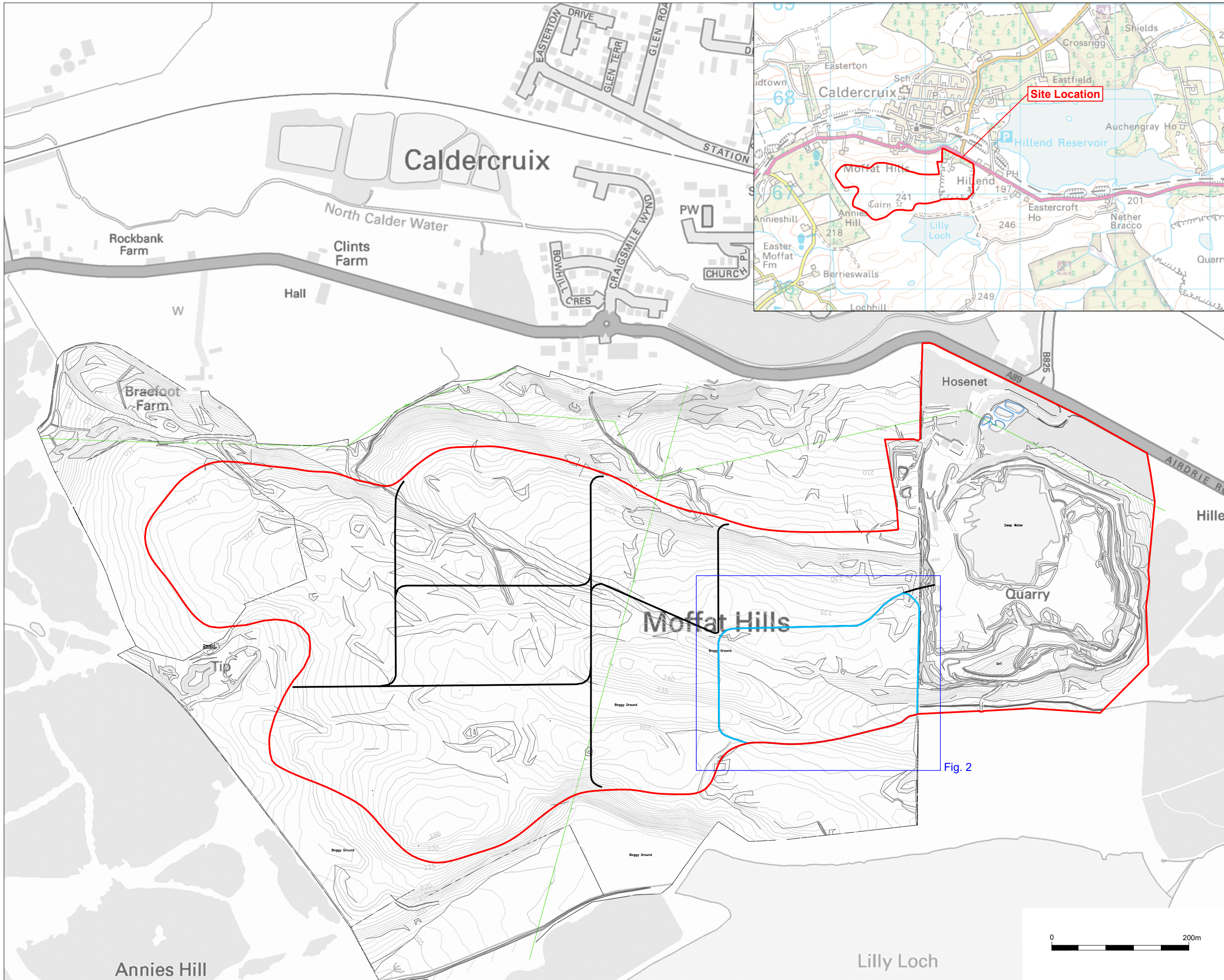
### APPENDIX 3: Trench Summary

<b>Trench</b>	<b>Dimensions</b>	<b>Depth of deposits</b>	<b>Features</b>
1	18m by 1.8m		Clearance cairn (Site 3)
2	13m by 1.8m	0.4-0.5m	Clearance cairn (Site 4)
3	30m by 1.8m	0.6 -1.2m	N/A
4	30m by 1.8m	0.3-0.5m	N/A
5	30m by 1.8m	0.45m	N/A
6	30m by 1.8m	0.2-0.3m	N/A
7	30m by 1.8m	0.1-0.2m	N/A
8	30m by 1.8m	0.45m	N/A
9	30m by 1.8m	0.25-0.4m	N/A
10	30m by 1.8m	0.2m	N/A
11	6m by 1.8m	0.2-0.4m	Natural bedrock outcrop

### APPENDIX 4: Drawings Register

<b>Dwg No.</b>	<b>Sheet No.</b>	<b>Scale</b>	<b>Plan / Section</b>	<b>Description/contexts</b>
1	1	1:20	Section	Trench 1, south-facing section through Site 3
2	2	1:20	Section	Trench 2, north-facing section through Site 4





Key:

- Site Boundary
- Phase 1



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Title:  
**Location map**

Project:  
**Hillend Quarry, Caldercruix, North Lanarkshire**

Client:  
**Tillicoultry Quarries Ltd**

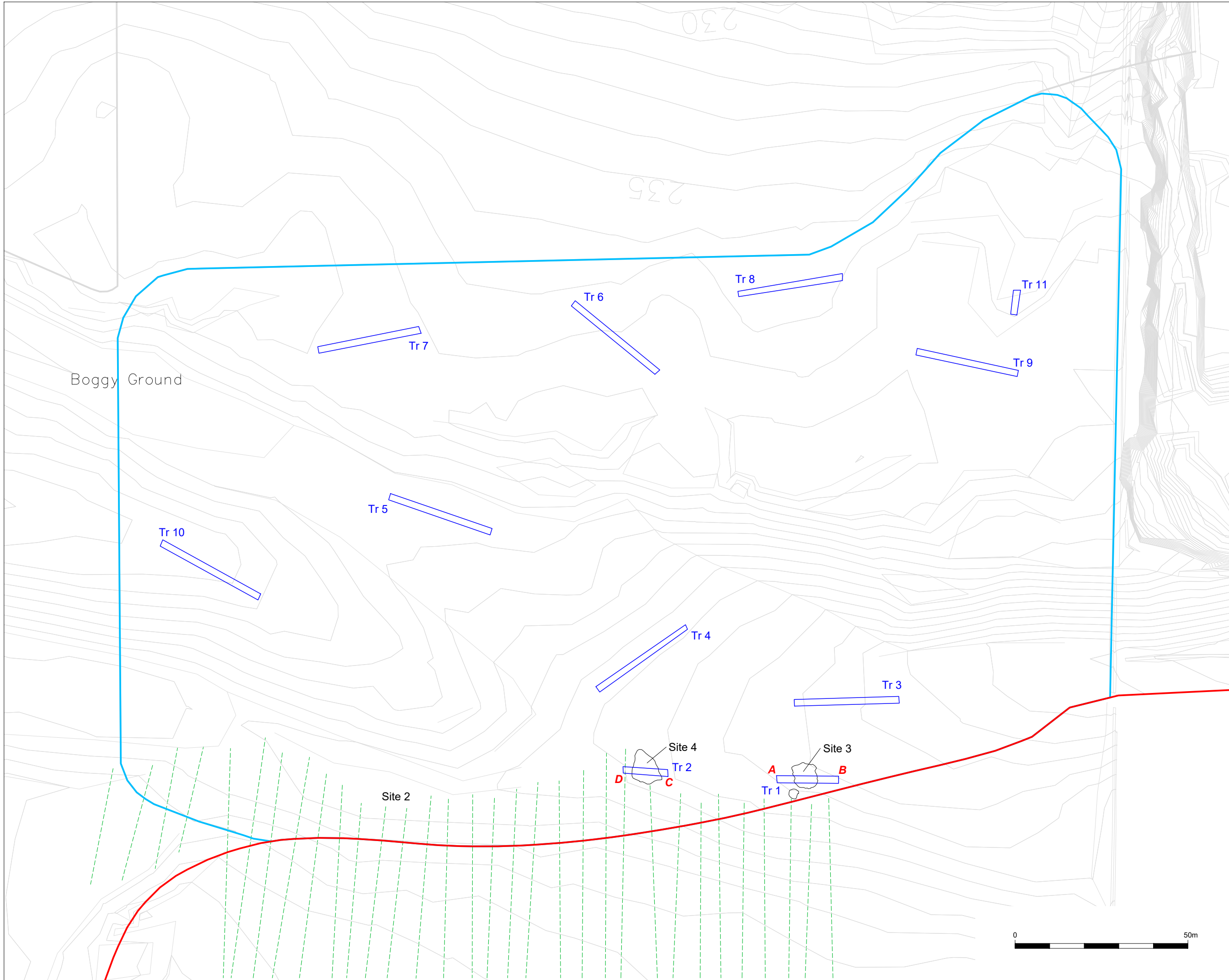
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Fig. 2





**Key:**

- Site Boundary
- Phase 1
- Trench Outline
- Archaeological Feature
- Ridge and Furrow

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Title:  
**Trench Plan and survey**

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Client:  
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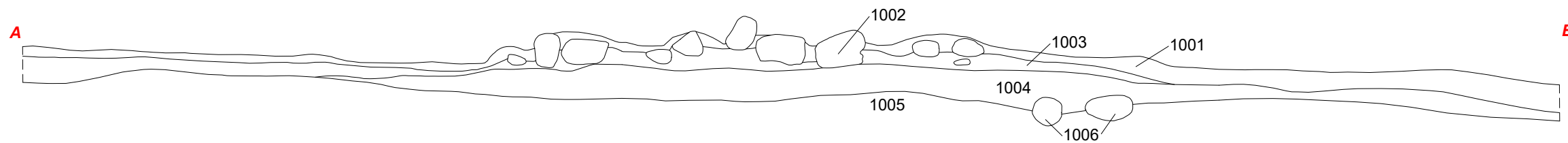


Fig. 3 - Trench 1, south-facing section through Site 3

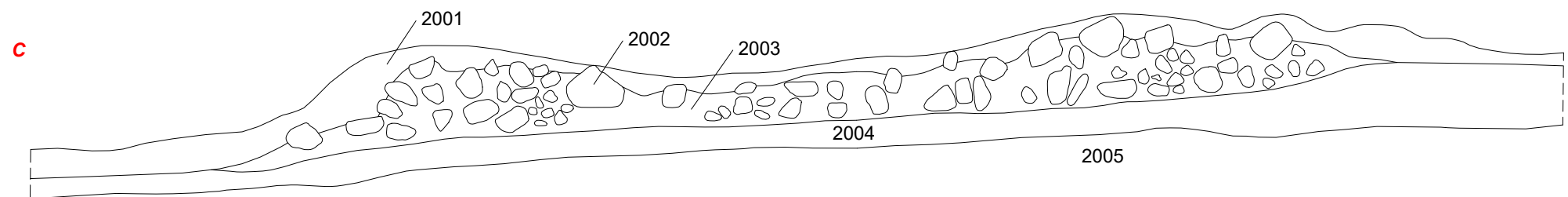


Fig. 4 - Trench 2, north-facing section through Site 4



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Sections

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upper: 1:60; lower: 1:50

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Report No: 3458	Fig. No: 3-4
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Fig. 5 - General shot of Site 2 rig-and-furrow



Fig. 6 - Pre-excavation shot of Site 3

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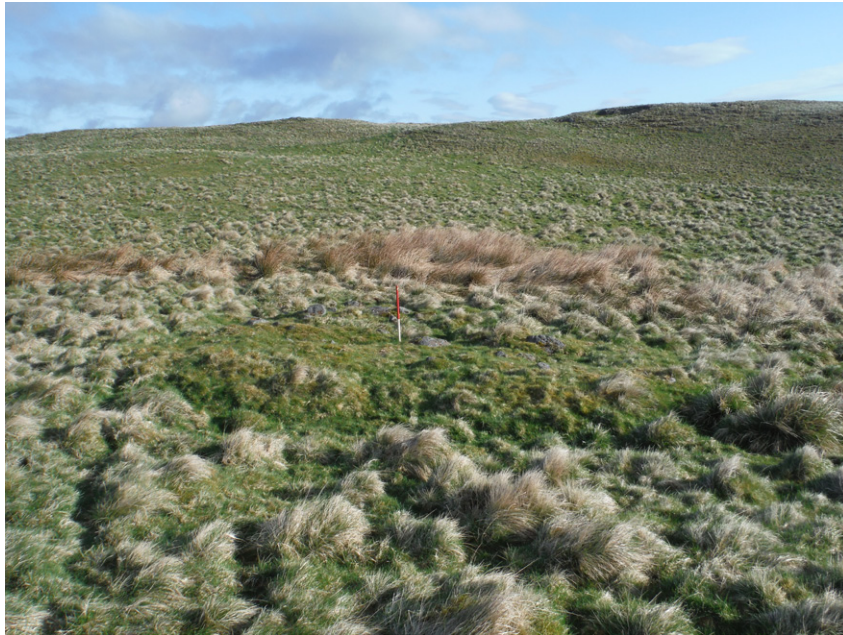


Fig. 7 - Pre-excavation shot of Site 4



Fig. 8 - South facing section through Site 3

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Fig. 9 - North-facing section through Site 4



Fig. 10 - Deep peat deposits at eastern end of Trench 3

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Fig. 11 - Shallow soil deposits overlying bedrock in trench 6



Fig. 12 - Bedrock outcrop in Trench 11

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Fig. 13 - Trench 3, general shot



Fig. 14 - Trench 5 general shot

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Fig. 15 - Trench 7, general shot



Fig. 16 - Trench 10, general shot

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