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Rusha Opencast Facility, West Lothian Archaeological Excavation: Site 1 and Soil Strip Watching brief

Report No. 3142

 0131 273 4380

 0131 273 4381

 info@cfa-archaeology.co.uk

 www.cfa-archaeology.co.uk

CFA ARCHAEOLOGY LTD

The Old Engine House
Eskmills Business Park
Musselburgh
East Lothian
EH21 7PQ

Tel: 0131 273 4380
Fax: 0131 273 4381
email: info@cfa-archaeology.co.uk
web: www.cfa-archaeology.co.uk

Author	Stuart Mitchell MA AIfA & Bruce Glendinning BSc PG Dip MIfA
Illustrator	Shelly Werner BA MPhil PhD
Editor	Bruce Glendinning BSc PG Dip MIfA
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CONTENTS

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

Appendices

1.	Context Register	9
2.	Photograph Register	9
3.	Drawings Register	11

Illustrations (bound at rear)

Fig 1	Site location map
Fig 2	Site 1 plan
Fig 3	View of Site 1 from the east
Fig 4	View of Site 1 from the south
Fig 5	View of Site 1 from the west
Fig 6	View of (008) and (009)
Fig 7	Detail of (008) and (009)
Fig 8	View of Site 1 post-excavation
Fig 9	Watching Brief Area

1. INTRODUCTION

1.1 General

This report presents the results of an archaeological excavation and watching brief undertaken by CFA Archaeology Ltd (CFA), and completed in March 2014, as part of a series of mitigation works at the Rusha Opencast facility, near Longford, West Lothian (NGR: NS 97718 60023, Fig. 1). The work was commissioned by Banks Developments Ltd.

A Written Scheme of Investigation (WSI) dated 25 February 2012 covering this programme of works was produced by CFA on behalf of Banks. This WSI was designed to meet the requirements of the West of Scotland Archaeology Service (WoSAS).

1.2 Background

Planning consent (Ref No. 1199/M/07) has been granted for the recovery of coal using surface mining techniques at Rusha Farm, near West Calder, West Lothian. The planning consent was subject to a condition requiring a programme of archaeological trial works.

An Archaeological Assessment (McLellan & LeLong 2007) was produced to support the planning application for the proposed development. This included a desk-based assessment and site visit, and recommended a programme of mitigation works.

As part of the mitigation works a survey was undertaken in the previously forested areas to record industrial remains (Gray 2011) and two sites (1 & 2) identified in the ES were subject to detailed topographic survey and recording (Johnson 2012).

Following these surveys WoSAS requested an archaeological evaluation on Sites 1 and 2 to establish if any further work was required. The evaluation found no evidence of a coherent structure at Site 1 but did identify potential structural features such as a turf wall line. At Site 2 it was identified that nothing earlier than the late 19th or possibly early 20th century survived (Mitchell 2012). Following the evaluation WoSAS concluded that no further work was required in relation to the upstanding elements of Site 2. Site 1 required further excavation to fully excavate and record the feature.

During the course of the watching brief (Lewis 2012) a wider area around Site 1 was de-turfed by hand. Whilst a wider spread of stones was identified the remains were still perceived to be incoherent. This report presents the results of the full excavation of the area that followed on from the results described in the aforementioned report. It also provides the report on the final results of the watching brief.

1.3 Objectives

The objectives of the programme of works reported herein were:

The objectives of the project were:

- to conduct an appropriate programme of archaeological investigation (watching brief) during the excavation of all topsoil removal associated with the development.
- To undertake further excavation of Site 1.

2. WORKING METHODS

2.1 General

CFA Archaeology Ltd follows the Institute for Archaeologists' Code of Conduct, Standards and Guidance.

2.2 Archaeological Watching Brief

The terms of the WSI required an appropriate programme of archaeological investigation (watching brief). The topsoil removal was undertaken by 360° tracked excavators fitted with smooth edged ditching buckets.

2.3 Excavation of Site 1

A trench was excavated by hand to fully uncover the remains that were present. On completion this measured c.12m².

The surviving remains were then excavated by hand.

3. ARCHAEOLOGICAL RESULTS

3.1 General

An area measuring c.12m² was de-turfed by hand with narrow central baulks across the two axis which divided the site into quadrants (Fig 1). Numbers in bold and in parentheses refer to contexts, a full list of which is contained in Appendix 1.

3.2 Site 1 (Figs. 1, 3, 4, 5)

The site surface comprised rough grass and rushes (**001**) growing on 0.1-0.2m of dark brown to black peaty soil (**002**). This overlay pale sandy clay natural (**003**) which contained occasional stones and was poorly drained.

Two possible separate structures were identified, however, the surviving remains were so vestigial a confident interpretation was not possible.

The easternmost possible structure appeared to comprise two different structural elements. The northern part of the structure was built from turf banks which had been built on to the peaty soil. These formed three partial sides of a rectangle. The stacked turves (**006/014/023**) survived to a maximum height of 0.3m. The width of the banks was between 0.6m and 1.2m. In places random stones were embedded in to the turf bank.

The southern part of the structure survived mainly survived as a loose spread of medium sized angular stones (**004**) apparently defining a sub-square footprint. These stones were simply sitting on the peaty soil and survived as a single spread (i.e there were no courses). Within this apparently random spread of stones a couple of sections appeared to have been more carefully constructed from larger boulders. These short sections were present on the northwestern and southern sides of the possible enclosure. The stones did not appear to be the base of a wall of stone so they may have formed the base for a turf superstructure.

The northern part and southern part were offset from each other but they appeared to roughly join up to create an overall sub-square structure measuring 7.5m x 8.0m. It is possible that the remains represented two separate structures that were joined together to form one but the remains were so vestigial it was impossible to prove this either way.

Within the interior of the possible structure a thin layer of turves (**005**) was identified, roughly in the centre of the structure. They extended for 2.5m by 2m and lay up to 0.15m thick. A random scatter of small to medium sized angular stones (**010**) were embedded in to the surface of the turves (**005**).

Several discrete concentrations of stones (**011-013**) sitting on the peaty soil were present around the edge of the structure. No function, if there were any, could be ascribed to these.

The westernmost structure was substantially smaller and measured 4m by 2.5m. It was sub-rectangular and survived to a maximum height of 0.2m. It was built from stacked turves (007/008) (Fig. 6) which had been built on to the peaty soil. A number of stones (009) (Fig. 7) were embedded in to the turfs and could have formed part of the structure.

The peaty soil was removed from across the trench (Fig.8) and nothing was identified underlying this or cut in to the natural subsoil.

3.3 Watching Brief

The area of the development that required monitoring was the developable area outside of the commercial forestry plantation. Following the 2012 season of soil stripping it was agreed with WoSAS that the next phase of striping that covered the unimproved marshy ground would also be monitored but, if after a certain extent, no remains other than rig-and-furrow were identified then discussions over the cessation of the watching brief would be held. An agreement was reached to this end and the final extent of the watching brief is shown on Fig. 9.

The site was covered by peaty black topsoil which overlay beige- orange sandy clay subsoil which contained occasional angular stones and outcroppings of lignite/coal.

Rig-and- furrow cultivation traces are visible on aerial photographs of the site and unsurprisingly the remains of the furrows were present across the site. They generally had a wave length of about 5m from centre to centre. No finds were recovered from any of the fills.

4. CONCLUSIONS

The site was very poorly draining with peaty soils and a clay subsoil and was prone to waterlogging. Whilst the area had obviously been pressed into arable agricultural use in the past, as evidenced by the rig-and-furrow cultivation that was present as either earthworks or cropmarks across the site, it cannot have been very productive as it appeared to have been largely abandoned following this, apart from the northeastern corner of the site which has been subject to agricultural improvement.

The watching brief confirmed the presence of extensive rig-and-furrow cultivation across the entire site. No dating material was found associated with the cultivation furrows.

Excavation of Site 1 led to the identification of two possible turf and stone-built structures. No artefacts were identified from anywhere in the trench and no occupation layers were identified so it is unlikely that this was a domestic site. It may have had an agricultural use but there was insufficient surviving remains to base a more detailed interpretation on.

Site 1 was described by RCAHMS in 1994 as the remains of a sub-rectangular building situated close to the east end of a low ridge. The building was described as measuring about 10m from ESE to WNW by 4.5m over grass-grown wall-footings up to 0.3m high. The building had two compartments and there was a poorly-preserved outshot or enclosure immediately to the NNE. Situated about 15m to the ESE of the building was a turf-covered mound which measured about 4.5m in diameter and 0.4m in height. The remains that were identified did not match these observations. The available evidence points towards an incorrect interpretation during this initial survey. Based on grid references and geographical descriptions CFA are confident that the excavations were in the correct location and a wider survey of the environs did not uncover any other structural remains.

CFA recommend that no further reporting or post-excavation work is required. However it is recognised that any and all decisions regarding further work rest wholly with the planning authority as advised by WoSAS.

The project archive, comprising all CFA record sheets, maps and reports, will be deposited with the National Monuments Record of Scotland (NMRS) and copies of reports will be lodged with the West Lothian Council Sites and Monuments Record.

A summary statement of this work will be submitted for publication in *Discovery and Excavation in Scotland* and will also be reported on through *OASIS Scotland*.

5. REFERENCES

Gray, H. 2012 *Rusha Opencast Facility, West Lothian Phase 1 Mitigation Works: Archaeological Field Survey*. CFA Report No. 2015

Johnson, M. 2012 *Rusha Opencast Facility, West Lothian: Phase 1 Mitigation Works. Topographic Survey: Sites 1 & 2*. CFA Report No. 2026

Lewis, J. 2013 *Rusha Opencast Facility, West Lothian: Archaeological Watching Brief*. CFA Report No. 2132

McLellan, K & Lelong, O. 2007. *Rusha Surface Mine: Archaeological Assessment*. Project 2336 & 2450. GUARD.

Mitchell, S. 2012 *Rusha Opencast Facility, West Lothian, Sites 1 and 2: Archaeological Evaluation*. CFA Report No. 2053

APPENDIX 1 - Context Register

Context No.	Description
001	Turf, rushes and vegetation
002	Black peaty soil
003	Natural
004	Stones apparently forming wall? of southern part of eastern structure
005	Turf layer
006	Turf bank forming wall? of northern part of eastern structure
007	Upstanding turf bank forming wall? of western structure
008	Same as 007
009	Stones topping (007/008)
010	Scatter of stones overlying (005)
011	Isolated scatter of stones, Q1
012	Isolated scatter of stones, Q2
013	Isolated scatter of stones, Q4
014	Turf bank forming wall? of northern part of eastern structure
015	Sandy clay/disturbed natural Q1
016	Black organic sandy silt deposit overlying natural
017	Mid brown sandy silt overlying natural
018	Grey/dark brown laminated soil deposit overlying natural
019	Same as 006
020	Black organic sandy silt deposit overlying 021
021	Mid brown sandy silt deposit overlying natural
022	Same as 005
023	Turf bank forming wall? of northern part of eastern structure

APPENDIX 2: Photograph Register

Site 1

Photo No.	Description	Taken from
1	Excavation working shot	W
2	Excavation working shot	W
3	Excavation working shot	W
4	View of site following deturfing	E
5	View of site following deturfing	E
6	Quadrant 2 fully excavated	E
7	General view of site	E
8	Quadrant 2 following deturfing	E
9	Quadrant 3 following deturfing	E
10	Quadrant 4 following deturfing	S
11	Quadrant 4 following deturfing	W
12	Quadrant 1 following deturfing	W
13	Quadrant 1 following deturfing	N
14	Quadrant 2 following deturfing	N
15	Quadrant 3 following deturfing	S
16	004 within Quadrant 4	E
17	004 within Quadrant 1	S
18	006 within Quadrant 2	W
19	005 within Quadrant 2	N
20	004 within Quadrant 3	E
21	008/009 following deturfing	N

Photo No.	Description	Taken from
22	Detail of individual turves in 008	N
23	008	W
24	Detail of 009 overlying 008	W
25	004 within Quadrant 4	NE
26	View of site following deturfing	W
27	View of site following deturfing	S
28	View of site following deturfing	N
29	Quadrant 1, west-facing section	W
30	Quadrant 1, west-facing section	W
31	Quadrant 1, west-facing section	W
32	Quadrant 4, west-facing section	W
33	Quadrant 4, west-facing section	W
34	Quadrant 4, west-facing section	W
35	Quadrant 3, east-facing section	E
36	Quadrant 3, east-facing section	E
37	Quadrant 3, east-facing section	E
38	Quadrant 2, east-facing section	E
39	Quadrant 2, east-facing section	E
40	Quadrant 2, east-facing section	E
41	Main trench section through 007/008, east-facing	E
42	Main trench section through 007/008, east-facing	E
43	Main trench section through 007/008, east-facing	E
44	Main trench section through 007/008, east-facing	E
45	Main trench section through 007/008, east-facing	E
46	Main trench section through Quadrants 1 & 2, south-facing	S
47	Main trench section through Quadrants 1 & 2, south-facing	S
48	Main trench section through Quadrants 1 & 2, south-facing	S
49	Main trench section through Quadrants 1 & 2, south-facing	S
50	Main trench section through Quadrants 1 & 2, south-facing	S
51	Main trench section through Quadrants 1 & 2, north-facing	N
52	Main trench section through Quadrants 1 & 2, north-facing	N
53	Main trench section through Quadrants 1 & 2, north-facing	N
54	Main trench section through Quadrants 1 & 2, north-facing	N
55	Main trench section through Quadrants 1 & 2, north-facing	N
56	Main trench section through Quadrants 2 & 3, east-facing	E
57	Main trench section through Quadrants 1 & 4, west-facing	W
58	Site on completion of excavation	W
59	Site on completion of excavation	W
60	Site on completion of excavation	W
61	Site on completion of excavation	W
62	Site on completion of excavation	W

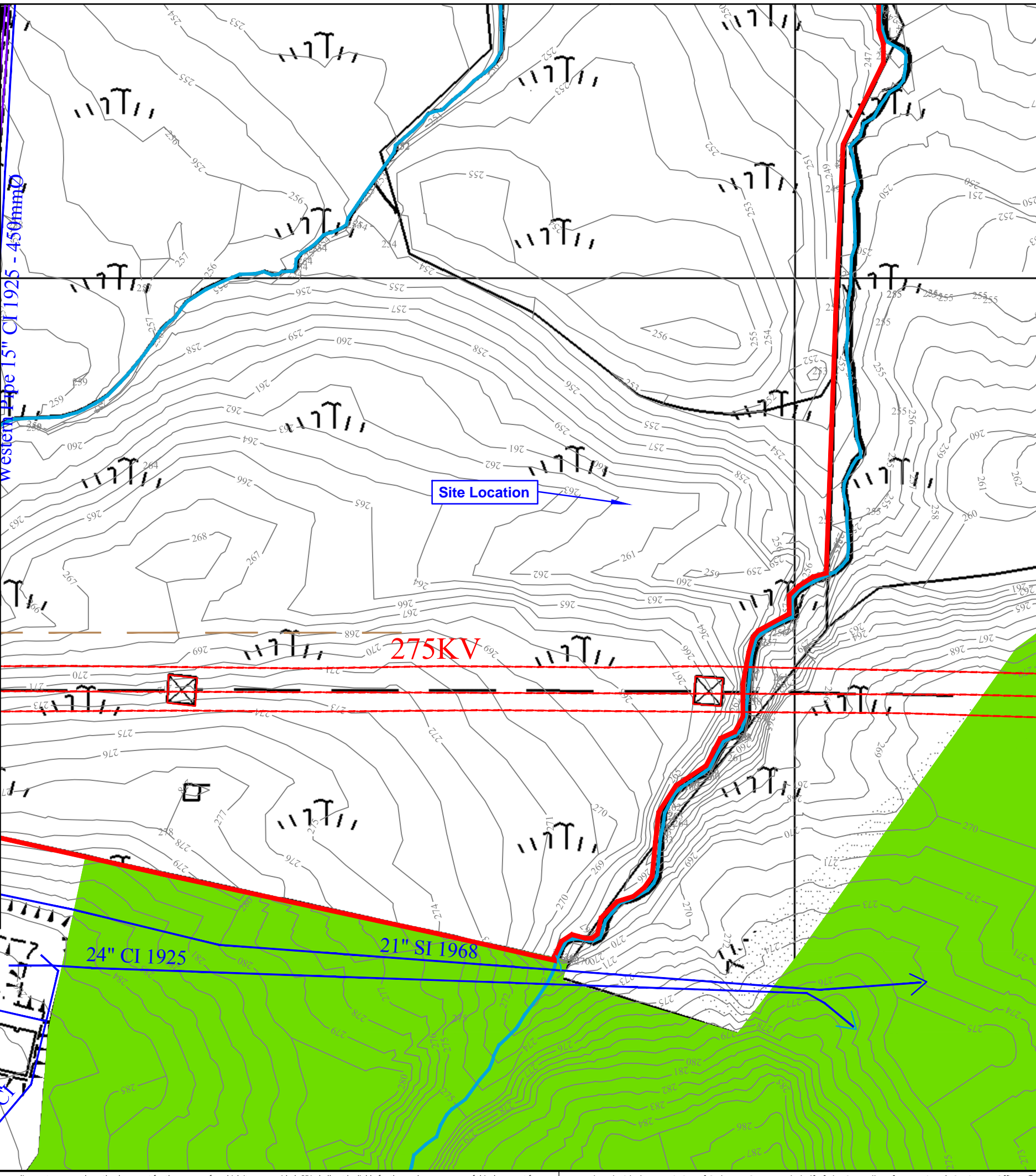
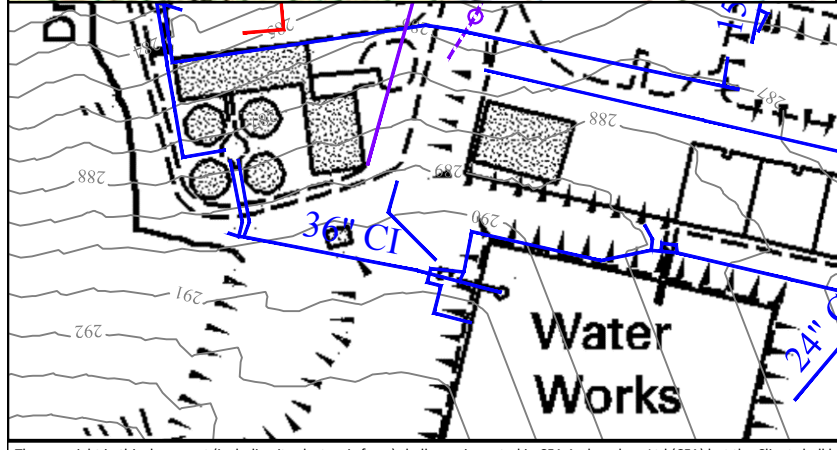
Watching Brief

Photo No.	Description	Taken from
1	General Stripping showing furrows in subsoil	S
2	General Stripping showing furrows in subsoil	S
3	General Stripping showing furrows in subsoil	N
4	General Stripping showing furrows in subsoil	N
5	General Stripping showing furrows in subsoil	N
6	General Stripping showing furrows in subsoil	N
7	General Stripping showing furrows in subsoil	N
8	General Stripping showing furrows in subsoil	N
9	General Stripping showing furrows in subsoil	N
10	General Stripping showing furrows in subsoil	N
11	General Stripping showing furrows in subsoil	E

Photo No.	Description	Taken from
12	General Stripping showing furrows in subsoil	N
13	General Stripping showing furrows in subsoil	W
14	General Stripping showing furrows in subsoil	N
15	General Stripping showing furrows in subsoil	W
16	General Stripping showing furrows in subsoil	W
17	General Stripping showing furrows in subsoil	W
18	Sample section through furrow	

APPENDIX 3: Drawings Register

Drawing No.	Sheet No.	Description	Scale
1	1	Site plan	1:50
2	2	East-facing section	1:20
3	3	West-facing section, quadrants 1 & 4	1:20
4	3	East-facing section, quadrants 2 & 3	1:20
5	2	North-facing section, quadrants 1 & 2	1:20
6	4	South-facing section, quadrants 3 & 4	1:20



Key:

CFA ARCHAEOLOGY LTD
 The Old Engine House
 Eskmills Park
 Musselburgh
 East Lothian, EH21 7PQ
 t: 0131 273 4380
 f: 0131 273 4381
 e: info@cfa-archaeology.co.uk
 w: www.cfa-archaeology.co.uk

Fig. No:	1	Revision:	A
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Title:
Site 1 location map

Project:
Rurha Opencast Facility,
West Lothian:
Archaeological
Excavation

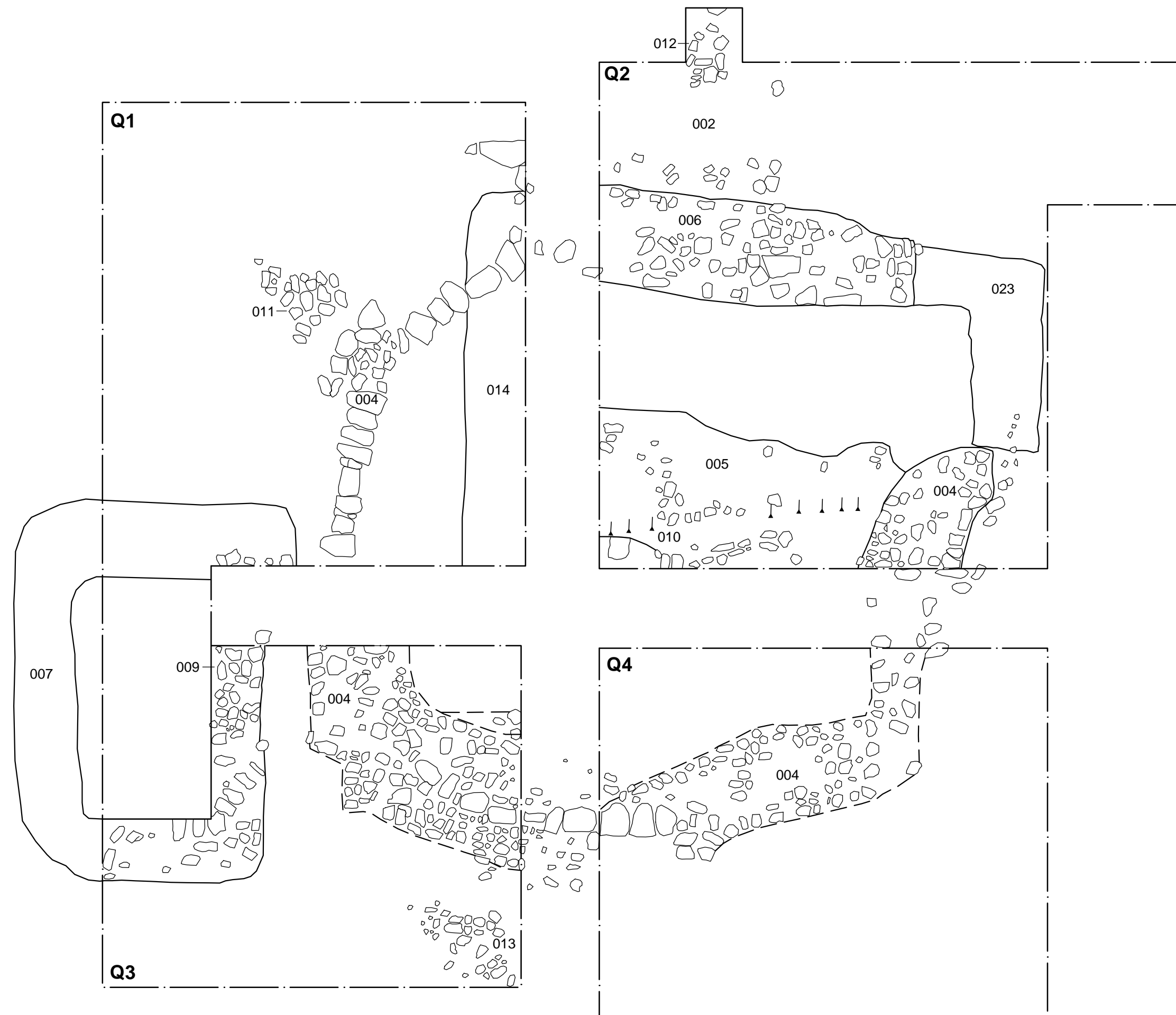
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CFA ARCHAEOLOGY LTD
 The Old Engine House
 Eskmills Park
 Musselburgh
 East Lothian, EH21 7PQ
 t: 0131 273 4380
 f: 0131 273 4381
 e: info@cfa-archaeology.co.uk
 w: www.cfa-archaeology.co.uk

Fig. No:	2	Revision:	A
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Title:
Site 1 plan

Project:
**Rusha Opencast Facility,
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Client:
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Scale at A3:
1:50





Fig. 3 - View of Site 1 from the east



Fig. 4 - View of Site 1 from the south



Fig. 5 - View of Site 1 from the west



Fig. 6 - View of (008) and (009)





Fig. No: 3-6		Revision: A	Project: Rusha Opencast Facility, West Lothian: Archaeological Excavation
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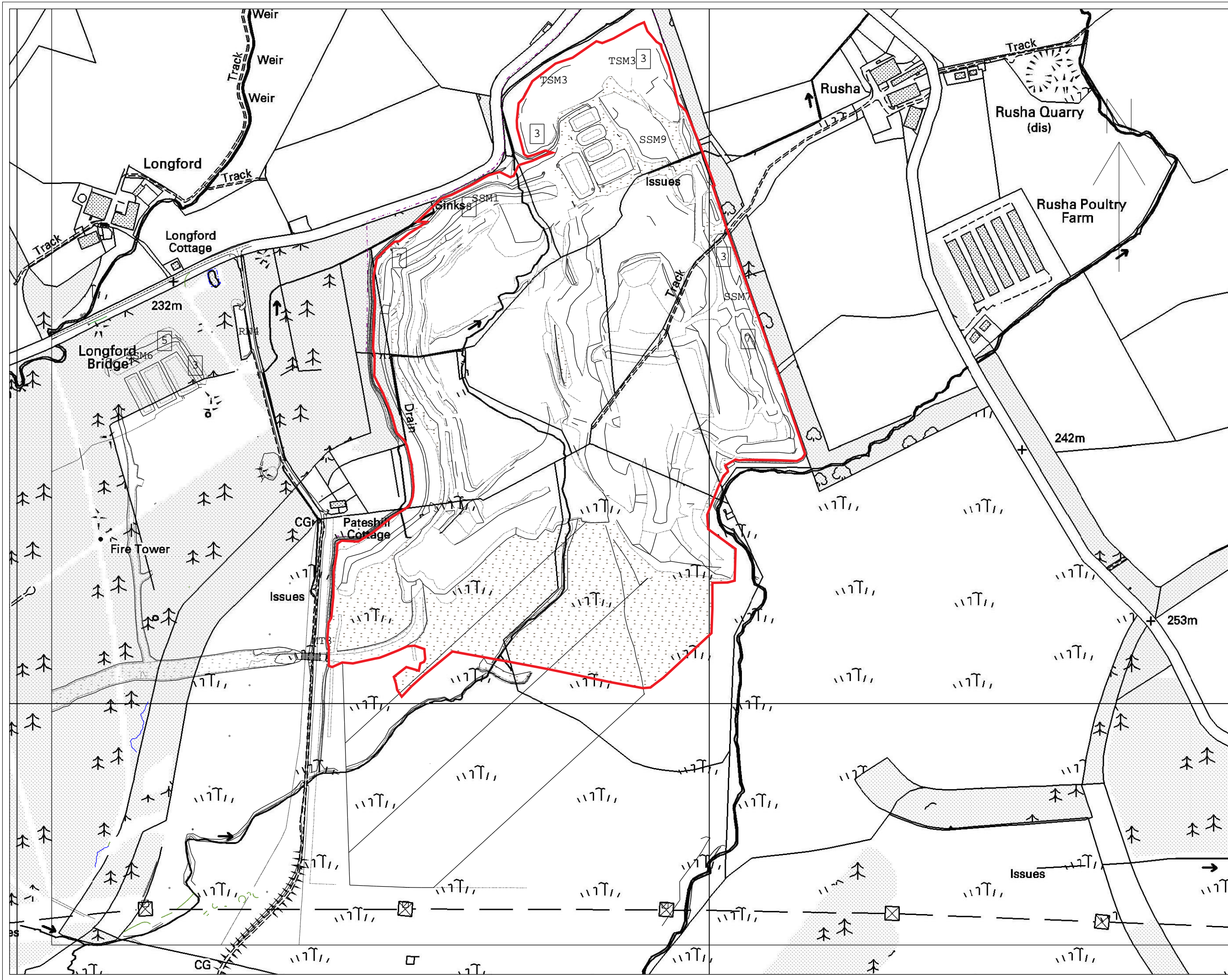



Fig. 7- Detail of (008) and (009)



Fig. 8 - View of Site 1 post excavation

Fig. No: 7-8		Revision: A	Project: Rusha Opencast Facility, West Lothian: Archaeological Excavation
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Key:
 Watching Brief Area



CFA ARCHAEOLOGY LTD
 Old Engine House
 Eskmills Park
 Musselburgh
 East Lothian EH21 7PQ
 T: 0131 273 4380
 F: 0131 273 4381
 info@cfa-archaeology.co.uk
 www.cfa-archaeology.co.uk

Fig. No: 9 Report No: A

Title:
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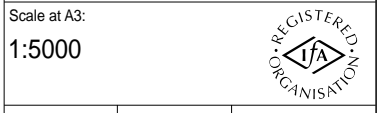
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