

CFA Archaeology Ltd

archaeological consultants

Advice on Archaeology & Planning

Environmental Impact Assessment

Interpretation, Design & Display

Finds/ Environmental Analysis

Field Evaluation & Excavation

Historic Building Recording

Site & Landscape Survey

Geophysical Survey

**Muir Dean Surface Mine
Annfield Extension
Inverkeithing
Fife**

Archaeological Evaluation

Report No. 2030

 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	Magnus Kirby MA FSA Scot AIfA
Illustrator	Leeanne Whitelaw MA MIfA
Editor	Melanie Johnson MA PhD FSA Scot MIfA
Commissioned by	ATH Resources
Date issued	April 2012
Version	0
Planning Application No	10/02006/PAN
Grid Ref	NT 14924 86586 (centred)

This document has been prepared in accordance with CFA Archaeology Ltd standard operating procedures.

**Muir Dean Surface Mine
Annfield Extension
Inverkeithing
Fife**

Archaeological Evaluation

Report No. 2030

CONTENTS

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

Appendices

1.	Photographic Register	9
2.	Context Register	12
3.	Summary of Excavation Results	13
4.	Summary of ES Sites	16
5.	Drawings Register	17
6.	Discovery and Excavation in Scotland entry	18

Illustrations (bound at rear)

Fig. 1	Site Location
Fig. 2a	Area 1A trench plan showing mineshafts, rig and furrow, and ES sites
Fig. 2b	Area 1B trench plan showing mineshafts, rig and furrow, and ES sites
Fig. 2c	Area 2 trench plan showing Trench 161, possible foundation trenches associated with Damleys
Fig. 3	Trench 161 showing possible foundation trenches associated with Damleys
Fig. 4	Section through linear 038 at Damleys
Fig. 5	Well 047
Fig. 6	Back-filled mine-shaft

INTRODUCTION

1.1 General

This report presents the results of an archaeological evaluation undertaken by CFA Archaeology Ltd (CFA) in February and March 2012 at Muir Dean Surface Mine (Annfield Extension), near Inverkeithing, Fife (NGR: NT 14924 86586 centred) (Fig. 1). The work was commissioned by ATH Resources.

A Written Scheme of Investigation (WSI) dated 22 February 2012 covering this programme of works was produced by CFA on behalf of ATH Resources. This WSI was designed to meet the requirements of the Fife Council Archaeologist.

1.2 Background

Planning consent (Ref No. 10/02006/PAN) has been granted for the recovery of coal using surface mining techniques at Annfield, near Inverkeithing. The planning consent was subject to a condition requiring a programme of archaeological trial trenching.

The programme of trial trenching consisted of the evaluation of the western extension (Area 1A and Area 1B) and the southern extension (Area 2) (Fig. 1). These areas were situated within undulating improved farmland at an altitude of c.100m AOD.

A cultural heritage study undertaken for the Environmental Statement (ES) identified twenty-eight (numbered 1 – 28 within the ES) non-designated features of cultural heritage interest within a 500m study area. Five of these features (ES20, ES24, ES26, ES27 and ES28) were recorded as lying directly within the evaluation areas (Fig. 1). These consisted of four separate buildings and associated enclosures (ES20, ES24, ES26 and ES27), and one possible small scale coal workings enclosure (ES28) (see Appendix 4 for further details). All of these features were depicted on an estate map dating to 1756. The assumed location of a farmstead annotated ‘Damleys’ (ES24) was subject to a more intensive programme of trial trenching in order to establish if there were any surviving remains. Damleys was selected for more intensive investigation because it is the only one of the five ES sites which is also depicted on the First Edition Ordnance Survey map (1856).

A previous evaluation at Muir Dean Surface Mine was carried out by CFA in 2008 (Richardson 2008) to the north of the Annfield extension. This evaluation identified features associated with recent agricultural improvement and some mine shafts relating to earlier mining activity.

1.3 Objectives

The objectives of the programme of works reported herein were:

- To conduct a 5% evaluation of the assumed location of Damleys Farmstead;
- To undertake a 2% evaluation of the remainder of the extension areas;
- To establish the presence or absence, location, extent, date and character, condition, significance and quality of any surviving archaeological remains associated within the site and to establish their significance and vulnerability to the proposed development;
- To develop a mitigation strategy, if needed, for the excavation, recording and reporting of any surviving remains

2. WORKING METHODS

2.1 General

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

2.2 Evaluation

Seventy six trenches (Trench 1 to Trench 76) were excavated within the western extension (Area 1A/1B) amounting to 4104m² (2.05%) and eighty-eight trenches (Trench 77 to Trench 164) were excavated within the southern extension (Area 2) amounting to 4752m² (2.4%). Nine of the trenches (Trench 86 and Trenches 154 – 161) within Area 2 were located within a 100m by 70m box centred on the probable location of Damleys Farmstead (ES24). These amounted to 486m² (6.9%).

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

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 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 contained in Appendix 2. A summary of the trenches excavated is contained in Appendix 4.

The deposits throughout the proposed development areas predominantly consisted of 0.3m to 0.4m of grey-brown silt topsoil (**001**) overlying orange-brown sandy clay natural (**000**). Within the majority of trenches the topsoil directly overlay the natural, but a few of the trenches also contained slope-wash subsoil deposits (**002**).

The evaluation did not identify the remains of ES20, ES26, ES27 and ES28. This would either indicate that the quality of the 1756 mapping did not allow their location to be accurately pinpointed or that they were very superficial structures and any traces have been removed by later agricultural activity.

A number of sub-surface features were identified within the assumed location of Damleys farmstead (ES24). These consisted of shallow linear features and a shallow spread of demolition debris.

The remaining features uncovered throughout the evaluation areas predominantly related to recent agricultural improvements and consisted of field drains and linear drainage features. There was also evidence of mining related activity, some vestigial traces of pre-improvement rig and furrow cultivation, and a well associated with Annfield Farm. None of these features are considered to be archaeologically significant.

Further details of both Damleys farmstead and the other features uncovered are given below.

3.2 Damleys Farmstead

Possible remains associated with Damleys farmstead were identified within Trench 161 (Fig. 2c). They consisted of three linear features (**038**, **040** and **044**), possibly representing the remains of three sides of a square or rectangular structure (Fig. 2c and Fig. 3). Linear **038** ran in a south to north direction for a distance of 8m before turning through 90° into linear **040**. Linear **040** then ran west to east for a further 8m, before turning southwards through two 45° bends into linear **044**, which continued southwards for a distance of 6.5m before terminating. A further linear (**042**) ran at c.90° to linear **038**, extending from close to the corner with **040** in an east to west direction for a distance of 6.5m, and a spread of demolition debris (**046**) measuring 1.6m north-west to south-east by 1m south-west to north-east was located c.2.2m to the east of the southern end of linear **038**.

Sections recorded across linear features **038**, **040**, **042** and **044** showed that they measured 1.6m in width by 0.2m in depth, 1.5m in width by 0.25m in depth, 0.33m in width by 0.2m in depth, and 0.3m in width by 0.05m in depth respectively. Linear **038** (Fig. 4) and **040** were very similar in nature with gently sloping sides and irregular bases, but **042** had steeply sloping sides and a concave base, and **044** had fairly

regular sloping sides and a flat base. The fill (**039**, **041**, **043** and **045** respectively) of these features consisted of loosely compacted soil and stone/demolition debris containing occasional sherds of 19th century pottery. Spread **046** was of a very similar nature to the fill of the other features.

It is considered possible that the linear features uncovered might represent the remains of foundation trenches associated with Damleys farmstead indicating a structure measuring 8m east to west by >8m north to south. However, no clear evidence of foundation stones was identified. It is also of note that linear **038** and **044** appear very wide for a foundation trench, although it is possible that these trenches were widened out during the demolition process for the purpose of the disposal of demolition debris.

3.3 Field Drains

Field drains of the ceramic cylinder type, the ceramic horseshoe type, and the field clearance rubble type were identified throughout Area 1A/1B and Area 2. The earlier horseshoe type of drain is generally indicative of early 19th century agricultural improvement, with the later cylinder type having been first introduced in 1843. A number of the later cylinder drains uncovered were date stamped '1972'. In a number of trenches horseshoe drains and cylinder drains were identified within close proximity to each other indicating two separate phases of drainage. The high concentration of field drains indicates extensive agricultural improvement throughout the 19th and 20th century.

3.4 Linear Features

Linear features were identified within Trenches 10 (**003**) and 23 (**007**, **009** and **011**) (Fig.2a). All are thought to be recent drainage ditches. Recent pottery was noted within the fill (**004**) of ditch **003**.

3.5 Rig-and-Furrow Cultivation

Vestigial traces of rig-and-furrow were recorded within Trenches 15, 16, 46, 140, 141, 143 and 145 (Fig. 2a – 2c). The identified furrows typically measured 1m wide by <0.1m deep. Due to the intermittent survival of the furrows it was not possible to establish the original width of the individual rigs.

3.6 Mining Remains

Back-filled mine shafts (Fig. 6) were identified within Trenches 25-28, 37 and 133 (Fig. 2a – 2c). These predominantly lie within the western extension (Area 1A/1B). Small scale mine-workings are shown within this location on an estate plan dating to 1756.

3.7 Well

A well (**047**) (Fig. 2b and Fig.5) measuring 0.9m in diameter internally and 1.35m in diameter externally was identified within Area 1B immediately to the east of Annfield Farm. The sides of the well had been lined with sandstone blocks and a brick-built parapet had been constructed on top of the sandstone. The parapet survived to a

maximum height of four courses, but had been largely demolished with the brickwork being dumped inside the well. A ceramic overflow pipe exited from the eastern side of the well and the metal piping for a lift-pump was visible within the well on the northern side. This well appears on the 1896 Second Edition Ordnance Survey map and all subsequent editions, but is not depicted on the 1856 First Edition Ordnance Survey map.

4. CONCLUSIONS

An archaeological trial trenching evaluation was carried out at Annfield, near Inverkeithing in advance of an extension to the Muir Dean Surface Mine. The trial trenches were positioned to target five sites identified within the cultural heritage chapter of the ES, as well as provide a good spread of trenches throughout the evaluation area.

The sites identified within the ES consisted of four separate buildings with associated enclosures, and an enclosure associated with earlier mining activities. These sites are depicted on an estate plan dating to 1756. One of the sites annotated Damleys is also depicted on the First Edition OS map. The probable site of Damleys was subject to a more intensive programme of trial trenching.

Trial trenching led to the identification of a series of possible foundation trenches associated with Damleys. The foundation trenches had been backfilled with demolition debris. There was no evidence of the remaining ES sites, indicating that they are likely to have been insubstantial in nature.

The other features that were identified during this programme of works consisted of post-improvement field drains and drainage features, mine-shafts relating to earlier mining activity, vestigial traces of pre-improvement rig-and-furrow cultivation and a late 19th century well associated with Annfield Farm. None of these features are considered to be archaeologically significant.

CFA does not recommend any further work in relation to this evaluation. However, it is understood that the decision regarding any further mitigation lies with the Fife Council Archaeologist.

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 Fife Council Sites and Monuments Record.

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

5. REFERENCES

Bibliographic

Richardson, P 2008 *Muir Dean OCCS, Fife: Archaeological Evaluation*, CFA Report No. 1473.

Cartographic

Ordnance Survey First Edition 6" map 1856, *Fife Sheet 35*

Ordnance Survey Second Edition 6" map 1896, *Fife and Kinross Sheet XXXIX.NE*

Winter, P (surveyor) 1756, *Plan of the estate of Fordell, the property of Sir Robert Henderson*

APPENDIX 1: Photographic Register

Digital

Shot	Description	From
1	Pre-existing site shots	
2	Pre-existing site shots	
3	Pre-existing site shots	
4	Pre-existing site shots	
5	Trench 1	NW
6	Trench 1 drains	E
7	Trench 2	SE
8	Trench 3	NW
9	Trench 4	SE
10	Trench 5 work shot	W
11	Trench 6	SW
12	Trench 7	NE
13	Trench 8	SW
14	Trench 9	NW
15	Context 003 in Trench 10 section	S
16	Context 003 in Trench 10 section	S
17	Context 003 intersection with rubble drain	E
18	Trench 11	NW
19	Trench 11 drain	NW
20	Trench 12	
21	Trench 13	
22	Trench 14	
23	Trench 15	
24	Trench 16	
25	Trench 17	
26	Trench 18	
27	Trench 16 R/F section	
28	Trench 16 R/F section	
29	Working shot	
30	Coal spread in Trench 24	
31	Trench 19	
32	Trench 23 section, context 009	
33	Trench 23 section, context 009	
34	Trench 23 section, context 011	
35	Trench 23	
36	Trench 26 mineshaft	S
37	Trench 26 mineshaft	S
38	Trench 26 mineshaft excavation	SE
39	Trench 26 mineshaft excavation	SE
40	Trench 26 mineshaft section	E
41	Trench 24	NE
42	Trench 22	SW
43	Trench 30	SW
44	Trench 28 shaft	NE
45	Trench 28	N
46	Trench 27 shaft section	NE
47	Trench 27	NW
48	Trench 20 section	W
49	Trench 21 section	SW
50	Trench 21 and 22 plan	SW
51	Trench 22 section	W
52	Trench 23 section	SW

Shot	Description	From
53	General shot of ditch and shaft	S
54	General shot of ditch and shaft	S
55	Section of gully Trench 32	SE
56	N/A	N/A
57	Trench 32	SW
58	Trench 33	NE
59	Trench 34	SW
60	Trench 35	SE
61	Trench 36	SE
62	Trench 37	SE
63	Trench 38 ploughmark	NE
64	Trench 39	SW
65	Trench 40	NE
66	Trench 41	NE
67	Trench 42	SE
68	Trench 43 shaft	E
69	Trench 43 working shot	S
70	Trench 43 working shot	S
71	Trench 43 ditch	SE
72	Trench 44 ploughmark	SE
73	Trench 37 mineshaft	SE
74	Trench 43 mineshaft	SE
75	Trench 43 shaft excavation	S
76	Trench 43 shaft excavation	S
77	Trench 43 ditch section	SE
78	Trench 43 ditch section	SE
79	Trench 44	E
80	Trench 37 mineshaft	SE
81	Trench 37 testing shaft	E
82	Trench 40 drain in ditch	S
83	Trench 40 drain in ditch	S
84	Trench 45	NE
85	Trench 45	NE
86	Trench 46	NE
87	Trench 47	SE
88	Trench 48	NE
89	Trench 49	SE
90	Trench 50	SW
91	Trench 51	SE
92	Trench 52	SE
93	Trench 53	SW
94	Trench 54	SE
95	Trench 55	SW
96	Trench 56	SE
97	Trench 57	SE
98	Trench 58	SW
99	Trench 59	SE
100	Trench 60	SW
101	Trench 61	NW
102	Trench 62	SW
103	Trench 63	NE
104	Trench 64	SW
105	Trench 65	NE
106	Trench 66	NW
107	Trench 67 drain detail	
108	Trench 68	SE
109	Trench 69	SW

Shot	Description	From
110	Trench 76	SE
111	Trench 75	SW
112	Trench 70	SW
113	Trench 74	SE
114	Trench 71	SW
115	Trench 72	E
116	Borehole (suspected well)	
117	Borehole (suspected well)	
118	Trench 85 drain	
119	Trench 80	SE
110	Trench 81	NW
111	Trench 78	NE
112	Trench 154	NW
113	Trench 155	NE
114	Trench 155 ditch general	NW
115	Trench 155 ditch sections	NW
116	Trench 156	E
117	Trench 157	NW
118	Trench 158	SW
119	Trench 159	S
120	Trench 160	E
121	Trench 156 ditch sections	E
122	Trench 156 ditch sections	E
123	Trench 161 boxed out and features	V
124	Trench 161 boxed out and features	V
125	Trench 161 boxed out and features	V
126	Trench 161 boxed out and features	V
127	Trench 161 boxed out and features	V
128	Trench 161 ditch sections	E
129	Trench 161 ditch sections	E
130	Trench 161 ditch sections	E
131	Trench 161 ditch sections	E
132	Trench 97	NE
133	*number skipped on register*	N/A
134	Trench 91	NW
135	Trench 84	SW
136	Trench 92	SE
137	Trench 93	SE
138	Trench 98	NE
139	Trench 104	SE
140	Trench 161 section and profile	NE
141	Trench 161 section and profile	NE
142	Trench 161 South terminus of ditch	SE
143	Trench 116 general	NE
144	Trench 108 general	SE
145	Trench 109 general	SE
146	Trench 102 general	NE
147	Trench 96 general	NW
148	Trench 90 general	SW
149	Trench 95 general	SE
150	Trench 89 general	SW
151	Trench 94 general	SE
152	Trench 101 general	NE
153	Trench 107 general	SE
154	Trench 123 general	SE
155	Trench 117 general	NE
156	Trench 124 general	SE

Shot	Description	From
157	Trench 131 general	SW
158	Trench 137 general	NW
159	Trench 143 general	SW
160	Trench 149 general	SE
161	Trench 148 general	SE
162	Trench 142 general	NE
163	Trench 136 general	NW
164	Trench 130 general	NE
165	Trench 129 general	NE
166	Trench 135 general	SE
167	Trench 128 general	SW
168	Trench 134 general	SE
169	Trench 141 general	SW
170	Trench 147 general	NW
171	Trench 153 general	SW
172	Trench 146 general	NW
173	Trench 152 general	SW
174	Trench 145 general	NW
175	Trench 151 general	SW
176	Trench 150 general	SW
177	Trench 144 general	NW
178	Trench 138 general	SW
179	Trench 139 general	NE
180	Trench 140 general	NE
181	Trench 127 general	NE
182	Trench 133 general	SE
183	Trench 126 general	NE
184	Trench 125 general	SW
185	Trench 132 general	NW
186	Trench 133 general shot of mineshaft	SW
187	Trench 133 general shot of mineshaft	SW

APPENDIX 2: Context Register

Context No.	Area	Trench	Description
000	All	All	Natural
001	All	All	Topsoil
002	All	Various	Subsoil
003	1	10	Linear ditch
004	1	10	Fill
005	1	15, 16	Rig and Furrow
006	1	15, 16	Fill
007	1	23	Linear ditch
008	1	23	Fill
009	1	23	Linear ditch
010	1	23	Fill
011	1	23	Linear ditch
012	1	23	Fill
013	1	25	Cut of possible pit
014	1	25	Upper fill of 013- silt with charcoal
015	1	25	Primary fill of 013- grey sand
016	N/A	N/A	N/A
017	N/A	N/A	N/A
018	N/A	N/A	N/A
019	N/A	N/A	N/A
020	N/A	N/A	N/A
021	1	30	Cut of possible pit
022	1	30	Cut of possible pit
023	N/A	N/A	N/A
024	N/A	N/A	N/A
025	N/A	N/A	N/A
026	1	30	Upper fill of 021
027	1	30	Lower fill of 021
028	N/A	N/A	N/A
029	1	30	Upper fill of 022
030	1	30	Lower fill of 022
031	N/A	N/A	N/A
032	1	30	Cut of gully associated with mine shaft
033	1	30	Upper fill of 032
034	1	30	Primary fill of 032
035	1	25	Cut of gully associated with mine shaft
036	1	25	Upper fill of 035
037	1	25	Lower fill of 035
038	2	161	Cut of ditch
039	2	161	Fill of ditch 038- loose soil/pebbles
040	2	161	Cut of ditch
041	2	161	Fill of ditch 040- loose soil/rubble
042	2	161	Cut of ditch
043	2	161	Fill of ditch 042- loose soil/stones
044	2	161	Cut of shallow ditch
045	2	161	Fill of ditch 044
046	2	161	Spread of ash and brick rubble
047	2	N/A	Late 19 th century well

APPENDIX 3: Summary of Excavation Results

Trench No.	Area No.	Size (m)	Depth of Deposits (m)	Features
1	1	30 x 1.8	0.4	Rubble and clay drains
2	1	30 x 1.8	0.45	Rubble and clay drains
3	1	30 x 1.8	0.4	Rubble and clay drains
4	1	30 x 1.8	0.3	N/A
5	1	30 x 1.8	0.35	N/A
6	1	30 x 1.8	0.35	Rubble drains
7	1	30 x 1.8	0.4	Rubble and clay drains
8	1	30 x 1.8	0.4	Rubble and clay drains
9	1	30 x 1.8	0.35	Rubble drains
10	1	30 x 1.8	0.45	Rubble drains and one large ditch.
11	1	30 x 1.8	0.45	N/A
12	1	30 x 1.8	0.4	N/A
13	1	30 x 1.8	0.4	N/A
14	1	30 x 1.8	0.4	N/A
15	1	30 x 1.8	0.4	N/A
16	1	30 x 1.8	0.45	Field drains
17	1	30 x 1.8	0.4	N/A
18	1	30 x 1.8	0.4	N/A
19	1	30 x 1.8	0.4 - 0.8	N/A
20	1	30 x 1.8	0.45	N/A
21	1	30 x 1.8	0.45	N/A
22	1	30 x 1.8	0.45	Rubble and clay drains
23	1	30 x 1.8	0.4	Three ditches
24	1	30 x 1.8	0.5	N/A
25	1	30 x 1.8	0.4	One mineshaft with five pits
26	1	30 x 1.8	0.35	One mineshaft
27	1	30 x 1.8	0.4	One mineshaft
28	1	30 x 1.8	0.45	One mineshaft
29	1	30 x 1.8	0.4	N/A
30	1	30 x 1.8	0.4	N/A
31	1	30 x 1.8	0.4	Rubble and clay drains
32	1	30 x 1.8	0.4	Rubble and clay drains
33	1	30 x 1.8	0.4	N/A
34	1	30 x 1.8	0.4	N/A
35	1	30 x 1.8	0.45	N/A
36	1	30 x 1.8	0.45	One large ditch
37	1	30 x 1.8	0.45	One mineshaft
38	1	30 x 1.8	0.45	N/A
39	1	30 x 1.8	0.45	N/A
40	1	30 x 1.8	0.45	One large ditch with clay drain
41	1	30 x 1.8	0.4	Spread of coal
42	1	30 x 1.8	0.4	N/A
43	1	30 x 1.8	0.45	N/A
44	1	30 x 1.8	0.45	N/A
45	1	30 x 1.8	0.41	Field drains, one ditch, and one mineshaft
46	1	30 x 1.8	0.4	One field drain
47	1	30 x 1.8	0.25	N/A
48	1	30 x 1.8	0.3	N/A
49	1	30 x 1.8	0.5	One field drain
50	1	30 x 1.8	0.5	Field drains
51	1	30 x 1.8	0.41	Field drains
52	1	30 x 1.8	0.45	Field drains

Trench No.	Area No.	Size (m)	Depth of Deposits (m)	Features
53	1	30 x 1.8	0.5	Field drains
54	1	30 x 1.8	0.32	N/A
55	1	30 x 1.8	0.3	Field drains
56	1	30 x 1.8	0.31	Field drains
57	1	30 x 1.8	0.4	Clay drains
58	1	30 x 1.8	0.35	N/A
59	1	30 x 1.8	0.3	N/A
60	1	30 x 1.8	0.4	Clay drains
61	1	30 x 1.8	0.4	Clay drains
62	1	30 x 1.8	0.4	Clay drains
63	1	30 x 1.8	0.45	Clay drains
64	1	30 x 1.8	0.5	Clay drains
65	1	30 x 1.8	0.45	Clay drains
66	1	30 x 1.8	0.3 - 0.5	Rubble and clay drains
67	1	30 x 1.8	0.3 - 0.4	Rubble and clay drains
68	1	30 x 1.8	0.45	Clay drains
69	1	30 x 1.8	0.45	Clay drains
70	1	30 x 1.8	0.4	Clay drains
71	1	30 x 1.8	0.35	Clay drains
72	1	30 x 1.8	0.45	Clay drains
73	1	30 x 1.8	0.4	N/A
74	1	30 x 1.8	0.4	Clay drains
75	1	30 x 1.8	0.4	N/A
76	1	30 x 1.8	0.4	N/A
77	2	30 x 1.8	0.8 - 1.0	Many clay drains
78	2	30 x 1.8	0.3	N/A
79	2	30 x 1.8	0.9	Clay drains
80	2	30 x 1.8	0.4	Clay drains
81	2	30 x 1.8	0.4	Rubble and clay drains
82	2	30 x 1.8	0.8-0.9	Many clay drains
83	2	30 x 1.8	0.9	Many clay drains
84	2	30 x 1.8	0.45	Clay drains
85	2	30 x 1.8	0.4	Clay drains
86	2	30 x 1.8	0.4 - 0.5	Clay drains
87	2	30 x 1.8	0.3	Clay drains
88	2	30 x 1.8	0.4	Clay drains and one ditch
89	2	30 x 1.8	0.5	Four ceramic field drains
90	2	30 x 1.8	0.3	Four ceramic field drains
91	2	30 x 1.8	0.4	Rubble and clay drains
92	2	30 x 1.8	0.4	Clay drains
93	2	30 x 1.8	0.4	Clay drains
94	2	30 x 1.8	0.43	Two ceramic field drains and two machine cut linears
95	2	30 x 1.8	0.25	Five ceramic field drains
96	2	30 x 1.8	0.3	Four ceramic field drains
97	2	30 x 1.8	0.4	Rubble drains
98	2	30 x 1.8	0.4	Clay drains
99	2	30 x 1.8	0.35	Clay drains
100	2	30 x 1.8	0.3	Clay drains
101	2	30 x 1.8	0.3	Three ceramic field drains and one rubble field drain
102	2	30 x 1.8	0.4	N/A
103	2	30 x 1.8	0.3	N/A
104	2	30 x 1.8	0.3	N/A
105	2	30 x 1.8	0.3	N/A
106	2	30 x 1.8	0.3	N/A
107	2	30 x 1.8	0.3	Six ceramic field drains

Trench No.	Area No.	Size (m)	Depth of Deposits (m)	Features
108	2	30 x 1.8	0.25	Three ceramic field drains
109	2	30 x 1.8	0.3	Three ceramic field drains
110	2	30 x 1.8	0.3	N/A
111	2	30 x 1.8	0.3	N/A
112	2	30 x 1.8	0.3	N/A
113	2	30 x 1.8	0.3	N/A
114	2	30 x 1.8	0.3	N/A
115	2	30 x 1.8	0.3	N/A
116	2	30 x 1.8	0.4 - 0.6	Four ceramic field drains and one rubble drain
117	2	30 x 1.8	0.2 - 0.3	N/A
118	2	30 x 1.8	0.3	N/A
119	2	30 x 1.8	0.3	N/A
120	2	30 x 1.8	0.3	N/A
121	2	30 x 1.8	0.3	N/A
122	2	30 x 1.8	0.3	N/A
123	2	30 x 1.8	0.3	N/A
124	2	30 x 1.8	0.3	N/A
125	2	30 x 1.8	0.25	Four ceramic drains
126	2	30 x 1.8	0.2	Five field drains
127	2	30 x 1.8	0.43	Two ceramic drains and one field drain cut
128	2	30 x 1.8	0.43	Clay field drains
129	2	30 x 1.8	0.4	Two clay drains and one shallow linear ditch drain
130	2	30 x 1.8	0.5	Six field drains
131	2	30 x 1.8	0.2	Five field drains
132	2	30 x 1.8	0.3	Four field drains
133	2	30 x 1.8	0.2	Four field drains
134	2	30 x 1.8	0.2	Three field drain cuts
135	2	30 x 1.8	0.23	Four field drains
136	2	30 x 1.8	0.23	Two field drain cuts
137	2	30 x 1.8	0.25	Four field drains
138	2	30 x 1.8	0.2	Five field drains
139	2	30 x 1.8	0.45 - 0.3	Three field drains
140	2	30 x 1.8	0.25	Rig and furrow and four field drains
141	2	30 x 1.8	0.2	Possible rig and furrow
142	2	30 x 1.8	0.45	Two field drain cuts
143	2	30 x 1.8	0.2	Possible rig and furrow and four ceramic field drains
144	2	30 x 1.8	0.2	Five field drain cuts
145	2	30 x 1.8	0.2	Possible rig and furrow and five field drain cuts
146	2	30 x 1.8	0.3	Three field drain cuts and one modern drainage ditch
147	2	30 x 1.8	0.2 - 0.5	Two field drains
148	2	30 x 1.8	0.2	Four field drains
149	2	30 x 1.8	0.2 - 0.6	Six field drains
150	2	30 x 1.8	0.55 - 0.2	Four field drain cuts
151	2	30 x 1.8	0.3	Five field drain cuts
152	2	30 x 1.8	0.4	Three field drains
153	2	30 x 1.8	0.2	Four field drain cuts
154	2	30 x 1.8	0.3	N/A
155	2	30 x 1.8	0.3	N/A
156	2	30 x 1.8	0.3	N/A
157	2	30 x 1.8	0.3	N/A

Trench No.	Area No.	Size (m)	Depth of Deposits (m)	Features
158	2	30 x 1.8	0.3	N/A
159	2	30 x 1.8	0.3	N/A
160	2	30 x 1.8	0.3	N/A
161	2	30 x 1.8	0.3	Possible foundation trenches
162	2	30 x 1.8	0.3	N/A
163	2	30 x 1.8	0.3	N/A
164	2	30 x 1.8	0.3	N/A

APPENDIX 4: Summary of ES Sites

No.	Source	NGR	Description	Location
20	1756 map	NT 1501 8696	Building and enclosure shown on 1756 map in a field denoted 'The Quaw'	Area 1
24	1756 map	NT 1528 8634	Building and enclosure within an area denoted 'Dam leys' on 1756 map. On the 1796 map and 1st Ed OS map a more developed farmstead denoted 'Damleys' is depicted.	Area 2
26	1756 map	NT 1523 8622	Building and enclosure within an area annotated 'Dam leys' on 1756 map. On the 1796 map it is denoted 'Ferry hill', but is not depicted on later maps.	Area 2
27	1756 map	NT 1475 8656	Building and enclosure shown on 1756 map within an area annotated 'Bullstones'	Area 1
28	1756 map	NT 1480 8666	Possible former small-scale coal workings enclosure shown on the 1756 map within an area denoted 'Bullstones'.	Area 1

APPENDIX 5: Field Drawings Register

Sheet No	Drawing No	Scale	Section/Plan	Description
1	1	1:10	S	Pit 013, NW-facing section
1	2	1:10	S	Pit 021, SW-facing section
1	3	1:10	S	Pit 022, SW-facing section
1	4	1:20	S	Gully 032, S-facing section
1	5	1:10	S	Gully 035, E-facing section
1	6	1:50	P	Gully 032 and mine shaft, plan
2	7	1:50	P	Linear 038, 040, 044 and spread 046, plan
3	8	1:20	S	Linear 038, S-facing section
3	9	1:10	S	Linear 040, E-facing section
3	10	1:10	S	Linear 042, E-facing section
3	11	1:10	S	Linear 044, S-facing section
3	12	1:50	P	Overlay plan for Dr 7 showing 042

APPENDIX 6: Discovery and Excavation in Scotland Entry

LOCAL AUTHORITY:	Fife Council
PROJECT TITLE/SITE NAME:	Muir Dean OCCS, Annfield Extension, Fife
PROJECT CODE:	MUDE2
PARISH:	Dalgety
NAME OF CONTRIBUTOR:	Magnus Kirby
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Evaluation
NMRS NO(S):	N/A
SITE/MONUMENT TYPE(S):	Linear features, coal shafts and a well
NGR (2 letters, 6 figures)	NT 14924 86586
START DATE (this season)	February 2012
END DATE (this season)	March 2012
PREVIOUS WORK (incl. DES ref.)	N/A
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	<p>An archaeological trial trenching evaluation was carried out at Annfield, near Inverkeithing in advance of an extension to the Muir Dean Surface Mine. The trial trenches were positioned to target five sites identified within the cultural heritage chapter of the ES, as well as provide a good spread of trenches throughout the evaluation area.</p> <p>The sites identified within the ES consisted of four separate buildings with associated enclosures, and an enclosure associated with earlier mining activities. These sites are depicted on an estate plan dating to 1756. One of the sites annotated Damleys is also depicted on the First Edition OS map. The probable site of Damleys was subject to a more intensive programme of trial trenching.</p> <p>Trial trenching led to the identification of a series of possible foundation trenches associated with Damleys. The foundation trenches had been backfilled with demolition debris. There was no evidence of the remaining ES sites indicating that they are likely to have been insubstantial in nature.</p> <p>The other features that were identified during this programme of works consisted of post-improvement field drains and drainage features, mine-shafts relating to earlier mining activity, vestigial traces of pre-improvement rig and furrow cultivation and a late 19th century well associated with Annfield Farm. None of these features are considered to be archaeologically significant.</p>
PROPOSED FUTURE WORK:	N/A
CAPTION(S) FOR ILLUSTRS:	N/A
SPONSOR OR FUNDING BODY:	ATH Resources PLC
ADDRESS OF MAIN CONTRIBUTOR:	The Old Engine House, Eskmills Park, Musselburgh, East Lothian EH21 7PQ
EMAIL ADDRESS:	mkirby@cfa-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	Report to be submitted to NMRS and Fife SMR Archive to be submitted to NMRS



Keys:



ES Site

CFA
ARCHAEOLOGY LTD
ARCHAEOLOGY LTD
Old Engine House
Eskmills Park
Musselburgh
East Lothian, EH21 7PQ
t: 0131 273 4390
f: 0131 273 4391
www.cfa-archaeology.co.uk
www.cfa-archaeology.co.uk

Fig. No: 1

Revisiort: A

Site Location

Project:
Muir Dean Surface Mine
Annfield Extension
Inverkerthing
Fife

Archaeological Evaluation

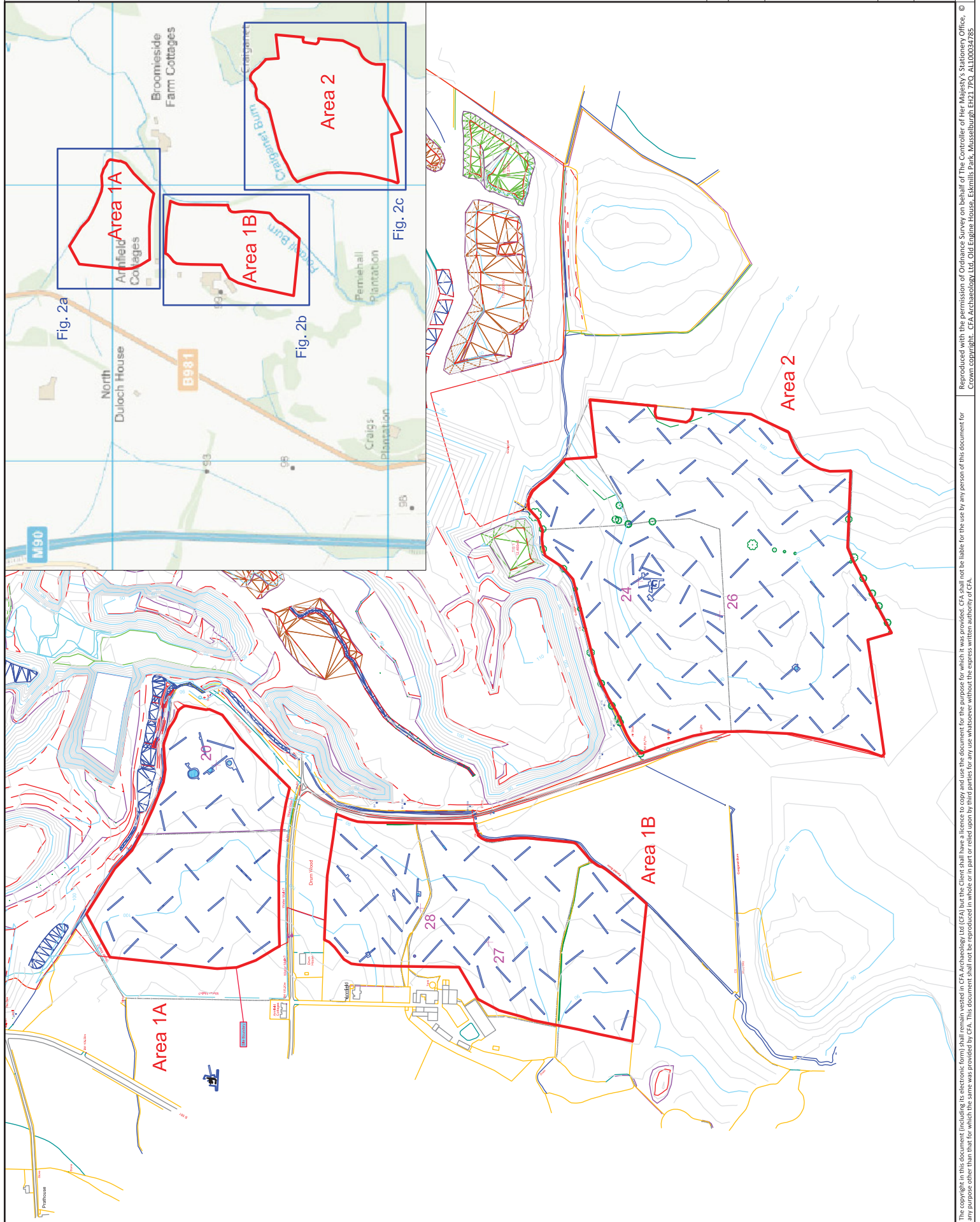
Client:
ATH Resources

Scale at A3:
1:5000

Drawn by:
LW

Checked:
LW

Report No:
2030



Reproduced with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office, © Crown copyright. CFA Archaeology Ltd, Old Engine House, Eskmills Park, Musselburgh EH21 7PQ, A1100034785

The copyright in this document (including its electronic form) shall remain vested in CFA Archaeology Ltd (CFA) but the Client shall have a licence to copy and use the document for the purpose for which it was provided. CFA shall not be liable for the use by any person of this document for any purpose other than that for which the same was provided by CFA. This document shall not be reproduced in whole or in part or relied upon by third parties for any use whatsoever without the express written authority of CFA.

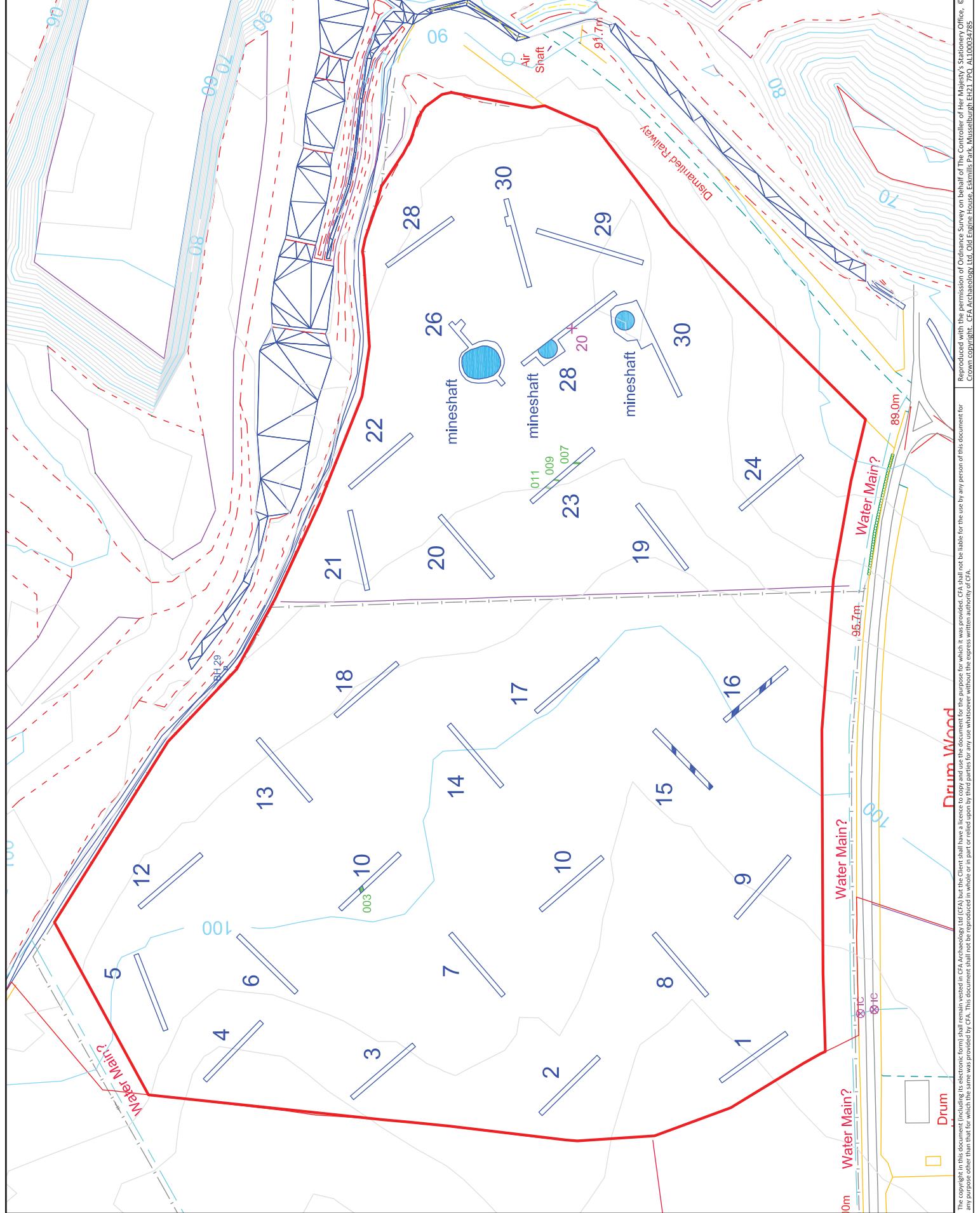


Key:

- Site Boundary
- CFA Trench
- Rig & Furrow
- Linear feature
- Mineshaft
- ES Site

CFA
 CFA ARCHAEOLOGY LTD
 Old Engine House
 Eskmills Park
 Musselburgh
 East Lothian, EH21 7PQ
 t: 0131 272 4390
 f: 0131 272 4391
 www.cfaarchaeology.co.uk

Fig. No:	2a	Revisort:	A
Title: Area 1A Trench plan showing Mineshafts, Rig and Furrow and ES Sites			
Project: Muir Dean Surface Mine Annfield Extension Inverkeithing Fife			
Client: ATH Resources			
Scale at A3: 1:1250			
Drawn by:	LW	Checked:	LW
Report No:	2030		



The copyright in this document (including its electronic form) shall remain vested in CFA Archaeology Ltd (CFA) but the Client shall have a licence to copy and use the document for the purpose for which it was provided. CFA shall not be liable for the use by any person of this document for any purpose other than that for which the same was provided by CFA. This document shall not be reproduced in whole or in part or relied upon by third parties for any use whatsoever without the express written authority of CFA.



Keys:

- Site Boundary
- CFA Trench
- Rig & Furrow
- Mineshaft
- Well
- ES Site

CFA
ARCHAEOLOGY LTD
ARCHAEOLOGY LTD
Old Engine House, Eskmills Park, Musselburgh, East Lothian, EH21 7PQ
t: 0131 272 6390
f: 0131 272 6391
www.cfaarchaeology.co.uk
www.cfaarchaeology.co.uk

Fig. No: 2b Revisior: A

Title: Area 1B Trench plan showing Mineshafts, Rig and Furrow and ES Sites

Project: Muir Dean Surface Mine Annfield Extension Inverkeithing Fife Archaeological Evaluation

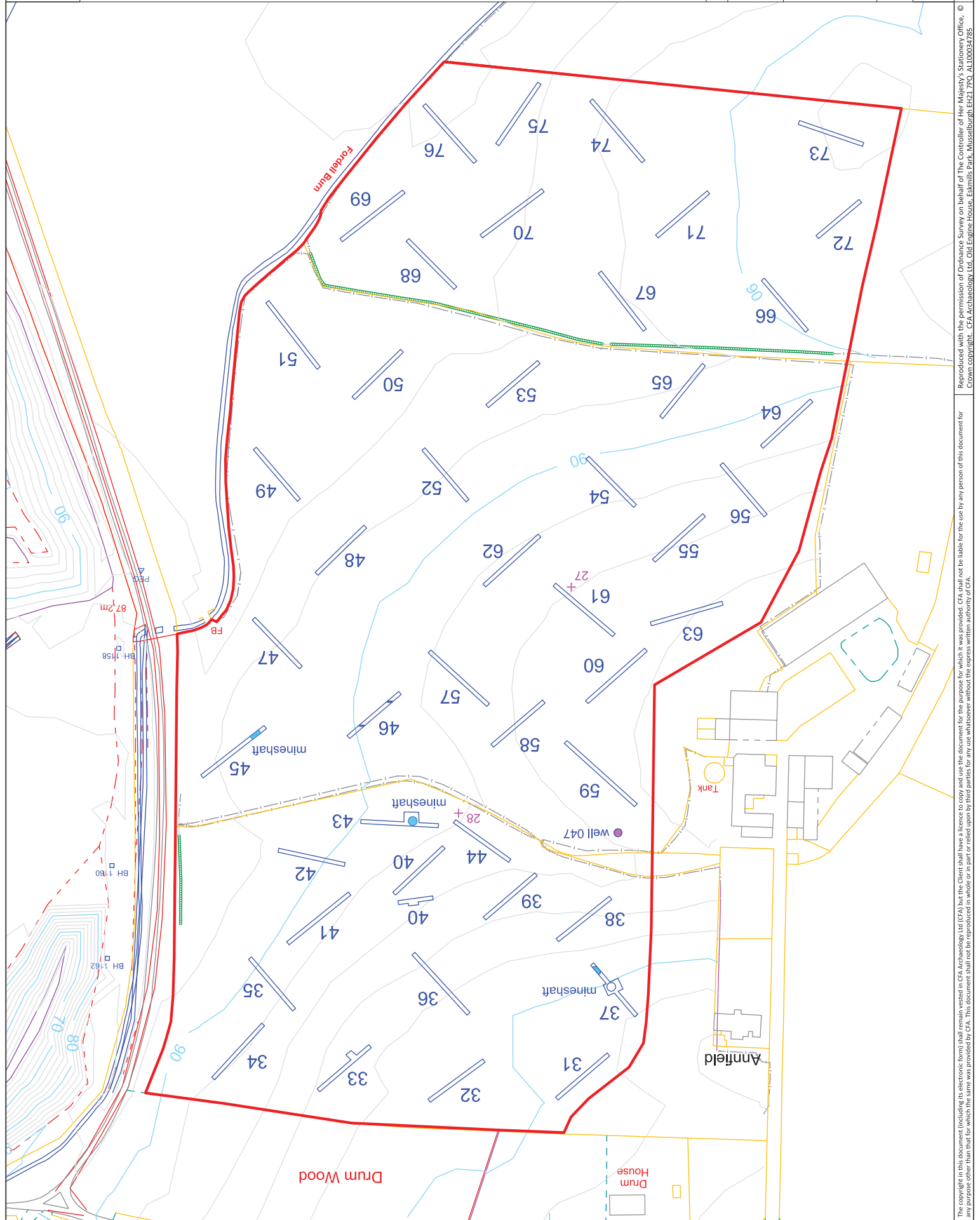
Client: ATH Resources

Scale at A3: 1:1500

Drawn by: LW

Checked: LW

Report No: 2030



Reproduced with the permission of Ordnance Survey on behalf of The Controller of Her Majesty's Stationery Office, © Crown copyright. CFA Archaeology Ltd, Old Engine House, Eskmills Park, Musselburgh EH21 7PQ, AL100034785

The copyright in this document (including its electronic form) shall remain vested in CFA Archaeology Ltd (CFA) but the Client shall have a licence to copy and use the document for the purpose for which it was provided. CFA shall not be liable for the use by any person of this document for any purpose other than that for which the same was provided by CFA. This document shall not be reproduced in whole or in part or relied upon by third parties for any use whatsoever without the express written authority of CFA.



Keys:

- Site Boundary
- CFA Trench
- Rig & Furrow
- Mineshaft
- ES Site

CFA
ARCHAEOLOGY LTD
ARCHAEOLOGY LTD
100, Engine House
Esplanade Park
Musselburgh
East Lothian, EH21 7PQ
t: 0131 273 4380
f: 0131 273 4381
www.cfa-archaeology.co.uk

Fig. No: 2c Revisiort: A

Title: Area 2 Trench plan showing Trench 161, possible foundation trenches associated with Damleys

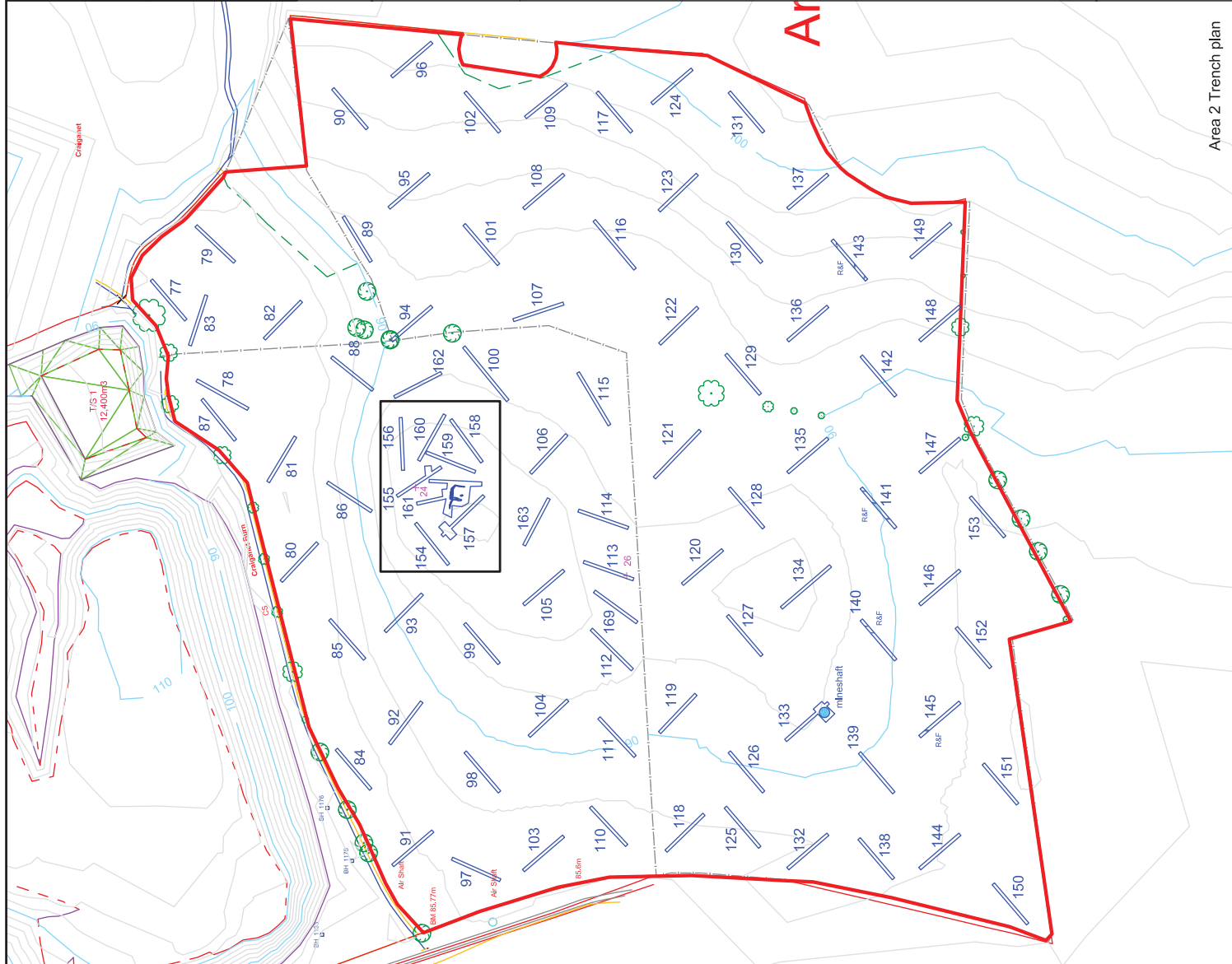
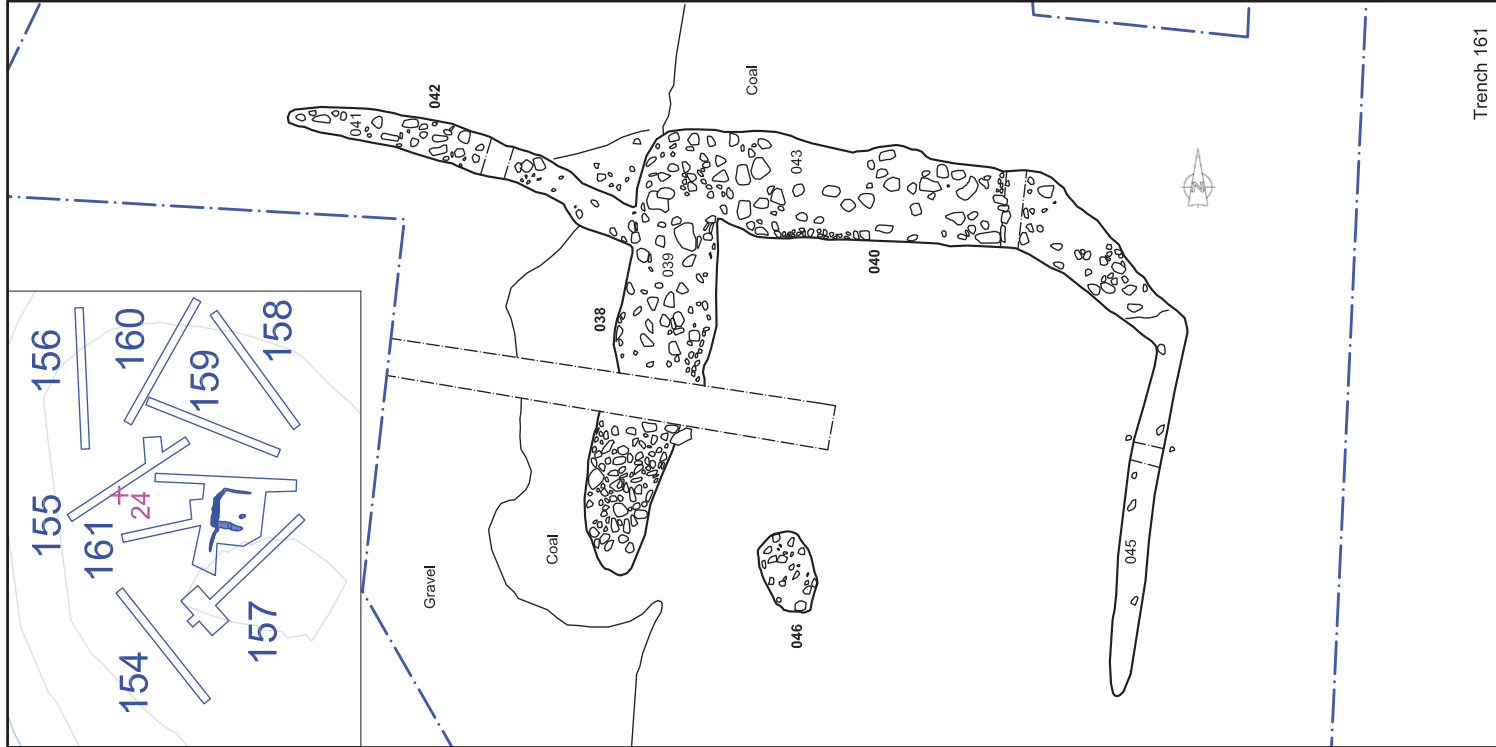
Project: Muir Dean Surface Mine Annfield Extension Inverkerthing Fife

Client: Archaeological Evaluation ATH Resources

Scale at A3:

Area 2 - 1:2500 Trench 161 - 1:80

Drawn by: LW Checked: LW Report No: 2030



Area 2 Trench plan

Trench 161

The copyright in this document (including its electronic form) shall remain vested in CFA Archaeology Ltd (CFA) but the Client shall have a licence to copy and use the document for the purpose for which it was provided. CFA shall not be liable for the use by any person of this document for any purpose other than that for which the same was provided by CFA. This document shall not be reproduced in whole or in part or relied upon by third parties for any use whatsoever without the express written authority of CFA.



Fig. 3 - Trench 161 showing possible foundation trenches associated with Damleys



Fig. 4 - Section through linear 038 at Damleys

Key:

Fig. No:	3-4	Revision:	A	Client:	ATH Resources
Title:					
Project:	Muir Dean Surface Mine, Annfield Extension Inverkeithing, Fife Archaeological Evaluation				



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

Drawn by:	LW	Checked:	LW	Report No:	2030
-----------	----	----------	----	------------	------



Fig. 5 - Well 047



Fig. 6 - Back-filled mine-shaft

Key:

Fig. No:	5-6	Revision:	A	Client:	ATH Resources
Title:					
Project:	Muir Dean Surface Mine, Annfield Extension Inverkeithing, Fife Archaeological Evaluation				



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

Drawn by: LW Checked: LW Report No: 2030