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Mackie's Mill Opencast Coal Extension East Wemyss Fife

Archaeological Evaluation

Report No. 2037

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1. INTRODUCTION

1.1 General

This report presents the results of an archaeological evaluation undertaken by CFA Archaeology Ltd (CFA) in March 2012 at Mackie's Mill Opencast Mine (Earlseat Extension), near East Wemyss, Fife (NGR: NT 3076 9791 centred) (Fig. 1). The work was commissioned by Hall Construction Ltd.

A Written Scheme of Investigation (WSI) dated 15 March 2012 covering this programme of works was produced by CFA on behalf of Hall Construction. This WSI was designed to meet the requirements of the Fife Council Archaeologist.

1.2 Background

Planning consent (Ref No. 09/00843/EIA) has been granted for the recovery of coal using surface mining techniques at Mackie's Mill, near East Wemyss. 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 Earlseat extension (Fig. 1). This area was situated within mildly undulating improved farmland located to the south and east of the River Ore.

A cultural heritage study (Haines 2008) produced by CFA identified no sites of cultural heritage interest within the application area, and thirteen non-designated cultural heritage sites within 2km of the proposed development area. Two of these features (NT39NW1 & 2) are standing stones. Cropmarks of a possible ring-ditch and other possible features (NT29NE3) are recorded less than 1km to the north-east of the site. Four colliery sites (NT39NW149, 165, 226 & 229) and a bing (NT39NW180) associated with mid 19th to mid 20th century coal mining are located within 2km of the proposed development area. The sites of two buildings dating from the 18th and 19th century (NT39NW168 & 235) are located in the vicinity of the proposed development area, as are a pillbox (NT39NE36.01) and anti-tank ditches (NT39NE36 & NT 29NE71) forming part of World War Two, Fife Command Line defensive position.

Two designated sites of national importance and two designated sites of regional importance were identified within 2km of the proposed extension. The Barrel Brig is a Scheduled Ancient Monument (4125) and category B listed building (42980). The Thornton Beam Engine House (42992) is a Category A listed building. A terraced pair of houses dating to the early 19th century; 88 main Street, Coaltown of Balgonie (42992) and 90 Main Street, Coaltown of Balgonie (42974) are both Category B listed buildings.

No previous invasive archaeological work has been undertaken within the proposed development area.

1.3 Objectives

The objectives of the programme of works reported herein were:

- To conduct a 5% evaluation of the proposed development area;
- 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

A total of one hundred and eighty-seven trenches were excavated amounting to 13,774m² (5.8% of the area) were excavated. Twenty-two trial trenches were excavated on ground from which topsoil had already been mechanically removed without archaeological supervision (Figs. 19-20).

Topsoil and modern overburden were removed by tracked 360° mechanical excavators equipped with smooth-bladed ditching buckets. An 8 tonne machine fitted with a 1.5m bucket, a 15 tonne machine fitted with a 1.8m bucket and a 22 tonne machine fitted with a 2m bucket were used. All trial trench excavation 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.

3. ARCHAEOLOGICAL RESULTS

3.1 General

Numbers in bold refer to contexts, a full list of which is contained in Appendix 2. Only trial trenches containing archaeological remains are described in the narrative below. A summary of all the trenches is contained in Appendix 1.

The deposits throughout the proposed development areas consisted of 0.3m to 0.4m of grey-brown silt topsoil (**001**) overlying stony orange-brown sandy clay, with coarse sand being present at the extreme north and south of the site (**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**). Clay cylinder drains were present in most of the trenches, and rubble drains were revealed in a few (Figs. 13-18).

3.2 Field Boundary Ditches

Two probable field boundary ditches were exposed, one crossing the centre of the site and one on the south edge of the site.

One ditch was revealed in Trenches 29, 33 and 37. It was aligned east to west and was on the same alignment as an extant hedge and ditch boundary on the east side of the site. The ditch (**005**) measured c.1.1m wide and was 0.4m deep (Fig. 2). It had steep convex sides narrowing to a concave base and was filled with compact dark silt which was distinguishable from the overlying topsoil only through virtue of being slightly more compact.

A sub-linear, slightly wandering ditch (**022**) was exposed and followed in Trench 158 (Fig. 12). It was aligned roughly north-west to south-east and extended at an oblique angle from an existing boundary and ran for c.25m to a tapered terminus. It had been severely truncated in places and had concave sides and a flattish, concave base. It was filled with dark clayey silt (**023**) and was cut by a rubble drain.

3.3 Pits

Four pits were discovered, all located in the south-west of the evaluation area. One pit was in Trench 43, the other three were in Trench 46.

Trench 43

A large pit (**007**) was revealed in Trench 43. It was sealed under topsoil (**001**) and was sub-square in plan with irregularly sloping sides merging to a concave base. The pit measured c.3m by 2.75m and was 0.54m deep in the centre, and contained three fills (Figs. 3-6). The primary fill (**008**) was mid brownish-yellow sandy clay lining the pit cut to a thickness of 0.08m. The secondary fill (**009**) comprised the main fill of the pit and was very dark brown sandy silt up to 0.3m thick. The upper fill (**010**) of the pit consisted of a deposit of mid-yellowish-brown sandy clay situated in the middle of the surface of the main pit fill (**009**). The deposit was 0.8m in diameter and 0.18m deep. The pit was fully excavated but no indications of date or purpose were discovered.

The square-form plan may suggest a relatively recent date, although it is impossible to be certain in the absence of any other evidence.

Trench 46

Three small pits were discovered in Trench 46 (Fig. 7). Pit **011** was oval in plan and measured 1.2m by 0.7m (Fig. 8). It had steep sides which turned abruptly to a flat base and was 0.23m deep. It contained two fills, a primary fill (**012**) of mid greyish-brown silt with rare small charcoal flecks, and a secondary fill (**013**) of dark brown sandy silt which was contained within the surface of **012** and was 0.06m thick. A fragment of pottery was recovered from the interface of this context and **012**.

A smaller sub-circular pit (**016**) was located on the south-east edge of **011** (Fig. 9-10). It measured 0.41m by 0.38m and had shallow sloping sides and a concave base. It contained a single fill (**017**) of mid grey-brown sandy silt.

Pit **014** was located 1m to the west of **011** and appeared to have suffered significantly more truncation than **011** or **016**. It was sub-oval to kidney shaped in plan and measured 0.46m by 0.35m and had steep sides turning to a flat base 0.1m deep (Fig. 11). It contained three fills. The primary fill (**015**) was mid grey silt with rare small charcoal flecks. Two secondary fills (**018**, **019**) were contained within the surface of **015**, both comprising dark brown sandy silt to 0.08m deep. A sherd of pottery was recovered from **018**.

A trench measuring c.10m by 10m was opened around these three pits, and no other features were revealed.

3.4 Rig-and-Furrow

Two areas of remnant rig-and-furrow cultivation were identified. Two furrows (**003**) were exposed in Trench 34. Both measured 0.9m wide and only up to 0.02m deep, and were aligned roughly east to west. They were filled with dark silt (**004**), which was indistinguishable from the overlying topsoil.

Vestigial traces of rig and furrow (**020**) were exposed in several trenches in the south-east of the site, all aligned roughly north to south. All the remains were very vestigial, and no measurable depth could be excavated, however the pattern was sufficiently discernible to note a wavelength of c.7m.

3.5 The finds, by Melanie Johnson

Two sherds of prehistoric pottery were recovered, plus two small fragments of burnt bone.

One plain body sherd weighing 13g was found in context **015**, the primary fill of pit **014**. One plain body sherd weighing 26g plus two fragments of burnt bone were found in context **013**, the secondary fill of pit **011**. The pottery sherds were very similar in fabric, with a red-brown exterior and dark grey core and interior.

It is difficult to ascribe a date with any certainty to plain body sherds such as these but they are likely to be later Neolithic or Bronze Age in date.

4. CONCLUSIONS

An archaeological trial trenching evaluation was carried out at Mackie's Mill, near East Wemyss, Fife to fulfil a planning application for an opencast coal mine. The trial trenches were positioned to provide a good spread of trenches throughout the evaluation area, covering just over 5%.

Trial trenching led to the identification of a large pit, a concentration of three smaller pits of probable prehistoric date, two field boundaries and vestigial traces of rig-and-furrow cultivation.

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* (Appendix 6) and will also be reported on through *OASIS Scotland*.

5. REFERENCES

Haines, K. 2008 *Proposed Opencast Extension, Earlseat, Kirkcaldy, Fife. Environmental Impact Assessment-Cultural Heritage*. CFA report No. 1536.

APPENDIX 1: Trial Trench Register

Trench No.	Dimensions (m)	Topsoil depth	Comments
1	40 x 1.5	0.35	Firm coarse sand, occasional rounded and sub-angular stones.
2	50 x 1.5	0.4	Firm coarse sand, occasional rounded and sub-angular stones. Rubble drains
3	50x 1.5	0.35	Firm coarse sand, occasional rounded and sub-angular stones. Rubble drains
4	50x 1.5	0.4	Loose coarse sand, occasional rounded and sub-angular stones. Rubble drains
5	50x 1.5	0.4	Loose coarse sand, occasional rounded and sub-angular stones.
6	50x 1.5	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
7	50x 1.5	0.4	Loose coarse sand, occasional rounded and sub-angular stones.
8	50x 1.5	0.4	Loose coarse sand, occasional rounded and sub-angular stones.
9	30 x 1.5	0.4	Loose coarse sand, occasional rounded and sub-angular stones.
10	50 x 1.5	0.4	Loose coarse sand, occasional rounded and sub-angular stones.
11	50 x 1.5	0.4	Loose coarse sand, occasional rounded and sub-angular stones.
12	50 x 1.5	0.4	Loose coarse sand, occasional rounded and sub-angular stones.
13	50 x 1.5	0.4	Loose coarse sand, occasional rounded and sub-angular stones.
14	50 x 1.5	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
15	50 x 1.5	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
16	50 x 1.8	0.35	Firm coarse sand, occasional rounded and sub-angular stones.
17	40 x 1.5	0.35	Firm coarse sand, occasional rounded and sub-angular stones.
18	50 x 1.5	0.35	Firm coarse sand, occasional rounded and sub-angular stones.
19	50 x 1.8	0.35	Firm coarse sand, occasional rounded and sub-angular stones.
20	50 x 1.8	0.35	Firm coarse sand, occasional rounded and sub-angular stones.
21	35 x 1.5	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
22	30 x 1.8	0.3	Firm coarse sand, occasional rounded and sub-angular stones.
23	50 x 1.5	0.45	Firm coarse sand, occasional rounded and sub-angular stones.
24	50 x 1.8	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
25	50 x 1.8	0.35	Firm coarse sand, occasional rounded and sub-angular stones.
26	50 x 1.5	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
27	50 x 1.8	0.4	Firm coarse sand, occasional rounded and sub-angular stones.

Trench No.	Dimensions (m)	Topsoil depth	Comments
28	50 x 1.5	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
29	50 x 1.8	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
30	50 x 1.8	0.35	Firm coarse sand, occasional rounded and sub-angular stones.
31	50 x 1.5	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
32	50 x 1.8	0.3	Firm coarse sand, occasional rounded and sub-angular stones.
33	20 x 1.5	0.35	Firm coarse sand, occasional rounded and sub-angular stones.
34	50 x 1.8	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
35	50 x 1.8	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
36	50 x 1.5	0.35	Firm coarse sand, occasional rounded and sub-angular stones.
37	55 x 1.8	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
38	45 x 1.8	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
39	50 x 1.5	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
40	50 x 1.8	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
41	40 x 1.8	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
42	40 x 1.8	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
43	40 x 1.5	0.3	Firm coarse sand, occasional rounded and sub-angular stones.
44	40 x 1.8	0.4	Firm coarse sand, occasional rounded and sub-angular stones.
45	50 x 1.8	0.3	Sandy clay with frequent rounded stones. Rubble and clay drains
46	50 x 1.5	0.3	Sandy clay with frequent rounded stones. Rubble and clay drains
47	50 x 1.8	0.3-0.35	Sandy clay with frequent rounded stones. Rubble and clay drains
48	50 x 1.5	0.35	Sandy clay with frequent rounded stones. Rubble and clay drains
49	45 x 1.5	0.35	Sandy clay with frequent rounded stones. Rubble and clay drains
50	50 x 1.8	0.3	Sandy clay with frequent rounded stones. Clay drains
51	50 x 1.8	0.35	Sandy clay with frequent rounded stones. Rubble and clay drains
52	55 x 1.8	0.35	Sandy clay with frequent rounded stones. Clay drains
53	50 x 1.8	0.35	Sandy clay with frequent rounded stones. Clay drains
54	65 x 1.8	0.3	Sandy clay with frequent rounded stones. Clay drains
55	40 x 1.8	0.3	Sandy clay with frequent rounded stones. Rubble and clay drains
56	40 x 1.8	0.35	Sandy clay with frequent rounded stones. Rubble

Trench No.	Dimensions (m)	Topsoil depth	Comments
			and clay drains
57	45 x 1.5	0.35	Sandy clay with frequent rounded stones. Rubble and clay drains
58	65 x 1.8	0.3	Sandy clay with frequent rounded stones. Rubble and clay drains
59	45 x 1.8	0.3	Sandy clay with frequent rounded stones. Rubble and clay drains
60	40 x 1.5	0.35	Smooth grey clay.
61	35 x 1.8	0.35	Stiff sandy clay with occasional rounded stones. Clay drains.
62	40 x 1.8	0.35	Stiff sandy clay with occasional rounded stones. Clay drains.
63	55 x 1.8	0.35	Stiff sandy clay with occasional rounded stones. Clay drains.
64	30 x 1.8	0.35	Stiff sandy clay with occasional rounded stones. Clay drains.
65	30 x 1.8	0.35	Stiff sandy clay with occasional rounded stones. Clay drains.
66	35 x 1.8	0.35	Stiff sandy clay with occasional rounded stones. Clay drains.
67	40 x 1.8	0.35	Stiff sandy clay with occasional rounded stones. Clay drains.
68	40 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
69	35 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
70	35 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
71	35 x 1.8	0.35	Stiff sandy clay with occasional rounded stones. Clay drains.
72	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
73	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
74	40 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
75	30 x 1.8	0.35	Stiff sandy clay with occasional rounded stones. Clay drains.
76	40 x 1.8	0.35	Stiff sandy clay with occasional rounded stones. Clay drains.
77	50 x 1.8	0.35	Stiff sandy clay with occasional rounded stones. Clay drains.
78	50 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
79	50 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
80	35 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
81	45 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
82	50 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
83	50 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
84	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
85	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones.

Trench No.	Dimensions (m)	Topsoil depth	Comments
			Clay drains.
86	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
87	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
88	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
89	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
90	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
91	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
92	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
93	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
94	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
95	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
96	50 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
97	40 x 1.5	0.3-0.4	Undisturbed subsoil to 0.1m thick in most of trench, merged with topsoil.
98	30 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
99	50 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
100	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
101	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
102	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
103	50 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
104	50 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
105	80 x 1.8	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
106	50 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
107	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
108	30 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
109	30 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
110	30 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
111	30 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
112	30 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
113	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.

Trench No.	Dimensions (m)	Topsoil depth	Comments
114	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
115	35 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
116	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
117	30 x 1.5	0.25	Stiff sandy clay with occasional rounded stones. Clay drains.
118	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
119	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
120	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
121	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
122	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
123	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
124	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
125	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
126	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
127	50 x 2	0.25	Stiff sandy clay with occasional rounded stones. Clay drains.
128	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
129	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
130	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
131	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
132	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
133	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
134	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
135	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
136	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
137	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
138	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
139	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
140	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
141	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
142	50 x 2	0.3	Stiff sandy clay with occasional rounded stones.

Trench No.	Dimensions (m)	Topsoil depth	Comments
			Clay drains.
143	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
144	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
145	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
146	50 x 2	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
147	25 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
148	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
149	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
150	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
151	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
152	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
153	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
154	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
155	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
156	40 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
157	30 x 1.5	0.3	Stiff sandy clay with occasional rounded stones. Clay drains.
158	50 x 2	0.3	Sandy clay with patches of coarse sand. Sub-linear ditch (022)
159	50 x 2	0.3	Sandy clay, clay drains
160	40 x 2	0.3	Sandy clay, clay drains
161	50 x 2	0.3	Sandy clay
162	40 x 1.5	0.3	Sandy clay
163	40 x 1.5	0.3	Sandy clay with patches of coarse sand.
164	50 x 2	0.3	Sandy clay with patches of coarse sand.
165	50 x 2	0.3	Sandy clay with patches of coarse sand.

Trial Trench Register: Fields 11 & 12

Trench No.	Dimensions (m)	Topsoil depth	Comments
11/1	35 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c.0.3m
11/2	N/a	N/a	N/a
11/3	35 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c.0.m
11/4	45 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c. 0.2m – 0.3m
11/5	45 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c. 0.2m – 0.4m
11/6	35 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c.0.2m – 0.4m
11/7	30 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c.0.3m
11/8	40 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c.0.3m
11/9	35 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c.0.2m - 0.3m
11/10	40 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c.0.3m
11/11	80 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c.0.3m
12/1	30 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c. 0.2m – 0.4m
12/2	30 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c. 0.3m – 0.4m
12/3	30 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c. 0.3m – 0.5m
12/4	60 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c. 0.2m – 0.4m
12/5	20 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c. 0.2m – 0.4m
12/6	35 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c. 0.3m – 0.4m
12/7	30 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c. 0.3m – 0.4m
12/8	30 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c. 0.2m – 0.4m
12/9	40 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c. 0.2m – 0.3m
12/10	35 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c. 0.2m – 0.4m
12/11	35 x 1.5	N/a	Natural sand. Occasional clay drains. Surface reduced c. 0.2m – 0.5m

APPENDIX 2: Context Register

Context No.	Trench No.	Description
000	All	Natural: Coarse sand, clay and gravels
001	All	Topsoil: stubble and pasture surfaced ploughsoil
002		Subsoil: bioturbated sandy silt interface between topsoil and natural
003	34	Cut of possible rigg furrow
004	34	Silt fill of 003
005	29,33,37	Cut of former field boundary ditch
006	29,33,37	Silt fill of 005
007	43	Cut of large pit
008	43	Primary silty clay fill of 007
009	43	Secondary and main dark soil fill of 007
010	43	Upper silty clay fill of 007
011	46	Cut of oval pit
012	46	Primary sandy silt fill of 011
013	46	Upper soil fill of 011
014	46	Cut of truncated oval pit
015	46	Primary sandy silt fill of 014
016	46	Cut of small pit associated with 011
017	46	Dark silt/soil fill of 016
018	46	Upper sandy silt fill of 014
019	46	Upper sandy silt fill of 014
020		Cut of vestigial rig furrow
021		Fill of vestigial rig furrow
022		Cut of sub-linear ditch
023		Clayey silt fill of 022

APPENDIX 3: Photograph Register

Photo No.	Description	Taken from
1	General view of north of site	
2	General view of north of site	
3	Trench 11/1	S
4	Trench 12/1	NW
5	Trench 12/2	E
6	Trench 12/3	SW
7	Trench 12/4	E
8	General view of north of site	
9	General view of north of site	
10	General view of north of site	
11	General view of north of site	
12	Detail of plant damage to topsoiled surface	
13	Trench 1	W
14	Trench 2	S
15	Trench 3	W
16	Trench 4	NW
17	Trench 5	N
18	Trench 6	N
19	Trench 7	SW
20	Trench 8	N
21	Trench 9	W
22	Trench 10	N
23	Trench 11	E
24	Trench 12	S

Photo No.	Description	Taken from
25	Trench 13	SW
26	Trench Detail of plant damage to topsoiled surface	
27	Trench 11/3	N
28	Trench 11/4	W
29	Trench 11/5	W
30	Trench 11/6	N
31	Trench 12/5	S
32	Trench 11/6	N
33	Trench 11/7	W
34	Trench 11/8	N
35	Trench 11/9	E
36	Trench 11/10	SW
37	Trench 11/11	SW
38	Trench 12/7	W
39	Trench 12/8	S
40	Trench 12/9	SE
41	Trench 12/10	N
42	Trench 12/11	SE
43	Trench 16	N
44	Trench 17	E
45	Trench 18	SE
46	Trench 19	E
47	Trench 20	SW
48	Trench 21	N
49	Trench 22	W
50	Trench 23	S
51	Trench 24	E
52	Trench 25	NE
53	Trench 26	S
54	Trench 27	E
55	Trench 28	E
56	Trench 29	SW
57	Trench 29 drainage ditch	E
58	Trench 30	NW
59	Trench 31	S
60	Trench 32	E
61	Trench 33	E
62	Trench 34	NE
63	Trench 35	S
64	Trench 36	W
65	Trench 33 field boundary	NE
66	Trench 34 rigg furrow	NE
67	Trench 34 rigg furrow	NW
68	Trench 37 field boundary	E
69	Trench 43	S
70	Trench 43 (007) pre-ex	S
71	Trench 43 (007) general	S
72	Trench 43 (007) working shot	S
73	Trench 43 (007) working shot	S
74	Trench 37	S
75	Trench 37 ditch section	SE
76	Trench 40 drain detail	SE
77	Trench 40	W
78	Trench 44	SW
79	Trench 42	NW
80	Trench 43 (007) section	NW
81	Trench 43 (007) section	SW

Photo No.	Description	Taken from
82	Trench 43 (007) section	SW
83	Trench 43 (007) section	SW
84	Trench 43 (007) section	NW
85	Trench 43 (007) section	NW
86	Trench 43 (007) section	NW
87	Trench 43 (007) ¼ section general	W
88	Trench 53	W
89	Trench 45	N
90	Trench 46 working shot	E
91	Trench 47	S
92	Trench 60	N
93	Trench 53	N
94	Trench 50	E
95	Trench 50 drain detail	S
96	Trench 43 (007) section	SW
97	Trench 43 (007) section	NW
98	Trench 43 (007) section, detail	NW
99	Trench 43 (007) working shot	NW
100	Trench 43 (007) working shot	NE
101	Trench 46 (011) section	NE
102	Trench 46 (011) section	E
103	Trench 71	E
104	Trench 70	S
105	Trench 67	W
106	Trench 66	S
107	Trench 61	E
108	Trench 46 (011)	NE
109	Trench 46 (011)	S
110	Trench 46 (011) & (016) fully excavated	W
111	Trench 46 (011) & (016) fully excavated	N
112	Trench 46 (014) fully excavated	N
113	Trench 43 (007) fully excavated	E
114	Trench 43 (007) fully excavated	W
115	Trench 91	W
116	Trench 98	E
117	Trench 88	E
118	Trench 87	S
119	Trench 86	E
120	Trench 79	E
121	Trench 87	E
122	Trench 90	S
123	Trench 102	S
124	Trench 107	EE
125	Trench 109	SW
126	Trench 157	SW
127	Trench 121	W
128	Trench 156	NW
129	Trench 145	E
130	Trench 143	NE
131	Trench 151	SW
132	Trench 149	SW
133	Trench 139	W
134	Trench 141	S
135	Trench 135	E
136	Trench 137	S
137	Trench 132	N
138	Trench 124	W

Photo No.	Description	Taken from
139	Trench 125	W
140	Trench 113	SW
141	Trench 126	E
142	Trench 129	N
143	Trench 131	W
144	Trench 158 (022) general	N
145	Trench 158 (022) section 1	S
146	Trench 158 (022) working shot	NW
147	Trench 158 (022) working shot	NW
148	Trench 158 (022) section 2	SE
149	Trench 158 (022) section 3	SE
150	Trench 158 (022) section 3	SE
151	Trench 158 (022) section 4	SE
152	Trench 158 (022) section 5	SE
153	Trench 158 (022) section 6	SE
154	Trench 158 (022) general	SE
155	Trench 158 (022) general	SE
156	General view of trial trenches	Various
157	General view of trial trenches	Various
158	General view of trial trenches	Various
159	General view of trial trenches	Various

APPENDIX 4: Drawings Register

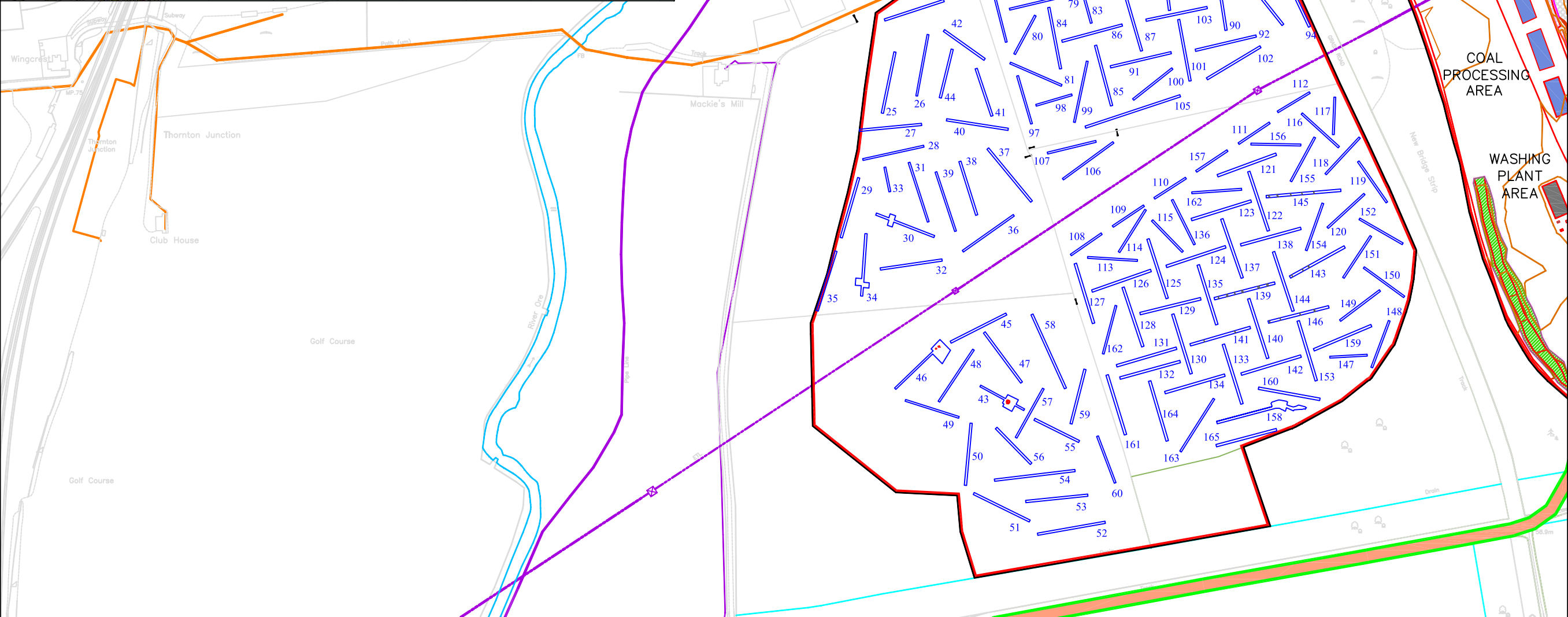
Drawing No.	Sheet No.	Description	Contexts	Scale
1	1	Plan	005/006	1:50
2	1	Plan	005/006	1:50
3	1	Section	005/006	1:10
4	1	Section	005/006	1:10
5	1	Plan	005/006	1:50
6	1	Section	005/006	1:10
7	1	Plan	005/006	1:10
8	2	Section	007/008/009//010	1:10
9	2	Section	007/008/009//010	1:10
10	2	Section	007/008/009//010	1:10
11	2	Plan	007/008/009//010	1:20
12	3	Plan	007/008/009//010	1:50
13	4	Section	011/012	1:10
14	4	Section	014/018/19	1:10
15	4	Section/Profile	011/012, 016/17	1:10
16	4	Plan	014/015/018/019	1:20
17	4	Section/Profile	011/012	1:10
18	4	Plan	011/012,016/017	1:20
19	4	Plan	022/023	1:50
20	4	Section	022/023	1:10
21	5	Plan	Trench 46	1:50
22	6	Plan	Trench 158	1:50

APPENDIX 5: Samples Register

Sample No.	Context	Volume (litres)	Reason
1	013	5	Charcoal, burnt bone, finds
2	009	12	Finds, routine
3	008	12	Finds, routine
4	010	12	Finds, routine
5	012	12	Finds, burnt bone, charcoal
6	017	12	Routine
7	019	2	Finds, routine
8	018	3	Finds, routine
9	015	12	Finds, burnt bone, charcoal

APPENDIX 6: Discovery and Excavation in Scotland Entry

LOCAL AUTHORITY:	Fife Council
PROJECT TITLE/SITE NAME:	Mackie's Mill, Earlseat Opencast Coal Mine, East Wemyss, Fife
PROJECT CODE:	MACK
PARISH:	Markinch
NAME OF CONTRIBUTOR:	Stuart Mitchell
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Evaluation
NMRS NO(S):	N/A
SITE/MONUMENT TYPE(S):	Pits, Prehistoric Pottery, Linear boundary Features, Rig and Furrow
NGR (2 letters, 6 figures)	NT 3076 9791
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 Mackie's Mill, near East Wemyss, Fife in advance of an extension to the Earlseat opencast mine.</p> <p>Trial trenching led to the identification of a large isolated pit which was fully excavated but yielded no information as to its date or purpose; three further small pits, two of which contained sherds of prehistoric pottery, and two boundary ditches. Vestigial remains of rig-and-furrow cultivation were also observed in the southern part of the site.</p>
PROPOSED FUTURE WORK:	N/A
CAPTION(S) FOR ILLUSTRS:	N/A
SPONSOR OR FUNDING BODY:	Hall Construction Ltd
ADDRESS OF MAIN CONTRIBUTOR:	The Old Engine House, Eskmills Park, Musselburgh, East Lothian EH21 7PQ
EMAIL ADDRESS:	smithcell@cfa-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	<p>Report to be submitted to NMRS and Fife SMR</p> <p>Archive to be submitted to NMRS</p>





Key:

- Trench Limits
- Rig and Furrow
- Archaeological feature



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Fig. No:	1	Revision:	A
Title: Location map and trial trench plan			
Project: Mackies Mill Opencast coal Extension, East Wemyss, Fife			
Client: Hall Construction			
Scale at A3: 1:3500			




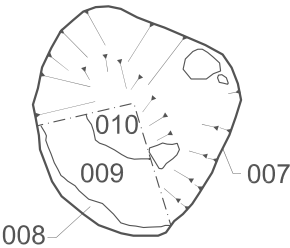
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Drawn by:	Checked:	Report No:
SW	LW	2037



Key:	Fig. No: 2	Revision: A	Client:
	Title: Section of field boundary ditch [005]		
	Project: Mackies Mill Opencast Coal Extension, East Wemyss, Fife		
Scale:			

		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:	SW	Checked:	LW
Report No:		2037	



Key:
 Trench Limits

Scale at A4:
1:100

Fig No: 3 Revision: 0 Client: Hall Construction

Title:
Plan of pits [007]

Project:
Mackies Mill Opencast Coal Extension, East
Wenyss, Fife



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Fig 04 - Pit [007] pre-excitation

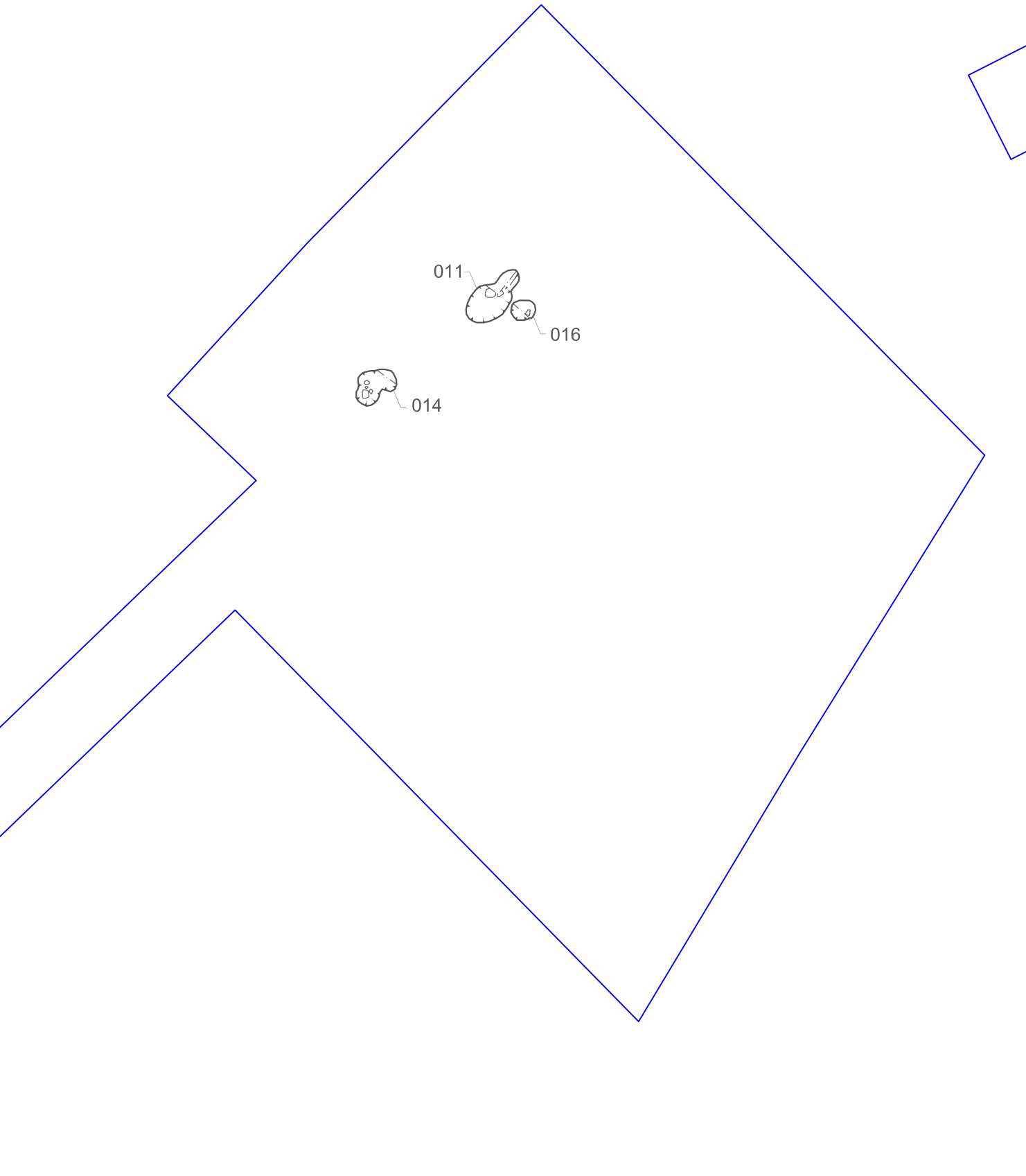


Fig 05 - Pit [007] section



Fig 06 - Pit [007] fully excavated

Key:	Fig. No:	4-6	Revision:	A	Client:	<div><div>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</div></div>		
	Title:							
	Project:	Mackies Mill Opencast Coal Extension, East Wenyss, Fife						
Scale:						Drawn by: SW	Checked: LW	Report No: 2037



Key: <div><div></div> Trench Limits</div>	Fig No: 7	Revision: 0	Client: Hall Construction
	Title: Plan of pits [011, 014, 016]		
	Project: Mackies Mill Opencast Coal Extension, East Wenyss, Fife		
Scale at A4: 1:100	<div><div><div>CFA</div><div>ARCHAEOLOGY LTD</div></div><div><div>CFA ARCHAEOLOGY LTD</div><div>The Old Engine House</div><div>Eskmills Park</div><div>Musselburgh</div><div>East Lothian, EH21 7PQ</div><div>t: 0131 273 4380</div><div>f: 0131 273 4381</div><div>e: info@cfa-archaeology.co.uk</div><div>w: www.cfa-archaeology.co.uk</div></div></div>		
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Fig 08 - Pit [011] section



Fig 09 - Pits [011] and [016] section



Fig 10 - Pit [011] and [016] fully excavated



Fig 11 - Pit [014] fully excavated

Key:	Fig. No:	8-11	Revision:	A	Client:	<div><div>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</div></div>
	Title:					
	Project:	Mackies Mill Opencast Coal Extension, East Wenyss, Fife				
Scale:						Drawn by: SW Checked: LW Report No: 2037



Fig 12 - Ditch 022



Fig 13 - Trench 10



Fig 14 - Trench 23



Fig 15 - Trench 50


Key:	Fig. No:	12-15	Revision:	A	Client:	 <div>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</div>		
	Title:							
	Project:							
Scale:	Mackies Mill Opencast Coal Extension, East Wenyss, Fife					Drawn by: SW	Checked: LW	Report No: 2037



Fig 16 - Trench 67




Fig 17 - Trench 79



Fig 18 - Trench 149




Fig 19 - Trench 12/3

Key:	Fig. No:	16-19	Revision:	A	Client:	 <div>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</div>		
	Title:							
	Project:							
Scale:	Mackies Mill Opencast Coal Extension, East Wenyss, Fife					Drawn by: SW	Checked: LW	Report No: 2037



Key:	Fig. No: 20	Revision: A	Client:
	Title: Trench 12/8		
	Project: Mackies Mill Opencast Coal Extension, East Wemyss, Fife		
Scale:			

		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:	SW	Checked:	LW
Report No:		2037	