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**Calderwood
East Calder, West Lothian
Archaeological Evaluation (Phase 2)
Report No. 3483**

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Calderwood
East Calder, West Lothian

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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 September 2016 for Phase 2 of a mixed use development at Calderwood, East Calder, West Lothian (NGR: NT 089 686) (Fig. 1). The work was commissioned by Stirling Property Partnership.

An addendum (Addendum 1 dated 10 May 2016) to the Written Scheme of Investigation (WSI) (dated 05/02/13) covering this programme of works was produced by CFA on behalf of Stirling Property Partnership. The WSI was approved by the West of Scotland Archaeology Service (WoSAS) on behalf of West Lothian Council.

1.2 Background

Planning permission in principle (Ref. No. 0524/P/09) has been granted for a 210 ha mixed use development comprising residential, commercial, industrial recreation, retail use, community facilities, landscape, open space, primary and secondary education schools and road and service infrastructure. The planning permission was subject to an archaeological condition requiring a trial trenching evaluation.

This report covers Phase 2 of the aforementioned development consisting of areas MWa, MWb and MWc (Fig.2). A fourth area (LKe) (Fig.2) forming part of Phase 2 was unavailable for trenching. Area LKe will be subject to a trial trenching evaluation at a future date and the results will be produced under separate cover.

The proposed development area is situated within former farmland located a short distance to the south of the River Almond. Consultation of early Ordnance Survey map editions indicates that this was an area of open farmland with a track running through it. Roy's military map of c.1750 indicates that it lay within an extensive area of rig and furrow cultivation.

A previous phase of evaluation was undertaken in the Phase 1 development area and in the area designated for use as a cemetery (Lewis 2013). One hundred and ninety two trenches were excavated and eighteen undated linear features were identified on a range of alignments. In the main these were shallow and contained single fills. These were not assessed as being of any significant antiquity and were interpreted as being most likely related to agricultural activity

When the current evaluation was undertaken in September 2016, the area consisted of slightly undulating former farmland, which was largely overgrown with chest-high vegetation. The available space for trial trenching was limited by buried services, work compounds, an existing access road, and soil bunds from the Phase 1 development.

1.3 Objectives

The project's aims and objectives were:

- To establish the presence/absence, extent, condition, character, quality and date of any archaeological features or deposits within the proposed development area through trial trenching evaluation;
- To establish the vulnerability of any archaeological features to the proposed development;
- To propose mitigation measures where appropriate to avoid, reduce or offset any predicted negative impacts on the archaeological resource.

2. WORKING METHODS

2.1 General

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

2.2 Evaluation

Sixty-nine trenches (Trench 1 to Trench 69) (Fig.2) were excavated with a total combined area of c.6394m² (c.8% of the available Phase 2 area).

Topsoil and subsoil were removed by two 360° 13-ton mechanical excavator equipped with 2m wide smooth-bladed ditching buckets. 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 3. A summary of the trenches excavated is contained in Appendix 2. Examples of excavated trenches are shown in Figs. 3-9.

3.2 Trial Trenching

The soil deposits across the Phase 2 area generally consisted of 0.2m to 0.5m of grey-brown clayey-sand topsoil (**001**) overlying natural (**002**). The natural predominantly consisted of orangey-brown sandy-clay/clayey-sand, but there were some areas of grey clay in the lowest lying parts and some better draining sands and gravels on the raised parts. Deeper made-ground deposits (**003**) of up to 1.1m were identified within Area MWb, while at the northern end of Area MWa there was evidence of modern disturbance associated with the construction of a settlement lagoon within Trenches 15-17.

Numerous field drains associated with 19th/20th century agricultural improvements were identified throughout the Phase 2 area. The majority of these were of the rubble type, but there were also ceramic cylinder drains and narrow shale-filled drains. Some of the rubble drains were considerably larger than those normally encountered with widths of up to c. 0.7m (Fig.6). This would perhaps indicate that the area was considerably waterlogged prior to agricultural improvements being carried out.

There was some evidence of pre-improvement agriculture in the form of the vestigial remains of cultivation furrows (Figs 10 and 11) within Trenches 25, 26, 34-36, 38-40, and 57. Those within Trenches 25, 26 and 38-40 were on a NW to SE alignment whereas those within Trenches 34-36 and 57 were on a predominantly east to west alignment. The furrows measured c.1 - 1.5m in width, had a depth of <0.1m, and were located c.8 - 10m apart. Consultation of Roy's military map of c.1750 indicates an extensive area of rig and furrow cultivation on the low-lying ground between the River Almond and the Pentland Hills.

4. CONCLUSIONS

An archaeological trial trenching evaluation was carried out in advance of Phase 2 of a mixed-use development at Calderwood, East Calder. Vestigial remains of cultivation furrows indicate that the area was being utilised for agricultural purposes prior to 19th/20th century agricultural improvements. Numerous field drains provide evidence of recent agricultural improvements, but there were no features, deposits or artefacts of archaeological significance identified.

CFA does not recommend any further mitigation in relation to Phase 2, Areas MWa, MWb and MWc. However, it is understood that a programme of trial trenching will be required within Area LKe following site clearing. The final decision regarding any mitigation measures lies with WoSAS.

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

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

5. REFERENCES

Bibliographic

Lewis, J 2013 Calderwood, East Calder, Phase 1 Archaeological Evaluation. CFA Unpublished Technical Report No. 3013.

Cartographic

Ordnance Survey First Edition 6" map, 1856, *Linlithgowshire* Sheet X.NE

Roy, c.1750 *Military Map of Scotland*

APPENDIX 1: Photographic Register

Photo Number	Contexts/Description	Taken From
1-6	Pre-excavation shots of Area MWa	Various
7	Trench 1, general shot	SE
8	Trench 2, general shot	SE
9	Trench 3, general shot	SE
10	Trench 4, general shot	SW
11	Trench 5, general shot	SW
12	Trench 6, general shot	SW
13	Trench 7, general shot	NW
14	Trench 8, general shot	NW
15	Trench 9, general shot	NW
16	Trench 10, general shot	NW
17	Trench 11, general shot	NW
18	Trench 12, general shot	SSE
19	Trench 13, general shot	SE
20	Trench 14, general shot	SE
21	Trench 13, backfilled	S
22	Trench 15, general shot	E
23	Trench 16, general shot	E
24	Trench 17, general shot	NE
25	Trench 18, general shot	SE
26	Trench 19, general shot	NW
27	Trench 20, general shot	NW
28	Trench 21, general shot	NW
29	Trench 22, general shot	NW
30	Trench 23, general shot	SW
31	Trench 24, general shot	SW
32	Trench 25, general shot	SW
33	Trench 25, cultivation furrow	W
34	Trench 25, cultivation furrow, NW-facing section	NW
35	Trench 26, general shot	SW
36	Trench 27, general shot	SW
37	Trench 28, general shot	NW
38	Trench 29, general shot	NW
39	Trench 30, general shot	NW
40	Trench 31, general shot	NW
41	Trench 32, general shot	SE
42	Trench 33, general shot	SE
43	Trench 34, general shot	SE
44	Trench 35, general shot	SE
45	Trench 36, general shot	SE
46	Trench 37, general shot	SSW
47	Trench 38, general shot	SW
48	Trench 38, cultivation furrow	SW
49	Trench 38, cultivation furrow	S
50	Trench 39, general shot	NE
51	Trench 40, general shot	NE
52	Trench 41, general shot	SW
53	Trench 42, general shot	NW
54	Trench 43, general shot	NW
55	Trench 44, general shot	NNW
56	Trench 45, general shot	NNW
57-59	Pre-excavation shots of soil bunds in Area MWb	Various
60	Pre-excavation shot of Area MWb	W

61	General shot of compound within Area MWb	E
62	Trench 46, general shot	NE
63	Trench 47, general shot	NE
64	Trench 48, general shot	NE
65	Trench 49, general shot	SW
66	Trench 50, general shot	SW
67	Trench 51, general shot	NE
68	Trench 52, general shot	NE
69	Trench 53, general shot	SE
70	Trench 55, general shot	SE
71	Trench 56, general shot	SE
72	Trench 57, general shot	SE
73	Trench 58, general shot	SE
74	Trench 59, general shot	SE
75	Trench 60, general shot	SW
76-78	General shots of compound within Area MWc	Various
79	Trench 54, general shot	W
80	Trench 61, general shot	W
81	Trench 62, general shot	E
82	Trench 69, general shot	NNE
83	Trench 63, general shot	NW
84	Trench 64, general shot	NNE
85	Trench 65, general shot	NNE
86	Trench 66, general shot	NNE
87	Trench 67, general shot	NNE
88	Trench 68, general shot	SE

APPENDIX 2: Summary of Excavation Results

Trench Number	Trench Size (m)	Depth of Deposits	Features
1	48 x 2	0.2 – 0.3m	1 rubble drain
2	49 x 2	0.25 – 0.3m	1 rubble drain and 1 stone hole
3	48 x 2	0.2 – 0.3m	3 rubble drains
4	50 x 2	0.3m	1 rubble drain and 1 clay drain
5	50 x 2	0.2m	1 rubble field drain
6	50 x 2	0.2 – 0.3m	1 rubble drain and 1 modern feature
7	50 x 2	0.25m	1 rubble drain
8	48 x 2	0.25m	1 rubble drain
9	48 x 2	0.25m	1 rubble drain
10	48 x 2	0.4m	1 rubble drain and 1 ceramic drain
11	44 x 2	0.3m	1 rubble drain
12	56 x 2	0.3m	5 rubble drains
13	48 x 2	0.2m	5 rubble drains
14	45 x 2	0.2m	1 rubble drain
15	45 x 2	0.4- >1.5m	Modern disturbance at western end (not bottomed)
16	35 x 2	0.6 – 1m	Modern disturbance at western end
17	5 x 2	>1.1m	Modern backfill. Not bottomed
18	46 x 2	0.4m	3 rubble drains
19	45 x 2	0.5m	3 rubble drains and 1 shale drain
20	46 x 2	0.5m	3 rubble drains
21	46 x 2	0.5m	2 rubble drains and 1 shale drain
22	44 x 2	0.4m	2 rubble drains
23	48 x 2	0.4m	2 rubble drains, 1 shale drain, and 1 ceramic drain

24	49 x 2	0.4m	2 rubble drains
25	53 x 2	0.4m	5 cultivation furrows, 1 rubble drain, and 1 shale drain
26	49 x 2	0.5m	6 cultivation furrows, 2, shale drains, and 1 rubble drain
27	48 x 2	0.5m	1 rubble drain and 1 shale drain
28	48 x2	0.5m	1 rubble drain and 1 shale drain
29	48 x 2	0.5m	1 rubble drain
30	49 x 2	0.5m	1 rubble drain
31	48 x 2	0.5m	1 rubble drain and 1 ceramic drain
32	50 x 2	0.3m	3 rubble field drains
33	48 x 2	0.4m	3 rubble drains
34	50 x 2	0.3m	1 cultivation furrow and 1 rubble drain
35	51 x 2	0.4m	1 cultivation furrow and 1 rubble drain
36	49 x 2	0.4m	2 cultivation furrows and 2 rubble drains
37	51 x 2	0.4m	3 rubble drains
38	54 x 2	0.4m	3 cultivation furrows
39	50 x 2	0.4m	2 cultivation furrows
40	48 x 2	0.4m	1 cultivation furrow, 1 rubble drain, and 1 ceramic drain
41	48 x 2	0.4 – 0.5m	1 rubble drain
42	45 x 2	0.4m	3 rubble drains
43	44 x 2	0.5m	2 rubble drains
44	50 x 2	0 – 0.4m	3 rubble drains
45	50 x 2	0 – 0.3m	2 rubble drains and 3 ceramic drains
46	49 x 2	0.4m	3 rubble drains
47	50 x 2	0.4m	2 rubble drains
48	49 x 2	0.4m	1 rubble drain
49	48 x 2	0.4m	2 rubble drains
50	48 x 2	0.4m	6 rubble drains
51	48 x 2	0.4m	5 rubble drains
52	45 x 2	0.4m	3 rubble drains
53	50 x 2	0.4m	1 rubble drain
54	46 x 2	1.1m	2 rubble drains and 2 shale drains
55	48 x 2	0.4m	N/A
56	50 x 2	0.4m	1 rubble drain and 1 ceramic drain
57	49 x 2	0.4m	4 cultivation furrows
58	48 x 2	0.4m	1 rubble drain
59	48 x 2	0.4m	N/A
60	48 x 2	0.1- 0.3m	1 ceramic drain
61	48 x 2	0.6 – 0.8m	1 rubble drain and 2 ceramic drains
62	41 x 2	0.8m	1 rubble drain and 2 shale drains
63	25 x 2	0.6 – 1.1m	1 rubble drain
64	48 x 2	0.5 – 0.9m	4 rubble drains
65	39 x 2	0.2 – 0.6m	3 rubble drains and 1 shale drain
66	44 x 2	0.2 – 0.8m	1 rubble drain and edge of cut for modern service
67	30 x 2	0.1 – 1m	3 rubble drains
68	33 x 2	0.5m	Cut for modern service
69	43 x 2	0.6m	5 rubble drains

APPENDIX 3: Context Register

Context No.	Trench	Description
001	All	Grey-brown clayey-sand topsoil
002	All	Natural: predominantly orange-brown sandy-clay/clayey-sand, but also some orange-brown sandy gravel in the drier areas and grey clay in the low lying wet areas
003	Area MWb (All trenches), Area MWa (Tr 15-17)	Modern made-ground



Key:

- Site Boundary
- Evaluation Trench
- Field Drain
- Rig and Furrow
- Modern Feature



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Title:
Trench Layout

Project:
Calderwood, East Calder

Client:
Stirling Property Partnership

Scale at A3: 1:1250		
Drawn by: SW	Checked: MK	Date: 16/09/2016
Report.No: 3483	Fig. No: 2	



Fig. 3: Trench 13 from SE



Fig. 4: Trench 23 from SW

Project:
Calderwood, East Calder



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Fig. 5: Trench 33 from SE



Fig. 6: Trench 37 from SSW

Project:
Calderwood, East Calder



Client:
Stirling Property Partnership

Drawn by: SW	Checked: GC	Date: 16/09/16
Report No: 3483		Fig. No: 5 - 6



Fig. 7: Trench 38 from SW



Fig. 8: Trench 55 from SE

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Fig. 9: Trench 54 from West



Fig. 10: Cultivation furrow in Trench 25

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Report No: 3483		Fig. No: 9 - 10



Fig. 11: Cultivation furrow in Trench 38

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