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Land North of Drumshoreland, Pumpherston, West Lothian

Archaeological Evaluation

Report No. 3645

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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 February and March 2018 in advance of a residential development at Land North of Drumshoreland, Pumpherston, West Lothian (NGR: NT 0638 7012) (Fig.1) . The work was commissioned by Dundas Building Co. Ltd.

A Written Scheme of Investigation (WSI) was produced by CFA (dated 25 January 2018), and agreed in advance with West of Scotland Archaeological Service (WoSAS), on behalf of West Lothian Council.

1.2 Background

Planning Permission (Reference No. 0418/MS/17) has been granted for the development of 248 houses and 18 flats, landscaping and accesses, formation of ecological habitat, and land for 20 affordable homes at Land North of Drumshoreland Road, Pumpherston. The planning permission was subject to a condition requiring a programme of archaeological trial trenching

Although the present day village of Pumpherston (which adjoins the larger town of Livingston) grew up around the shale mining of the late 19th/early 20th century its origins appear to be rather earlier, dating back to the medieval period. Information from the Canmore website suggests that a castle (Site No. NT06NE 6) (depicted on Bleau's Atlas of 1662) was located to the south of the evaluation area within close proximity to the present day Pumpherston Farm. The remains of this castle are recorded as having been entirely removed in the late 18th/early 19th century.

More recent features within close proximity to the evaluation area include Pumpherston Shale Bings (Site No. NT06NE 29), Pumpherston Shale Oil Works (Site No. NT06NE 36), and Broxburn Roman Camp Shale Oil Works (Site No. NT07SE 111). Early Ordnance Survey map editions suggest that the evaluation area consisted of undeveloped farmland. Two reservoirs depicted on map editions from 1897 onwards may have served the shale-oil industry. One of these reservoirs almost bisects the evaluation area while the other is situated immediately to the east of it. Further details relating to the historic background of the development area are contained within Chapter 8 (Cultural Heritage) of the Drumshoreland Master Plan Environmental Statement.

When this trial trenching evaluation was undertaken in February and March 2018, the area consisted of slightly overgrown farmland. Due to the presence of live services, the extreme southern end and part of the north-eastern corner of the evaluation area were unavailable for trial trenching.

1.2 Objectives

The objectives of the project 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

Work was conducted with regard to the Chartered Institute for Archaeologists' (CIFA) Standard and Guidance as appropriate.

2.2 Evaluation Strategy

The site ran to 25 acres and ninety trenches (Tr.1-90) were to be excavated totalling 8,100m² (c.8% of the available area) (Fig.1). An area of around 1.3ha at the south-east corner of the site was missed but the 90 trenches were excavated in the remaining, slightly smaller area. Following consultation WoSAS agreed that the evaluation that had been undertaken was sufficient to characterise the area as being of low potential and no further evaluation was requested.

Appropriate stand-off zones were maintained around overhead and underground services, in addition to minimising any impact on fencing related to a great-crested newt mitigation area.

Topsoil and modern overburden were removed by a tracked 360° mechanical excavator 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

The trenches contained no features other than field drains and occasional rig and furrow (Fig. 4). Appendix 1 contains a tabulated summary of all the trench dimensions and a description of the trench. Numbers in bold and parentheses are context numbers and are described in Appendix 3.

Topsoil (**001**) was generally 0.2 to 0.4m deep. Where present, the underlying subsoil (**002**) was 0.1m to 0.2m deep comprising orange-brown sandy clays. The natural substrate (**003**) generally comprised pale orange and blue-grey mixed sandy clays, thoroughly distorted with lignite, manganese and degraded stone inclusions.

Overall ground conditions were moderately wet, particularly following adverse weather and especially along the eastern side of the central fields. At times, pools of standing water quickly formed in and around trenches near this boundary, south of the conserved area dividing the site.

No archaeologically significant features or deposits were identified. Traces of rig and furrow, aligned NE-SW in Trenches 7 and 8, were ephemeral.

4. CONCLUSIONS

An archaeological trial trenching evaluation was carried out at Land North of Drumshoreland, Pumpherston in advance of a residential development. The trial trenching uncovered a number of clay field drains relating to recent agricultural improvements. Vestigial remains of rig and furrow cultivation were also uncovered indicating pre-improvement agriculture within the area. There were no features, artefacts, or deposits of archaeological significance identified.

No further mitigation measures are recommended in relation to the area covered by this evaluation. However, it is recognised that the final decision on any mitigation required lies with the planning authority as advised by WoSAS.

The project archive, comprising all CFA record sheets, maps and reports, will be deposited with the NRHE and copies of reports will be lodged with WoSAS.

On completion of the mitigation works a summary statement will be submitted for publication in *Discovery and Excavation in Scotland* (See Appendix 4) and will also be reported on through *OASIS Scotland*.

APPENDIX 1: Summary of Evaluation Trenches

Trench no.	Size (m)	Depth (m)	Topsoil Depth (m)	Subsoil Depth (m)	Description
01	50 x 1.8	0.37	0.37		
02	50 x 1.8	0.34	0.34		Clay field drain
03	50 x 1.8	0.63	0.40	0.23	
04	50 x 1.8	0.70	0.30	0.40	Modern field drains
05	50 x 1.8	0.30	0.30		Modern field drains
06	50 x 1.8	0.36	0.36		
07	50 x 1.8	0.35	0.35		Rig and furrow
08	50 x 1.8	0.50	0.50		Rig and furrow
09	50 x 1.8	0.30	0.30		Clay field drain
10	50 x 1.8	0.65	0.35	0.30	Clay field drains
11	50 x 1.8	0.34	0.34		
12	50 x 1.8	0.60	0.40		
13	50 x 1.8	0.44	0.32	0.12	Clay field drains
14	50 x 1.8	0.50	0.30	0.12	Clay field drains
15	50 x 1.8	0.60	0.40	0.20	Clay field drains
16	50 x 1.8	0.50	0.30	0.20	Plough scars, clay field drains
17	50 x 1.8	0.55	0.30	0.25	Clay field drains
18	50 x 1.8	0.47	0.39		
19	50 x 1.8	0.43	0.40		Clay field drains
20	50 x 1.8	0.50	0.42		
21	50 x 1.8	0.30	0.30		
22	50 x 1.8	0.42	0.39		
23	50 x 1.8	0.37	0.33		Clay field drain
24	50 x 1.8	0.35	0.32		Clay field drain
25	50 x 1.8	0.50	0.30	0.20	Clay field drains
26	50 x 1.8	0.60	0.35	0.25	
27	50 x 1.8	0.60	0.25	0.35	Rubble and modern bank material, eastern end
28	50 x 1.8	0.52	0.30	0.20	Clay field drains
29	50 x 1.8	0.46	0.36		Clay field drain
30	50 x 1.8	1.40	0.50	0.90	Natural buried soil, mid-trench depression
31	50 x 1.8	0.80	0.80		
32	50 x 1.8	0.50	0.50		
33	50 x 1.8	0.80	0.80		
34	50 x 1.8	0.30	0.30		
35	50 x 1.8	0.45	0.45		
36	50 x 1.8	0.40	0.40		Plough scars
37	50 x 1.8	0.60	0.60		Clay field drains
38	50 x 1.8	0.50	0.50		
39	50 x 1.8	0.60	0.60		
40	50 x 1.8	0.30	0.30		Clay field drains, plough scars
41	50 x 1.8	0.30	0.30		Clay field drain, plough scars
42	50 x 1.8	0.30	0.30		
43	50 x 1.8	0.30	0.30		Clay field drain
44	50 x 1.8	0.30	0.30		Plough scars
45	50 x 1.8	0.30	0.30		Clay field drain
46	50 x 1.8	0.30	0.30		Clay field drain
47	50 x 1.8	0.40	0.30	0.10	

48	50 x 1.8	0.35	0.35		Clay field drains, plough scars
49	50 x 1.8	0.65	0.30	0.35	Clay field drains
50	50 x 1.8	0.47	0.27	0.20	Clay field drain
51	50 x 1.8	0.36	0.23	0.13	Clay field drain
52	50 x 1.8	0.64	0.35	0.29	
53	50 x 1.8	0.38	0.23	0.15	
54	50 x 1.8	0.35	0.35		Clay field drain, site investigation pit
55	50 x 1.8	0.35	0.35		Clay field drain, plough scars
56	50 x 1.8	0.37	0.27	0.10	
57	50 x 1.8	0.35	0.35		
58	50 x 1.8	0.40	0.40		
59	50 x 1.8	0.47	0.27	0.20	
60	50 x 1.8	0.30	0.30		Clay field drain
61	50 x 1.8	0.30	0.30		Plough scars
62	50 x 1.8	0.49	0.38	0.11	
63	50 x 1.8	0.44	0.24	0.20	
64	50 x 1.8	0.40	0.21	0.19	
65	50 x 1.8	0.36	0.23	0.13	
66	50 x 1.8	0.36	0.16	0.20	
67	50 x 1.8	0.38	0.24	0.14	
68	50 x 1.8	0.40	0.26	0.14	
69	50 x 1.8	0.35	0.35		
70	50 x 1.8	0.40	0.40		Site investigation pit
71	50 x 1.8	0.40	0.40		Plough scars
72	50 x 1.8	0.40	0.28	0.12	
73	50 x 1.8	0.35	0.35		Clay field drain
74	50 x 1.8	0.40	0.40		
75	50 x 1.8	0.35	0.35		
76	50 x 1.8	0.35	0.35		
77	50 x 1.8	0.35	0.35		Site investigation pit
78	50 x 1.8	0.40	0.40		
79	50 x 1.8	0.40	0.40		Site investigation pit, clay field drain
80	50 x 1.8	0.35	0.35		
81	50 x 1.8	0.30	0.30		
82	50 x 1.8	0.40	0.28	0.12	
83	50 x 1.8	0.30	0.30		
84	50 x 1.8	0.40	0.40		
85	50 x 1.8	0.30	0.30		Site investigation pit
86	50 x 1.8	0.30	0.30		
87	50 x 1.8	0.30	0.30		Plough scars
88	50 x 1.8	0.34	0.25	0.09	
89	50 x 1.8	0.40	0.40		
90	50 x 1.8	0.38	0.27	0.11	

APPENDIX 2: Photographic Register

Shot No.	Summary description of subject	Facing
001	Title Shot	N/A
002	General pre-ex shots of site	NE
003	General pre-ex shots of site	N
004	General pre-ex shots of site	NW
005	Trench 3	NW
006	Trench 2	NW
007	Trench 5	NE
008	Trench 7	W
009	Trench 8	SW
010	Trench 1	NW
011	Trench 4	SW
012	Trench 5	S
013	Trench 6	E
014	Trench 8	SW
015	Trench 11	SE
016	Trench 12	E
017	Trench 10	NE
018	Trench 9	NE
019	Trench 13	NE
020	Trench 14	E
021	Trench 19	E
022	Trench 20	NE
023	Trench 17	N
024	Trench 18	E
025	Trench 16	N
026	Trench 22	SW
027	Trench 24	N
028	Trench 15	W
029	Trench 23	NNE
030	Trench 21	N
031	Trench 29	SE
032	Trench 28	E
033	Trench 27	NW
034	Trench 26	NNW
035	Trench 25	W
036	Trench 49	W
037	Trench 44	S
038	Trench 48	WNW
039	Trench 43	W
040	Trench 42	NE
041	Trench 41	NNE
042	Trench 41	SE
043	Trench 35	NE
044	Trench 36	E
045	Trench 45	W
046	Trench 38	S
047	Trench 47	W
048	Trench 37	W

049	Trench 39	SW
050	Trench 46	SW
051	Trench 40	S
052	Trench 30	SW
053	Trench 31	WSW
054	Trench 33	SE
055	Trench 34	NE
056	Trench 32	NE
057	Trench 50	NW
058	Trench 51	W
059	Trench 65	NE
060	Trench 66	NE
061	Trench 67	E
062	Trench 68	W
063	Trench 69	SE
064	Trench 62	W
065	Trench 70	SE
066	Trench 63	W
067	Trench 71	SE
068	Trench 61	WNW
069	Trench 59	NW
070	Trench 64	WNW
071	Trench 60	NW
072	Trench 55	NW
073	Trench 56	S
074	Trench 54	W
075	Trench 52	N
076	Trench 57	W
077	Trench 58	N
078	Trench 73	N
079	Trench 77	NW
080	Trench 75	W
081	Trench 76	N
082	Trench 83	N
083	Trench 74	NE
084	Trench 84	N
085	Trench 85	N
086	Trench 86	NE
087	Trench 87	NW
088	Trench 78	NW
089	Trench 81	N
090	Trench 53	NE
091	Trench 82	WNW
092	Trench 79	WNW
093	Trench 80	NW
094	Trench 88	N
095	Trench 90	W
096	Trench 89	W
097	Trench 72	ENE

APPENDIX 3: Context Register

Context no.	Fill of	Type	Description
001		Deposit	Topsoil; dark brown silty clay
002		Deposit	Subsoil; mid orange-brown sandy clay
003		Deposit	Natural; very mixed orange and blue-grey sandy clays with frequent inclusions of manganese and degraded stone

APPENDIX 4: DISCOVERY AND EXCAVATION IN SCOTLAND ENTRY

LOCAL AUTHORITY:	West Lothian
PROJECT TITLE/SITE NAME:	Land North of Drumshoreland, Pumpherston, West Lothian
PROJECT CODE:	PUMP
PARISH:	Mid Calder
NAME OF CONTRIBUTOR:	Bruce Glendinning
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Evaluation
NMRS NO(S):	N/A
SITE/MONUMENT TYPE(S):	N/A
SIGNIFICANT FINDS:	N/A
NGR (2 letters, 8 figures)	NT 0638 7012
START DATE (this season)	February 2018
END DATE (this season)	March 2018
PREVIOUS WORK (incl. DES ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	An archaeological trial trenching evaluation was carried out at Land North of Drumshoreland, Pumpherston in advance of a residential development. The trial trenching uncovered a number of clay field drains relating to recent agricultural improvements. Vestigial remains of rig and furrow cultivation were also uncovered indicating pre-improvement agriculture within the area. There were no features, artefacts, or deposits of archaeological significance identified.
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	None
SPONSOR OR FUNDING BODY:	Dundas Building Co. Ltd
ADDRESS OF MAIN CONTRIBUTOR:	CFA Archaeology Ltd, Old Engine House, Eskmills Park, Musselburgh, EH21 7PQ.
EMAIL ADDRESS:	bglendinning@cfa-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	Archive to be deposited in NRHE, Reports lodged with SMR.



Key:

- Site Boundary
- Trench Outline
- Modern Feature
- Exclusion area for HPG Main and HV overhead cables

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Title:
Site location and plan of trenches

Project:
Land North of Drumshoreland, Pumpherston, West Lothian: Archaeological Evaluation

Client:
Dundas Building Co. Ltd

Scale at A3:
1:2500

Drawn by: MP	Checked by: SW	Date: 20/03/2018
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Report No: 3645	Fig. No: 1
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Fig. 2 - General view of site pre-excitation; northern field, facing northeast



Fig. 3 - Trench 62, facing West, showing shallow depth of trench and mixed composition of the natural

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Fig. 4 - Trench 14, facing East; minimal traces of clay field drains

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