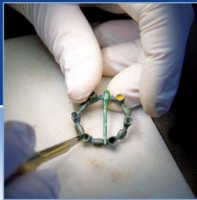


Land East of Dalhousie Dairy, Bonnyrigg, Midlothian: Archaeological Evaluation Data Structure Report

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Land East of Dalhousie Dairy, Bonnyrigg, Midlothian Archaeological Evaluation Data Structure Report

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National Grid Reference (NGR):	centred on NT321 651
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This document has been prepared in accordance with AOC standard operating procedures.

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Abstract

This report presents the results of an archaeological evaluation undertaken in respect to a proposed development at Land East of Dalhousie Dairy, Bonnyrigg, Midlothian (centred on NGR: NT321 651).

The evaluation was undertaken within a single land parcel of 1.8 ha. A 5% (500 linear metres) sample of the evaluation area was investigated by trial trenching. The scope of the works was agreed in a WSI approved by East Lothian Archaeological Service (ELCAS).

The evaluation revealed modern disturbance and deposition in the form of a shallow pit and bank, both likely in association with service and road works in the vicinity. The site had undergone significant truncation due to heavy ploughing. A single truncated furrow and frequent field drains were also revealed.

No archaeologically significant small finds were recovered during the evaluation.

1 INTRODUCTION

1.1 Background

- 1.1.1 A programme of archaeological works was undertaken by AOC Archaeology on a land parcel east of Dalhousie Dairy, Bonnyrigg, Midlothian. The works were commissioned by CgMs on behalf of Grange Estates (Newbattle) Ltd. The works were undertaken in support of a planning application (16/00855/DPP) for a proposed development of the site involving the construction of 28 houses, access roads and associated works.
- 1.1.2 The site lies within the administrative area of Midlothian Council, which is advised on archaeological matters by the East Lothian Council Archaeology Service (ELCAS). The archaeological works were conducted in accordance with the principles as set out in *Scottish Planning Policy* (2014) and *Planning and Archaeology 2/2011* (2011) and consisted of an archaeological evaluation by trial trenching. The works were undertaken in response to a Planning Condition (16/00855/DPP) produced by the Council and in accordance with a Written Scheme of Investigation (WSI) produced by CgMs (2017) and agreed with ELCAS.
- 1.1.3 The available area within the proposed development area (centred on NGR: NT 321 651; Figure 1) measures 1.8ha. The topography of the site consists of a three gently undulating fields with a steep bank along the south eastern boundary.
- 1.1.4 The evaluation revealed modern disturbance and deposition in the form of a shallow pit and bank, both likely created in association with service and road works. A single truncated furrow was located along with frequent field drains. The evaluation also revealed that the entire site area had undergone significant truncation due to heavy ploughing.
- 1.1.5 No archaeologically significant small finds were recovered during the evaluation.

1.2 Location

- 1.2.1 The site lies to the immediate west of the B6392 to the east of Bonnyrigg (Figure 1, centred on NS 321 651). The site is bounded by the B6392 to the east, by a farm track leading to Dalhousie Dairy to the south and by mature woodland and the Pittendreich Burn to the north.

1.3 Archaeological Background (Based on CgMs DBA Report)

- 1.3.1 The site is located in an area in which several crop-marks of probable late prehistoric date have been identified. Hardengreen, enclosure (AM6335) is situated 300m WNW of the site and has not been subject to any archaeological investigation.
- 1.3.2 Another crop-mark is recorded 350m to the south of the site (MEL8534; Fig.1); it was visible during only one sortie undertaken in 1986. It is classified as a possible enclosure and of uncertain date.

Further to the south is another crop-mark interpreted as a possible settlement (MEL7026; Fig.1). This is again of possible Prehistoric date. It is notable that both these enclosures are located close to watercourses. Neither of these enclosures has been investigated further.

- 1.3.3 Excavation of a crop-mark some 650m to the south of the site (MEL8510; Crone & O’Sullivan 1997) recorded a 3m deep ditch enclosing a rectilinear area (40 x 42m) and containing waterlogged deposits with preserved organic material. The radiocarbon dates obtained from waterlogged seeds in the ditch indicated two phases of activity, one in the 4th-2nd centuries BC and one in the 1st-2nd centuries AD. No significant features or artefacts were recorded in the interior, probably as a result of extensive plough damage. The enclosure was assumed to have contained a small settlement. A hollow feature with possible floor layers and a hearth was excavated out-with the southwest perimeter of the enclosure and was tentatively identified as the floor of a sunken hut.
- 1.3.4 Available evidence indicates that the site has negligible potential to contain features of archaeological interest relating to the Medieval and later periods, although sub-surface traces of 18th century and later agricultural features such as ridge and furrow are likely to be present.

2 OBJECTIVES

- 2.1 The objectives of the archaeological evaluation were:
- i) to determine the presence or absence of any buried archaeological remains that could be subject to disturbance during the proposed development;
 - ii) if present, to determine the nature, extent and significance of any remains present in order to inform an appropriate mitigation strategy (likely to be preservation by record, ie.. excavation, analysis and dissemination of results).

3 METHODOLOGY

- 3.1 The details of the archaeological evaluation, laid out below, were designed to meet the requirements of East Lothian Council as advised ELCAS, and agreed through the submission of a Written Scheme of Investigation (WSI) (CgMs 2017).
- 3.2 The available area within the proposed development area, once services were taken into account, covers c.1.8ha. A 5% sample of the area amounted to 500 linear metres of trenches excavated with a 2.0 m wide bucket.
- 3.3 The evaluation trenches were largely distributed as per an indicative trenching plan included in the WSI. Trench 4 was split into two 25 m trenches (Trench 4 and Trench 11) as the proposed Trench 4

was laid across a modern fence. Trenches 8-10 were moved due to the presence of a fenced compound within the southern corner of the site.

- 3.4 Trenches were opened by a single tracked excavator equipped with 2.0 m wide bladed ditching bucket. Excavation was undertaken in units/spits until the first significant archaeological horizon or geological deposits were reached. All machine excavation was supervised by an experienced field archaeologist and undertaken according to AOC Archaeology Group's standard operating procedures, and the methodology within the agreed WSI (CgMs 2017). A site meeting was held with Helena Grey of East Lothian Council and CgMs at a suitable point during the evaluation to discuss the results.

4 RESULTS

- 4.1 The archaeological evaluation was undertaken on the 27th-28th June 2017. On the 27th June weather conditions were wet then dry on 28th June. However, visibility remained good.
- 4.2 A total of 11 linear trenches were excavated (Figure 1) giving a total of 500 linear metres.
- 4.3 The site consisted of three fallow fields with vegetation grown to waist height. The fields were fairly level with a gentle slope into a bowl within the central field where the sewer pipe had been installed. The top-soil consisted of a heavily improved dark grey/ brown plough-soil with numerous shards of 19th century white ceramic and bottle glass. The plough-soil ranged from 0.24 m to 0.37 m in depth. The topsoil overlaid heavy compact geological clays.
- 4.3.1 The sub-soil had been heavily truncated by modern farming practices with numerous plough scars.



Plate 1: Trench 6 Post excavation with drain cut



Plate 2: Trench 10 post excavation plough scars

- 4.3.2 Every trench revealed the linear cuts of ceramic field drains aligned towards the lowest part of the development area in the central field.
- 4.4 An area of 20th century disturbance was located in Trench 5 consisting of a shallow rectangular cut filled with bitumen, fragmented brick and white ceramic, possibly deposited in association with the insertion of the sewage pipe which underlies the development area and crosses under the farm track to the south.
- 4.5 A steep artificial bank of made ground was located in the eastern extents of Trenches 8, 9 and 10. This consisted primarily of mixed re-deposited clays mixed with bitumen, fragmented brick, broken ceramic pipe and white ceramic which was deposited during road upgrading adjacent to the site. The bank is bounded to the west at its base by a rubble field drain, likely inserted at the time the bank was created.



Plate 3: Extent of modern deposited material in Trench 5



Plate 4: Slot through E-W orientated furrow in Trench 1

- 4.6 A single heavily truncated furrow was discovered in Trench 1. This was orientated east – west and survived to a depth of 0.1 m. The furrow was 1.4 m wide and filled by compact pale brown silty clay. The shallow depth suggests it has been heavily truncated and a more extensive system of broad rig may have been present in the past, however no other furrows were located in the rest of Trench 1 or the other trenches on site.

6 CONCLUSIONS

- 6.1 The proposed development site was subject to an archaeological evaluation as per the agreed WSI (CgMs 2017) and on-site discussions with Helena Grey of ELCAS. The evaluation revealed modern disturbance in the form of re-deposited bitumen, brick and white ceramics in a shallow rectangular pit and a large bank on the eastern extent of the site. A single truncated furrow survives in Trench 1 which may have been part of a more extensive broad rig field system which no longer survives due to modern ploughing.

7 BIBLIOGRAPHY

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Scottish Government 2011 *Planning and Archaeology 2/2011*

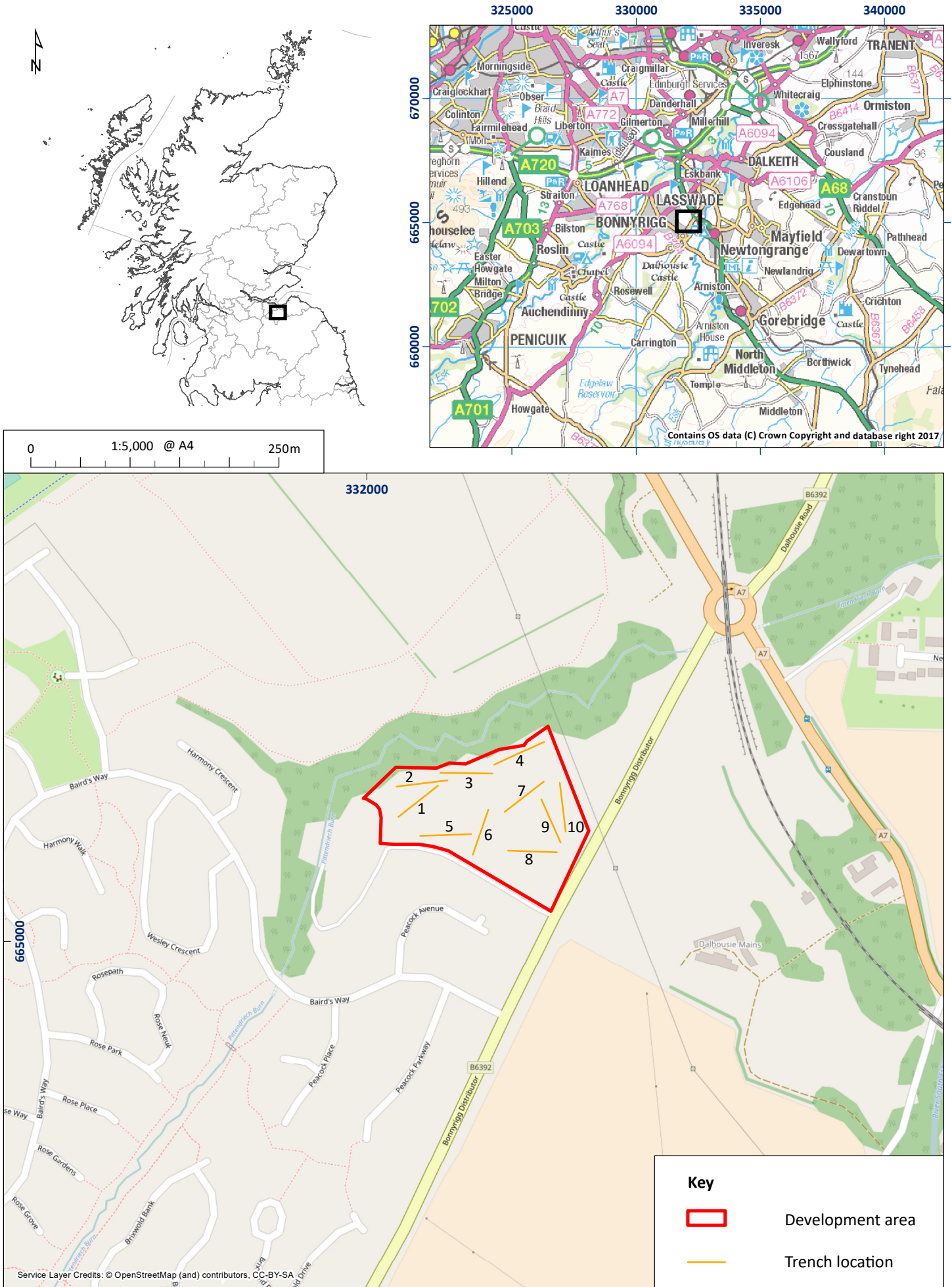


Figure 1: Site location plan

Land East of Dalhousie Dairy, Bonnyrigg, Midlothian: Archaeological Evaluation Data Structure Report

Section 2: Appendices

APPENDIX 1: Trench Descriptions

Trench 1

Dimensions

50 m by 2 m

<i>Total Area</i>	100 m ²
<i>Excavated Orientation</i>	SW - NE
<i>Topsoil Depth</i>	0.32 m – 0.35 m
<i>Excavation Depth</i>	0.36 m – 0.42 m
<i>Significant Features</i>	E-W orientated furrow, 13 m from NE end, 1.4 m wide, 0.1 m deep, filled with compact pale brown silty clay
<i>Natural Subsoil</i>	Compact pale pinky orange boulder clay with an outcrop of bedrock 2 m from N. end
<i>Unstratified Finds</i>	None
<i>Drains</i>	Clay cut – 5 m from SW end at 4 m intervals – orientated E-W

Trench 2

<i>Dimensions</i>	50 m by 2 m
<i>Total Area</i>	100 m ²
<i>Excavated Orientation</i>	W - E
<i>Topsoil Depth</i>	0.3 m – 0.36 m
<i>Excavation Depth</i>	0.34 m – 0.4 m
<i>Significant Features</i>	N.S.A.
<i>Natural Subsoil</i>	Compact pale pinky orange boulder clay
<i>Unstratified Finds</i>	None
<i>Drains</i>	Clay cut – 0-17 m from W end – orientated E-W. Clay cut – 0-10 m from E end – orientated E-W

Trench 3

<i>Dimensions</i>	50 m by 2 m
<i>Total Area</i>	100 m ²
<i>Excavated Orientation</i>	W - E
<i>Topsoil Depth</i>	0.25 m – 0.3 m
<i>Excavation Depth</i>	0.3 m – 0.35 m
<i>Significant Features</i>	N.S.A.
<i>Natural Subsoil</i>	Compact pale pinky orange boulder clay
<i>Unstratified Finds</i>	None
<i>Drains</i>	Clay cut – 10 m from E end at 2 m intervals – orientated N-S

Trench 4

<i>Dimensions</i>	25 m by 2 m
<i>Total Area</i>	50 m ²
<i>Excavated Orientation</i>	NE - SW
<i>Topsoil Depth</i>	0.32 m – 0.35 m
<i>Excavation Depth</i>	0.35 m – 0.39 m
<i>Significant Features</i>	N.S.A.
<i>Natural Subsoil</i>	Compact pale pinky orange boulder clay
<i>Unstratified Finds</i>	None
<i>Drains</i>	Clay cut – 2-5 m from NE – orientated N-S

Trench 5

<i>Dimensions</i>	50 m by 2 m
<i>Total Area</i>	100 m ²
<i>Excavated Orientation</i>	W - E
<i>Topsoil Depth</i>	0.32 m – 0.36 m
<i>Excavation Depth</i>	0.34 m – 0.4 m
<i>Significant Features</i>	Shallow rectangular cut filled with coal, brick and rubble – 6.1 m E-W, 2 m N-S (extending beyond trench limits), 0.25 m depth, 23 m from W end
<i>Natural Subsoil</i>	Compact pale yellowish orange boulder clay

<i>Unstratified Finds</i>	None
<i>Drains</i>	Clay cut – 4-11 m from W end – orientated ESE-WNW. Old service cut – 6 m from E end – orientated NE-SW

Trench 6

<i>Dimensions</i>	50 m by 2 m
<i>Total Area</i>	100 m ²
<i>Excavated Orientation</i>	NNE - SSW
<i>Topsoil Depth</i>	0.28 m – 0.32 m
<i>Excavation Depth</i>	0.33 m – 0.36 m
<i>Significant Features</i>	N.S.A.
<i>Natural Subsoil</i>	Compact pale yellowish orange boulder clay
<i>Unstratified Finds</i>	White CE
<i>Drains</i>	Clay cut – 4 m from NNE at 5 m intervals – NE-SW

Trench 7

<i>Dimensions</i>	50 m by 2 m
<i>Total Area</i>	100 m ²
<i>Excavated Orientation</i>	SW - NE
<i>Topsoil Depth</i>	0.3 m – 0.37 m
<i>Excavation Depth</i>	0.36 m – 0.42 m
<i>Significant Features</i>	N.S.A.
<i>Natural Subsoil</i>	Compact pale yellowish orange boulder clay
<i>Unstratified Finds</i>	None
<i>Drains</i>	Clay cut – 3 m from SW end – orientated N-S. Clay cut – 15 m from SW end – orientated N-S. Clay cut – 20 m from SW end – orientated NNE-SSW

Trench 8

<i>Dimensions</i>	50 m by 2 m
<i>Total Area</i>	100 m ²
<i>Excavated Orientation</i>	W - E
<i>Topsoil Depth</i>	0.28 m – 0.38 m
<i>Excavation Depth</i>	0.4 m – 0.42 m
<i>Significant Features</i>	Made ground bank consisting of mixed clay, bitumen and brick 0-16 m from E end
<i>Natural Subsoil</i>	Compact pale pinky orange boulder clay
<i>Unstratified Finds</i>	White CE
<i>Drains</i>	Clay cut – 2 m from W end at 2 m intervals – orientated NE-SW. Rubble – 16 m from E end – orientated NE-SW.

Trench 9

<i>Dimensions</i>	50 m by 2 m
<i>Total Area</i>	100 m ²
<i>Excavated Orientation</i>	NNW - SSE
<i>Topsoil Depth</i>	0.25 m – 0.36 m
<i>Excavation Depth</i>	0.27 m – 0.4 m
<i>Significant Features</i>	Made ground bank (same as Trench 8) 0-15 m from SSE end
<i>Natural Subsoil</i>	Compact pale yellowish orange boulder clay
<i>Unstratified Finds</i>	None
<i>Drains</i>	Clay cut – 2 m from NNW end at 2m intervals – orientated NE-SW. Rubble – 15 m from SSE end – orientated NE-SW

Trench 10

<i>Dimensions</i>	50 m by 2 m
<i>Total Area</i>	100 m ²

<i>Excavated Orientation</i>	N - S
<i>Topsoil Depth</i>	0.24 m – 0.34 m
<i>Excavation Depth</i>	0.26 m – 0.38 m
<i>Significant Features</i>	Made ground bank (same as Trench 8) 0-15 m from S end
<i>Natural Subsoil</i>	Compact pale yellowish orange boulder clay
<i>Unstratified Finds</i>	Glass and White CE
<i>Drains</i>	Clay cut – 2 m from N end at 2 m intervals – orientated NE-SW

Trench 11

<i>Dimensions</i>	25 m by 2 m
<i>Total Area</i>	50 m ²
<i>Excavated Orientation</i>	SW - NE
<i>Topsoil Depth</i>	0.32 m – 0.34 m
<i>Excavation Depth</i>	0.36 m – 0.37 m
<i>Significant Features</i>	N.S.A.
<i>Natural Subsoil</i>	Compact orangey grey clay at SW end for 6 m transitioning to orangey grey to NE
<i>Unstratified Finds</i>	None
<i>Drains</i>	Clay cut – 1 m from SW – orientated N-S

APPENDIX 2: Photographic Record

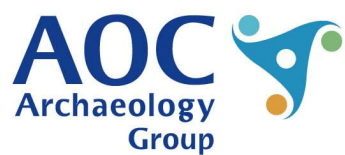
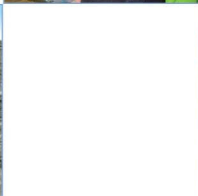
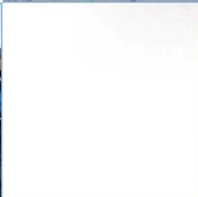
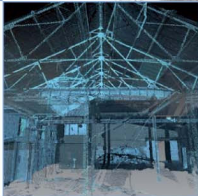
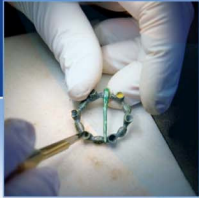
Digital Photographs

No.	Description	Taken From	Date
0	Pre-excavation shot of central field	SW	26/6/17
1	Post excavation shot of Trench 8	W	27/6/17
2	Rubble and made ground forming bank in Trench 8	W	27/6/17
3	Post excavation shot of Trench 9	NNW	27/6/17
4	Plough scarring in Trench 10	N	27/6/17
5	Post excavation shot of Trench 10	N	27/6/17
6	Post excavation shot of Trench 1	NE	27/6/17
7	Slot through E-W orientated furrow in Trench 1	SW	27/6/17
8	West facing section of furrow in Trench 1	W	27/6/17
9	Post excavation shot of Trench 2	W	27/6/17
10	Post excavation shot of Trench 4	NE	27/6/17
11	Post excavation shot of Trench 3	E	27/6/17
12	Location of gas monitoring borehole in central field	NE	27/6/17
13	Post excavation shot of Trench 5	E	28/6/17
14	Post excavation shot of Trench 6	SSW	28/6/17
15	Post excavation shot of Trench 7	NE	28/6/17
16	Post excavation shot of Trench 11	NE	28/6/17
17	Extent of modern dump in Trench 5	SE	28/6/17
18	Extent of modern dump in Trench 5	NW	28/6/17
19	Slot through modern material in Trench 5	N	28/6/17
20-23	General shots of backfilled trenches	Var.	28/6/17
24-26	Already striped area in SE corner of site	Var.	26/6/17

APPENDIX 3: 'Discovery and Excavation in Scotland' Report

LOCAL AUTHORITY:	Midlothian Council
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PROJECT TITLE/SITE NAME	Land East of Dalhousie Dairy, Bonnyrigg: Archaeological Evaluation
PROJECT CODE:	AOC 23514
PARISH:	Cockpen
NAME OF CONTRIBUTOR:	Alex Wood
NAME OF ORGANISATION:	AOC Archaeology Group
TYPE(S) OF PROJECT:	Archaeological Evaluation
NMRS NO(S)	None
SITE/MONUMENT TYPE(S):	None
SIGNIFICANT FINDS:	None
NGR (2 letters, 6 figures)	NT321 651
START DATE (this season)	27 th June 2017
END DATE (this season)	28 th June 2017
PREVIOUS WORK (incl. DES ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	<p>This report presents the results of an archaeological evaluation undertaken in respect to a proposed development at Land East of Dalhousie Dairy, Bonnyrigg, Midlothian (centred on NGR: NT321 651).</p> <p>The evaluation was undertaken within a single land parcel of 1.8 ha. A 5% (500 linear metres) sample of the evaluation area was investigated by trial trenching. The scope of the works was agreed in a WSI approved by East Lothian Archaeological Service (ELCAS).</p> <p>The evaluation revealed modern disturbance in the form of a shallow pit and a bank of made ground, both likely created in association with service and road works in the vicinity. A single truncated furrow was located along with frequent field drains. The evaluation also revealed that the entire site area had undergone significant truncation due to heavy ploughing.</p> <p>No archaeologically significant small finds were recovered during the evaluation.</p>
PROPOSED FUTURE WORK:	No
CAPTION(S) FOR ILLUSTRS:	---
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ARCHIVE LOCATION (intended/deposited)	Archive to be deposited in NMRS



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