



Minor Archaeological Services Call-Off Contract Mavisbank Policies (PIC156) Drainage Repair Works Evaluation - October 2017

Report No. HES-PIC156-2017-01 Author: Graeme Carruthers MA MCIFA













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Minor Archaeological Services Call-Off Contract

Mavisbank Policies (PIC156)

Drainage Repair Works
Evaluation
October 2017

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1. INTRODUCTION

1.1 General

This report presents the results of an archaeological evaluation carried out by CFA Archaeology Ltd (CFA) in October 2017 to excavate by hand seven trenches within Mavisbank Policies, Midlothian (NGR: NT 28807 65146). This was undertaken in order to investigate anomalies identified on a previous geophysical survey (Ovenden 2016). These anomalies have been identified as possible drainage systems within the Mavisbank Policy and required investigation to determine the nature of the anomalies and the condition of any drainage structures prior to a programme of drainage repair works (Fig. 1). The work was commissioned by Historic Environment Scotland as part of the Minor Archaeological Services Call-off Contract.

A Written Scheme of Investigation (WSI) dated 22 September 2017 was produced by CFA Archaeology for this programme of works. The WSI was agreed with Historic Environment Scotland (HES) in advance of the work taking place.

The site is a Property In Care in the guardianship of HES (PIC156) and a Garden and Designed Landscape (GDL00275).

1.2 Background

The Mavisbank Policies were laid out in the early 18th century and their design is characteristic of the transitional period between formal and picturesque garden layouts.

Designed by both Sir John Clerk and William Adam, building began in 1724. The house and gardens use the Ferme Ornée style of design and is seen as a precursor to the large landscapes later designed by Lancelot Brown. The Ferme Ornée style provided illusions of Arcadia; it incorporated a patte d'oie or 'goosefoot' of allées and vistas, former wilderness, a canal, a 'Roman Station' (NT26NE 43) and walled gardens with gazebo.

The quality of harmony achieved by Clerk between the house and designed landscape, gives Mavisbank a position of great importance in Scottish landscape design history.

The house and gardens passed out of the Clerk family ownership in 1815 and alterations to both were made as owners, styles and the house and gardens' usage changed. The narrow, rectangular canal was widened and turned into a more informal lochan, and the areas between the avenues radiating from the house were cleared of wilderness affording a clearer view of the lochan creating a landscape park. By the time of the First Edition Ordnance Survey map in 1852, the three avenue goosefoot radiating from the house had almost disappeared and by the 1890s tree-planted terraces were added to the east of the house. A revised survey in 1912 shows the approach in front of the house had changed to curve to the north.

In the 1950s neglect had set in to the house and gardens, and the area immediately in front of the house was used as a scrap yard. The house was gutted by fire in 1973.

A geophysical survey in 2016 (Ovenden 2016) revealed numerous anomalies that were interpreted as a series of drainage systems running across the Policies. These are believed to become blocked and are seen as a contributing factor to flooding and erosion across the Policies.

1.3 Objectives

The objectives of the programme of archaeological works were:

 To excavate by hand seven archaeological evaluation trenches, in order to investigate the drainage pipes found by geophysical survey and determine their condition and direction.

2. WORKING METHODS

2.1 General

All work was conducted in accordance with the Chartered Institute for Archaeologists (CIfA) 'Code of Conduct' (CIfA 2014), and other relevant CIfA Standards and Guidance.

2.2 Evaluation

Seven evaluation trenches were placed across the linear geophysical anomalies. The trenches were hand dug and recorded down to the appropriate archaeological level or a safe working depth of 1.2m.

All excavation and on-site recording was carried out according to standard CFA procedures and by completing standard CFA record forms.

3. ARCHAEOLOGICAL RESULTS

Numbers in bold refer to contexts, a full list of which is contained in Appendix 2. A summary of each trench is provided in Appendix 4.

3.1 Evaluation Results

Trench 1

Trench 1 was 2m x 1m. The topsoil (001) was 0.18m deep and lay over subsoil (002). Cut into (002), and the underlying natural clay substrate (003), was a 0.34m wide linear feature (004) that ran north-west to south-east out of the trench; this was filled by a 0.45m deep mix of clay and topsoil (005) at the base of which a line of ridged ceramic tiles stamped 'Electric Cable' were found (Fig. 2). These were not removed or the cable underneath examined as it was not certain whether the cable was live or not. It is assumed that this cable trench was generating the geophysical anomaly.

Trench 2

Trench 2 was 2m x 1m. The topsoil (001) was 0.16m deep and lay over subsoil (002). Cut into and sitting slightly above 002 was a 0.13m deep cinder and ash pathway (006). This sat upon a gravel and stone levelling layer (007) (Fig. 3). The path continued into the eastern end of Trench 2 and probing with a spade revealed that the path extended to an approximate width of 2.8m. It is assumed that the path was generating the geophysical anomaly.

Trench 3

Trench 3 was 2m x 1m. The topsoil (001) was 0.24m deep over a 0.12m deep subsoil layer (002), below which was natural substrate (003). Cut into 003 was a U-profile linear ditch (008) that ran east to west out of the trench. This was filled with compact clay layers (009, 010) and capped with a 0.25m deep sand and gravel layer (011) which extended over the edges of 008 by 0.15m on either side, creating a shallow linear hump at ground level, which has been adopted as a desire line (Fig. 4). It is assumed that this feature was generating the geophysical anomaly.

Trench 4

Trench 4 was 2m x 1m. The topsoil (001) was 0.24m deep and lay over subsoil (002) which extended down to a depth of 1m where the excavation was halted. No evidence of the geophysical anomaly was observed.

Trench 5

Trench 5 was 3m x 1m. The topsoil (001) was 0.25m in depth and lay over a layer of clay with a cobble upper surface (012). Below this was subsoil (002) and cut into this and the underlying natural (003) was a cut containing at its base a ceramic field drain (013) (Fig. 5). Only the western side of the field drain cut was exposed; the drain was unbroken and appeared in good condition. It is assumed that this feature was generating the geophysical anomaly.

Trench 6

Trench 6 was 2m x 1m. Topsoil (001) was 0.3m in depth, this lay over the natural substrate (003). Cut into the natural was an almost vertical sided cut (015) that continued below the trench's safe working depth of 1.2m. Only the western side of 015 was seen in the trench, with the other side of the cut presumably outwith Trench 6. The cut (015) was filled by a sandy silt with numerous small to medium sized rounded and flat stones throughout (016), (Fig. 6). A small lead figurine of a griffin was recovered from the top 0.2m of this ditch and there were white ceramic fragments throughout. It is assumed that this feature was generating the geophysical anomaly.

Trench 7

Trench 7 was 2m x 1m. The topsoil (001) was 0.3m deep and lay over subsoil (002) up to 1.2m deep, which overlay natural gravels (003). No evidence of the geophysical anomaly was observed.

3.3 Finds by Christina Hills

Find type	Number	Weight (g)
Animal Bone	1	2
Glass	19	123
Iron	1	3
Lead	1	191
Pottery	50	352

Table 1. Summary of finds by type

The finds are summarised in the above table and are discussed by type below.

The majority of the finds were pottery, all of which was modern and a mixture of porcelain, stoneware and redware.

The second largest group of finds was glass; most of this was bottle glass with 5 pieces of clear plate, probably broken window glass. All of the glass found on site was modern.

The Lead object was found in the fill of linear feature **015** in Trench 6, and was coated in copper alloy; it is a Griffin statuette of uncertain date. This object would have been a decorative addition to the top of an object of garden furniture, possibly a fence/gate post or urn.

The animal bone was just one small unidentified fragment from the fill of linear feature **015** in Trench 6. It is probably modern in date.

One small unidentified piece of iron was found in the topsoil of Trench 1 and is probably modern in date.

4. CONCLUSION

An evaluation was carried out by CFA Archaeology Ltd within the Property in Care and Designed Garden Landscape at Mavisbank, Midlothian. Seven trenches were excavated by hand across anomalies described as 'drainage' discovered during a geophysical survey (Ovenden 2016).

Five of the trenches contained linear features that correspond to features indentified on the geophysics; however, of these only Trench 5 contained a drain.

Trench 1 contained an electric cable, Trench 2 a cinder pathway, Trench 3 a probable backfilled field boundary and Trench 6 a large, deep feature containing modern ceramic. Trenches 4 and 7 contained no evidence of the geophysical anomalies.

The project archive, comprising all CFA record sheets, maps and reports, will be deposited with the National Record for the Historic Environment Scotland (NRHE) and copies of reports will be lodged with Midlothian Council Sites and Monuments Record.

A summary statement will be submitted for publication in *Discovery and Excavation in Scotland* (Appendix 6) and will also be reported on through *OASIS Scotland*.

5. REFERENCES

Ovenden, SM 2016 Geophysical *Survey Report. Mavisbank. RGC16185/MVB*. Unpublished report prepared for Kirkdale Archaeology on behalf of HES.

APPENDIX 1: Photographic Register

Shot No.	Summary description of subject	Taken from	
1	Area of Tr.1, pre-ex	W	
2	Tr1 marked sub, pre-ex	W	
3	North end of Tr.1 showing cut [004]/(005)	Е	
4	View of Tr.1, post-ex	Е	
5	East-facing section of Tr.1, showing [004]/(005) post-ex. Tiles are visible	Е	
	in base of trench		
6	Detail of tiles visible in base of Tr.1	Е	
7	Detail of 'electric cable' tiles in [004]/(005), Tr.1	Е	
8	Post-ex of Tr.1, showing re-turfing	Е	
9	Area of Tr.2, pre-ex	W	
10	Tr2, showing (006) and natural (003)	Е	
11	Tr2, showing (007) and natural (003)	Е	
12	Detail of (007), Tr.2	Е	
13	Post-ex of Tr.2, showing (006) and (007) in section	Е	
14	Detail of (006)and (007) in east-facing section, Tr.2	Е	
15	Post-ex of Tr.2, showing re-turfing	W	
16	Area of Tr.3, pre-ex	W	
17	Tr.3 after de-turfing, showing (011)	Е	
18	Mid-ex of Tr.3, showing (011) and (003)	Е	
19	Post-ex of Tr.3, general view	Е	
20	Post-ex of Tr.3, South-east-facing section	Е	
21	Post-ex of Tr.3, detail of cut [008] and fills (009)/(101)/(011)	Е	
22	Post-ex of Tr.3, showing re-turfing	W	
23	Area of Tr.4, pre-ex	W	
24	Post-ex of Tr.4, showing half section slot	Е	
25	Post-ex of Tr.4, detail of East-facing section in slot	Е	
26	Post-ex of Tr.4, showing re-turfing	Е	
27	Area of Tr.5, pre-ex	W	
28	Tr.5, showing (012)	SE	
29	Tr.5, showing (012)	SE	
30	Post-ex of Tr.5, showing (012), [013], (014)	SE	
31	Tr.5, detail of drain cut and pipe	SE	
32	Post-ex of Tr.5, South-east-facing section	SE	
33	Tr.5, detail of ceramic drain	S	
34	Tr.5, detail of side of ceramic drain	S	
35	Post-ex of Tr.5, showing re-turfing	S	
36	Area of Tr.6, pre-ex	W	
37	Post-ex of Tr.6, east-facing section	Е	
38	Post-ex of Tr.6, detail of east-facing section	Е	
39	Post-ex of Tr.6, showing re-turfing	Е	
40	Area of Tr.7, pre-ex	W	
41	Post-ex of Tr.7	Е	
42	Post-ex of Tr.7, showing SE facing section		
43	Post-ex of Tr.7, showing re-turfing	Е	

APPENDIX 2: Context Register

Context no.	Fill of	Trench	Description	
001		Tr1	Topsoil	
002		Tr1	Subsoil	
003		Tr1	Natural	
004		Tr1	Cut of electric cable trench	
005	[004]	Tr1	Fill of [004]	
006		Tr2	Cinder path surface	
007		Tr2	Gravel and cobble layer under cinder	
008		Tr3	Cut for linear feature	
009	[008]	Tr3	Lower fill of [008]	
010	[008]	Tr3	Middle fill of [008]	
011		Tr3	Upper capping layer above fill of [008]	
012		Tr5	Clay and cobble layer in Tr.5	
013		Tr5	Cut for field drain	
014		Tr5	Fill of field drain	
015		Tr6	Cut of linear feature	
016	[015]	Tr6	Fill of linear feature [015]	

APPENDIX 3: Drawing Register

Dwg No.	Sheet No.	Scale	Plan / Section	Description/contexts
1	1	01:20	Plan	Post-ex plan of Tr.1
2	1	01:10	Section	East-facing section of Tr.1, showing [004]/(005)
3	1	01:20	Plan	Mid-ex plan of Tr.2, showing (006)
4	1	01:20	Plan	Post-ex plan of Tr.2
5	1	01:10	Section	East-facing section of Tr.2
6	2	01:20	Plan	Post-ex plan of Tr.3
7	2	01:10	Section	South-east-facing section of Tr.3
8	2	01:20	Plan	Post-ex plan of Tr.4
9	2	01:10	Section	South-east-facing section of Tr.4
10	3	01:20	Plan	Mid-ex plan of Tr.5
11	3	01:20	Plan	Post-ex plan of Tr.5
12	3	01:10	Section	South-east-facing section of Tr.5
13	4	01:20	Plan	Post-ex plan of Tr.6
14	4	01:10	Section	East facing section of Tr.6
15	4	01:20	Plan	Post-ex plan of Tr.7
16	4	01:10	Section	South-east-facing section of Tr.7

APPENDIX 4: Trench Register

Trench no.	Size	Depth	Description
Tr1	2.0m x 1.0m	0.63m	Topsoil 001 of 0.17m depth lay on top of on top of 0.07m of subsoil, 002 , which lay above a clay natural, 003 . Cut into the subsoil and natural was a linear feature, 004 . This was 0.35m wide and was excavated to a depth of 0.45m when a row of ridged ceramic tiles marked 'Electric Cable' was encountered.
Tr2	2.0m x 1.0m	0.30m	Topsoil of 0.18m deep, 001 , lay on top of 0.12m of subsoil, 002 . Between the topsoil and subsoil from the centre of the trench to the trenches southern edge was a 0.1m deep cinder and ash layer that lay on a 0.05m layer of clay and cobbles, 006 . Probing to the south of the trench determined this layer carried on giving the layer a width of 2.8m and was presumably a pathway. Under the subsoil was the clay natural.
Tr3	2.0m x 1.0m	0.30m0.74m	When the 0.26m deep topsoil and turf, 001, was removed a domed sand and gravel linear feature, 011, appeared sitting in the subsoil, 002 When 011 was half sectioned a linear feature, 008, was underneath it cutting into the natural, 003. 008 was filled by two layers, 009 and 010, a very compact clay and topsoil mix
Tr4	2.0m x 1.0m	1.0m (stopped excavation at this depth)	Topsoil, 001 , of 0.24m depth lay above a subsoil, 002 , that continued down to the trenches depth of 1m. No features were observed in the trench.
Tr5	3.0m x 1.0m	0.65m	Topsoil, 001 , of 0.25m depth sat above topsoil, 002 , and a clay and cobble layer, 012 . The trench was extended to the NE by 1m on order to find the edge of 012 . This was not found however under 012 was a linear feature cutting into the subsoil, 002 and the natural, 003 . The linear contained a ceramic field drain.
Tr6	2.0m x 1.0m	1.20m (only excavated to safe depth, feature continues)	The topsoil, 001 , was 0.3m in depth and lay directly on the natural, 003 . Within the natural was , 015 , one side of a cut feature. The cut was almost vertical and continued down to the safe working depth of 1.2m. Probing indicated that the fill, 016 , continued to possibly for a further 0.25m.
Tr7	2.0m x 1.0m	1.20m	Topsoil, 001 , of 0.24m depth lay above a subsoil, 002 , that continued down to the trenches depth of 1.2m.At this depth the natural geology, 003 , was encountered. No features were observed in the trench.

APPENDIX 5: Finds Register

Trench	Context	Find type	No.	Wt (g)	Notes	Spotdate
1	001	Glass	8	17	Green Bottle	Modern
1	001	Glass	1	1	Clear Plate	Modern
1	001	Iron	1	3	Unknown	Modern
1	001	Pottery	1	3		Modern
1	005	Pottery	1	2		Modern
2	002	Pottery	5	74	Porcelain	Modern
2	002	Pottery	7	23	Redware	Modern
2	006	Glass	2	13	Clear Bottle	Modern
2	006	Pottery	10	47	Porcelain	Modern
5	012	Glass	2	50	Green Bottle	Modern
5	012	Glass	1	8	Blue Bottle	Modern
5	012	Glass	4	27	Clear Plate	Modern
5	012	Pottery	3	42	Redware	Modern
5	012	Pottery	15	106	Porcelain	Modern
6	016	Animal Bone	1	2		Modern
6	016	Glass	1	7	Clear Bottle	Modern
6	016	Pottery	1	16	Stoneware	Modern
6	016	Pottery	1	11	Redware	Modern
6	016	Pottery	6	28	Porcelain	Modern
6	016	Lead	1	191	Statuette- Griffin.	
					Coated in copper alloy.	

APPENDIX 6: Discovery and Excavation in Scotland Entry

LOCAL AUTHORITY:	Midlothian
PROJECT TITLE/SITE NAME:	Mavisbank Policies, Archaeological evaluation
PROJECT CODE:	MINA11
PARISH:	Lasswade
NAME OF CONTRIBUTOR:	Graeme Carruthers
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Evaluation
NMRS NO(S):	N/A
SITE/MONUMENT TYPE(S):	N/A
SIGNIFICANT FINDS:	
NGR (2 letters, 6 figures)	NT 29083 65419
START DATE (this season)	October 2017
END DATE (this season)	October 2017
PREVIOUS WORK (incl. DES ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	An evaluation was carried out by CFA Archaeology Ltd within the Property in Care of Mavisbank Policies, Midlothian as part of the Minor Archaeological Services Call Off Contract. Seven trenches were hand dug in order to investigate anomalies found by a previous programme of geophysical survey work. Two of the trenches uncovered no features: however, the rest uncovered features pertaining to services, garden paths and drainage. Finds included modern ceramic as well a small, decorative copper alloy covered lead griffin.
PROPOSED FUTURE WORK:	A further programme of geophysics and evaluation
CAPTION(S) FOR ILLUSTRS:	None
SPONSOR OR FUNDING BODY:	Historic Environment Scotland
ADDRESS OF MAIN CONTRIBUTOR:	CFA Archaeology Ltd, Old Engine House, Eskmills Park, Musselburgh, EH21 7PQ.
EMAIL ADDRESS:	cfa@cfa-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	Archive to be deposited with NRHE, reports lodged with SMR.

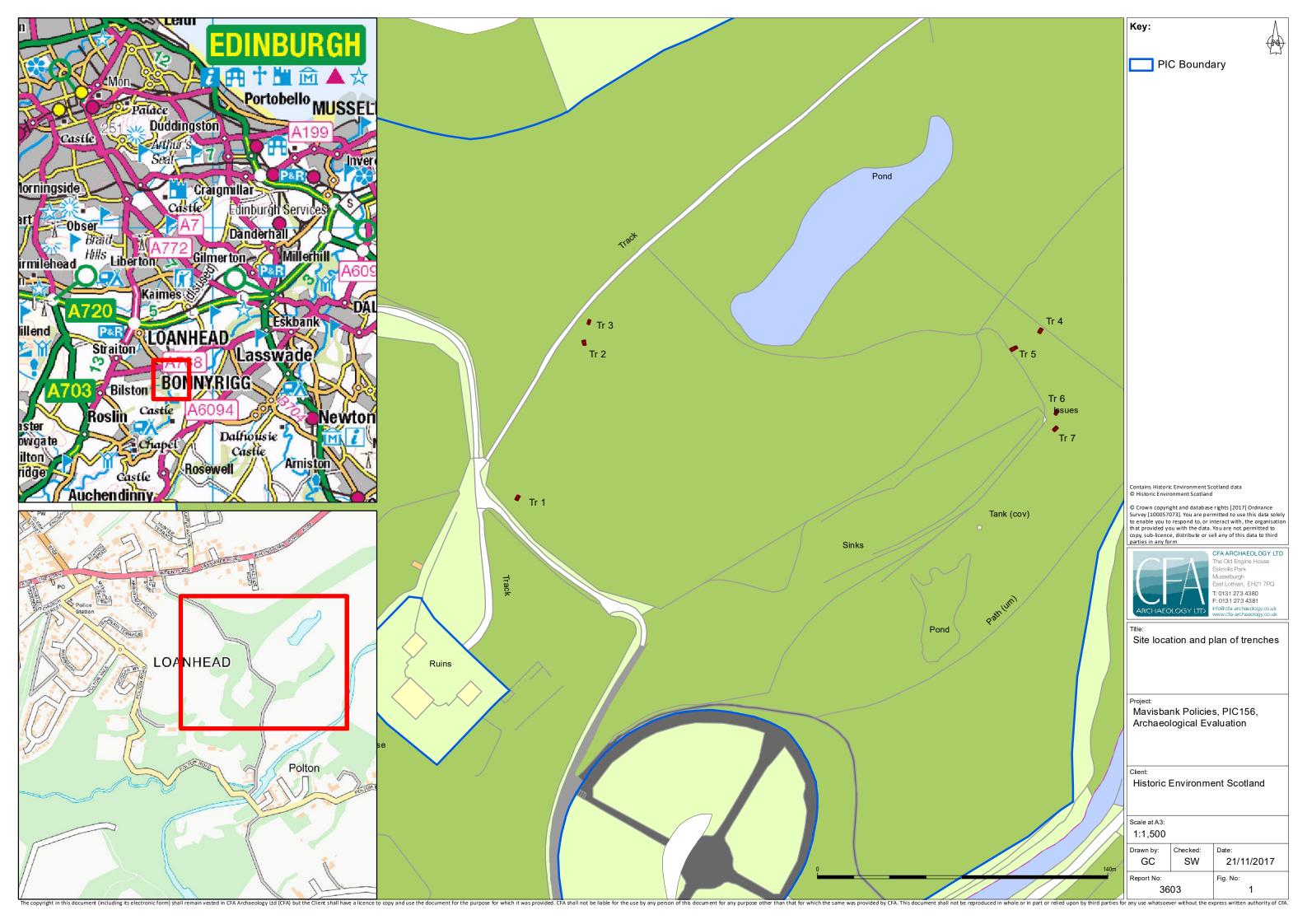




Fig. 2 Tr.1, post-excavation showing electric cable tiles within cut 004



Fig. 3 Tr.2, post-excavation showing cinder pathway 006 sitting above clay and cobble layer 007

Project:
Mavisbank Policies, PIC156, Archaeological Evaluation



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Fig. 4 Tr.3, post-excavation showing domed layer 011 over cut 008



Fig. 5 Tr.5, post-excavation showing ceramic drain within cut 015 and covered by clay and cobble layer 012

Project:
Mavisbank Policies, PIC156, Archaeological Evaluation



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Fig. 6 Tr.6, post-excavation showing one side of cut **015** and fill **016**

Project:
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