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## **Edinburgh Drinking Water Pipeline Glencorse to Alnwickhill, Midlothian and City of Edinburgh**

### **Archaeological Watching Brief**

**Report No. 1934**

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## **1. INTRODUCTION**

### **1.1 General**

This report presents the results of an archaeological watching brief undertaken by CFA Archaeology Ltd (CFA) between March 2009 and July 2011 during topsoil stripping operations for a water pipeline between Glencorse, Midlothian (NGR: NT 23614 62680) and Alnwickhill, City of Edinburgh (NGR: NT 27350 69086) (Fig. 1a to Fig. 1d). The work was commissioned by ERM on behalf of Black and Veatch Ltd.

A Written Scheme of Investigation (WSI) for the watching brief was produced by CFA on behalf of ERM. The WSI was produced following consultation with the Midlothian Council Archaeological Advisor and with the City of Edinburgh Archaeology Service (CECAS).

### **1.2 Background**

A new water pipeline providing drinking water for the City of Edinburgh is being constructed by Black and Veatch on behalf of Scottish Water. The pipeline runs from a new water treatment works at Glencorse to the existing water treatment plant at Alnwickhill, with a spur running from NGR NT 25354 66630 to NGR NT 25025 67340, which tied in with existing pipe work just to the south of the A720 City of Edinburgh Bypass.

The route of the pipeline takes it from Midlothian into the City of Edinburgh, meaning that it falls partially under the jurisdiction of the East Lothian Council Archaeology Service (ELCAS) (covering Midlothian) and partially under the jurisdiction of CECAS (covering City of Edinburgh).

In response to the planning application (Ref. 08/00847/FUL) for the pipeline, a programme of archaeological works was agreed with ELCAS and CECAS consisting of a watching brief, the excavation of a World War Two army camp, a metal detecting survey within an area possibly containing a Cromwellian army encampment, and the standing building survey of a possible brick built sentry box. This report covers the results of the archaeological watching brief. Reports covering the army camp excavations and the metal detecting survey have been produced under separate cover (Kirby 2010 and Kirby 2011 respectively). The possible sentry box was not affected by the development and consequently was not recorded.

The watching brief included the photographic survey of any upstanding field walls within the Mortonhall House estate prior to any demolition work being undertaken. It also included the monitoring of local upfill operations over the possible Roman fortlet (NMRS No. NT26SW 33) at Glencorse. This was carried out for landscaping associated with the water treatment works.

Previous work undertaken in relation to the construction of the pipeline included an archaeological desk-based assessment for the Environmental Statement, an evaluation undertaken in advance of the construction of the water treatment works at Glencorse (Kirby 2008), an evaluation undertaken within the soil storage area for the water

treatment works (Suddaby 2008), a watching brief during groundworks for the water treatment works (Gray 2008) and the Level 1 photographic survey of the boundary wall at Alnwickhill Reservoir (Cressey 2011).

### **1.3 Objectives**

The aims of the watching brief were:

- To establish the presence or absence of archaeological deposits within the watching brief area and propose mitigation measures were necessary.
- To record any upstanding field boundary walls within the designed landscape of Mortonhall House prior to their demolition.
- To monitor the local upfill of the area overlying the possible Roman fortlet at Glencorse.

## **2. WORKING METHODS**

CFA Archaeology Ltd follows the Institute for Archaeologists' Code of Conduct, Standards and Guidance for Archaeological Watching Briefs.

Due to legal agreements with the agents of the landowners along the pipeline route not to mix topsoil with any natural subsoil the topsoil stripping would not have exposed a clean surface where archaeological remains could be identified, instead a thin mixed deposit of topsoil and subsoil would have remained. The need to expose the clean natural was stipulated by CECAS and ELCAS so it was agreed in consultation with CECAS and ELCAS that an initial topsoil strip could be carried out unmonitored as there would be no disturbance to the natural subsoil and that archaeological monitoring was undertaken during the secondary strip down to natural.

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 existing topsoil over the Roman fortlet at Glencorse was covered over with geotextile fabric and the overlying deposits were built up by a depth of c.1.5m using locally excavated subsoil. This operation was carried out using a low pressure bulldozer to ensure that no damage occurred to the underlying archaeology. A constant archaeological presence was maintained during this programme of works.

## **3. ARCHAEOLOGICAL RESULTS**

### **3.1 General**

The pipeline from Glencorse to Alnwickhill measured c.9km in length, and the additional spur running from the main pipeline towards Fairmilehead measured 0.84km in length. It had a working width of c.30m.

The soil deposits along the pipeline predominantly consisted of 0.2m – 0.5m of plough soil and 0.1m - 0.2m of mixed yellowish-brown clayey silt overlying yellowish-brown sandy-clay and shattered bedrock.

Numbers in bold and parentheses in the following section refer to contexts, a list of which is contained in Appendix 1.

### 3.2 Archaeological Sites

Three sites of archaeological significance were identified during the watching brief. The archaeological sites consisted of section well preserved pre-improvement field system (Site 1), a pit containing a flint blade (Site 2), and a length of ditch with a 90° turn (Site 3). Details of the sites identified during the watching brief are contained in the following section.

#### *Site 1*

Site 1 (Fig. 2 and Fig 5) (NGR: NT 25194 64192) consisted of a discontinuous ditch thought to be a head-dyke (**060** and **089**) and eight probably associated cultivation furrows (**055**, **063**, **075**, **079**, **081**, **083**, **085** and **087**). Ditch **060** (Fig 6) measured >90m in length, but the full extent of this feature was not uncovered as it ran outwith the working width of the pipeline. Five sections (Trench 1 - Trench 5) excavated across this feature showed that it measured up to 5m in width and up to 0.75m in depth, and that it had a steeply sloping north edge and a gradually sloping south edge. The fill was a fairly homogenous mid-brown sandy-silt (**061**). There were no finds from this feature.

Ditch **089** was located c.3m to the north of Ditch **060**, but broadly followed the same line of curvature and is likely to have been part of the same feature. It measured in the region of 60m in length, but it may have originally have extended further to the north where it had been badly truncated. Four sections (Trench 6 – Trench 9) were excavated across this feature. It measured up to 6m in width by up to 0.4m in depth, and that it had steeply sloping sides and a flat to undulating base. The primary fill (**091**) of this feature consisted of gravel and cobbles within a matrix of grey-brown clay-silt, and the upper fill (**090**) consisted of a fairly homogenous greyish to reddish-brown silty clay. A number of finds were recovered from deposit **090** including 18th-19th-century earthenwares and a fragment of ?shale bracelet that is likely to be of prehistoric or Roman date and obviously residual in nature.

Cultivation furrows **055**, **063**, **075**, **079**, **081**, **083**, **085** and **087** measured between c.1m and 3m in width. Sections excavated across furrows **055** and **079** showed that they had depths of c.0.2m and 0.08m respectively. The furrows ran up and down the contours of the slope at approximately 90° degrees with the head-dyke (**060/089**). On the up slope side of the probable head-dyke the furrows terminated before the ditch which may suggest that the earthen bank that accompanies the ditch on a head-dyke was upslope from the ditch. The fact that the furrows respect the line of the ditch suggests that they were all part of the same field system.

### *Site 2*

Site 2 (Fig. 3 and Fig. 7) consisted of a single pit (**125**) (NGR: NT 25259 66783), which was sub-circular in plan, with a flat base and a steeply sloping SE side and a gently sloping NW side. It measured 1.4m in diameter and had been cut into the natural subsoil (**002**) to a depth of 0.3m. The fill of the pit (**126/127**) consisted of firmly compacted angular to rounded burnt and fire-cracked stone with occasional fragments of charcoal. One worked lithic was recovered from the fill of the pit. This feature is considered most likely to have been a prehistoric cooking pit.

### *Site 3*

Site 3 (Fig. 4 and Fig 8) (NT 26147 68746) consisted of a length of ditch (**145**), which emerged from the northern edge of the pipeline wayleave, running in a WSW direction for a distance of 33m before curving through 90° and running for a further 11m in NNW direction and then disappearing beneath the edge of the wayleave. Two sections excavated through the ditch showed that it measured c.2.4m wide by 1.1m deep, and that it had sloping sides and a concave base. The upper fill (**147**) of the ditch consisted of loose silt of the same colour and consistency as the topsoil (**001**) and the lower fill (**146**) consisted of loose shattered bedrock within a loose soil matrix. A sherd of 19th/20th-century pottery at the base of the ditch (not collected) suggests that it is fairly modern in date. The large dimensions of this feature suggest that it is likely to have been something more than a simple agricultural drainage ditch, and it may have been either a feature associated with the Mortonhall House designed landscape, or a military feature excavated for military training by troops who were stationed at Mortonhall during World War II.

## **3.3 Photographic Survey of Upstanding Walls**

Photographic surveys were undertaken of two boundary walls within the designed landscape associated with Mortonhall House at NT 25775 68137 and at NT 25885 68322 (Wall 1 and Wall 2 respectively). Wall 1 (Fig 9) marked the northern boundary of the field containing the main part of the Mortonhall Army Camp (ES Site 56). This wall was in very good condition, standing to its full height of 1.9m on the south-facing side and 1.2m on the north-facing side where the soil levels were higher. Wall 2 (Fig 10) was situated close to Mortonhall Arboretum. This wall was in variable condition, standing to its full height of c.1.8m at the eastern end, but only c.0.5m at the western end. Details of the photographs taken are contained within Appendix 2.

## **3.4 Finds**

### **Site 1**

Artefacts were collected from two contexts, two fills of the head-dyke (**060/089**). The finds are catalogued in Appendix 5.

A piece of heavily calcined unworked flint was found in ditch fill **061**. Burnt flint was often used in prehistoric cookery, but this piece does not show the characteristic crackled surface of a potboiler. Another use for calcined flint was pottery manufacture

in the 19th-20th centuries. However the fragment may simply have been accidentally burnt.

Ten sherds of pottery (95g) were recovered from ditch fill **090**. These comprised seven pieces of creamware, a small fragment of a pearlware shell-edged plate rim, and two base sherds from a glazed red earthenware vessel. All are of 18th/19th-century date. Also from **090** was a small piece of uncoloured modern window glass.

One object provides evidence for earlier activity on the site. A fragment of cannel coal or shale bracelet was recovered as a residual find in ditch fill **090**. The fragment was longitudinally split and was tapered to the edge, suggesting that originally it had a lentoid cross-section. It may be of prehistoric or Roman date.

## Site 2

A large honey-coloured flint flake from pit fill **126** has some slight retouch along one edge, and possibly a notch in the same side, although this may be accidental. It is most likely to be of Neolithic or Bronze Age date.

## 4. CONCLUSIONS

An archaeological watching brief was carried out by CFA Archaeology Ltd during soil stripping for a water pipeline. The watching brief included the monitoring of upfill operations overlying the possible Roman fortlet at Glencorse, and the photographic recording of any field boundaries within the designed landscape associated with Mortonhall House prior to their demolition. This programme of work led to the identification of three sites (Site **1** – Site **3**) considered to be of archaeological potential.

Site **1** consisted of what is considered to be the remains of a head-dyke and the remains of associated rig and furrow cultivation. The distance between the surviving furrows was in all cases greater than 6m so they fit the general pattern for Broad Rig and are therefore likely to have been the surviving remains of a pre-improvement field system (i.e pre-1800). However this type of cultivation has its origins in the medieval period so they may be quite early (Dixon 1994).

Site **2** consisted of a single pit containing fire-cracked stone and a single flint flake. It is likely to have been a cooking pit and is considered to be prehistoric in date.

Site **3** consisted of a ditch with a 90° turn. Pottery recovered from the base of this ditch suggests that it was modern in date. It may have been either a feature associated with the Mortonhall House designed landscape, or a military feature excavated for military training by troops who were stationed at Mortonhall during World War II.

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 Midlothian Council Sites and Monuments Record, and with the City of Edinburgh Council Sites and Monuments Record.



A summary statement of the results of this watching brief will be submitted for publication in *Discovery and Excavation in Scotland*.

## 5. REFERENCES

Cressey, M 2011 *Alnwickhill Reservoir, Loberton, Edinburgh: Boundary Wall Recording* CFA Unpublished Data Structure Report no. 1868

Dixon, P 1994, Field Systems, *Rig and Other Cultivation Remains in Scotland: The Field Evidence* in Foster, S & Smout, TC (eds) *The History of Soils and Field Systems*.

Gray, H 2008 *Glencorse Water Treatment Works, Glencorse Mains, Penicuik, Midlothian: Archaeological Watching Brief* CFA Unpublished Data Structure Report no. 1578

Kirby, M 2008 *Glencorse Water Treatment Works, Glencorse Mains, Penicuik, Midlothian: Archaeological Evaluation* CFA Unpublished Data Structure Report no. 1437

Kirby, M 2010 *Edinburgh Drinking Water Pipeline: Site 56 Excavations (Mortonhall Army Camp) Mounthooly Loan, City of Edinburgh: Archaeological Excavation* CFA Unpublished Data Structure Report no. 1761

Kirby, M 2011 *Glencorse Edinburgh Drinking Water Pipeline, Mortonhall City of Edinburgh: Metal Detecting Survey* CFA Unpublished Data Structure Report no. 1946

Suddaby, I 2008 *Glencorse Water Treatment Works, Glencorse Mains, Penicuik, Midlothian: Archaeological Evaluation* CFA Unpublished Data Structure Report no. 1529

## APPENDIX 1: Context Register

Context no.	Site	Description
001	All	Topsoil
002	All	Natural subsoil
003	All	Buried soil
055	1	Cut of furrow
056	1	Lower fill of 055
057	1	Upper fill of furrow 055. Same deposit as 062/086/088
060	1	Cut of field boundary ditch
061	1	Fill of boundary ditch 060
062	1	Buried soil, red-brown silty sand. Same deposit as 057/086/088.
063	1	Cut of field boundary ditch
064	1	Fill of boundary ditch 063
065	1	Charcoal lens within deposit 062
066	1	Fill of pit 067. Sheep burial
067	1	Cut of small pit
068	1	Upper fill of feature 070
069	1	Lower fill of feature 070
070	1	Irregular cut of feature
071	1	Fill of boundary ditch 060
072	1	Fill of boundary ditch 060
073	1	Cut of sub-oval pit
074	1	Fill of 073
075	1	Cut of possible furrow
076	1	Fill of 075
077	1	Natural subsoil
078	1	Natural subsoil
079	1	Cut of furrow
080	1	Fill of furrow 079 consisting of mid-grey clay-silt
081	1	Cut of furrow
082	1	Fill of furrow 081 consisting of mid-grey clay-silt
083	1	Cut of furrow
084	1	Fill of furrow 083 consisting of red-brown silty sand
085	1	Cut of furrow
086	1	Fill of furrow 085 consisting of red-brown silty sand. Same deposit as 057/062/088
087	1	Cut of furrow
088	1	Fill of furrow 087 consisting of red-brown silty sand. Same deposit as 057/062/086
089	1	Cut of boundary ditch, continuation of 060 to north
090	1	Fill of 089 consisting of brown clay silt (TR6)
091	1	Primary fill of 089 consisting of stones and clay-silt
092	1	Cut for possible field drain
093	1	Mixed fill of 093 consisting of soil and clay lumps
094	1	Fill of 089 consisting of orange-brown clay-silt
095	1	Fill of 089 consisting of greyish-brown clay-silt
096	1	Cut of field drain
097	1	Fill of field drain 096
098	1	Cut of ditch at north end within TR6
099	1	Fill of 098 consisting of greyish-brown clay silt
100	1	Cut of linear feature within TR 9
101	1	Fill of linear feature 100
125	2	Cut of pit
126	2	Fill of pit 125
127	2	Fill of pit 125
145	3	Cut of ditch

146	3	Lower fill of ditch 145
147	3	Upper fill of ditch 145

## APPENDIX 2: Photographic Register

### *Wall 1 Photographic Survey (Digital)*

Shot	Description	From	Conditions
1-18	Series of shots running east to west showing north face of wall	North	Sun
19-36	Series of shots running west to east showing south face of wall	South	Sun
37	General shot of south face of wall	SE	Sun
38	General shot of south face of wall	SW	Sun
39	Western end of wall	West	Sun
40	General shot of north face of wall	NW	Sun
41	General shot of north face of wall	NE	Sun

### *Wall 2 Photographic Survey (Digital)*

Shot	Description	From	Conditions
1-13	Series of shots showing south face of wall	South	Sun
14	East-facing end of wall	East	Sun
15-27	Series of shots showing north face of wall	North	Sun

### *Site 1 Photographs (Digital)*

Shot	Description	From	Conditions
1-3	Panorama of Field 13 (Site 1) pre-excavation from the stream to the W of Seafield Mill	NE to NW	Sunny
4-5	Field 13 (Site 1), general views looking NE & SW from the middle of the field	SW & NE	Sunny
6-8	Field 13 (Site 1). NW facing soil profile at the SW end of the field close to the stream	NW	Sunny
9-11	Field 13 (Site 1), sondage into buried soil showing how it seals a stone-filled field drain	SE	Bright
12-14	Field 13 (Site 1), working shots showing the depth of the topsoil being removed	SW	Bright
15-17	Field 13 (Site 1), general views of clay-piped field drains cutting through stone filled field drains	NE	Bright
18	Sondage into furrow located c.50m NE of the stream	SE	Bright
19	Sondage into furrow located c.50m NE of the stream	NE	Bright
20-21	General views of the area around the sondage into furrow	NE	Bright
22-24	Field 13 (Site 1), close-up views of ditch 060 in the drainage trench along the W side of the pipeline wayleave. At NT25194 64912	SE	Bright
25	Field 13 (Site 1), as above, general view	SE	Bright
26-31	Panorama from the NW showing the route of the pipeline in Field 14 and contouring around the low hill in Field 13 (Site 1),	NW	Bright
32-33	Field 13, ditch 063, pre-ex at west baulk	NE	Sun
34-35	Field 13, ditch 063, pre-ex at west baulk	SE	Sun
36-37	Field 13, general view of area to west showing route of ditch 063	NE	Sun
38	Field 13, general view of area including ditch 063	North	Sun
39	Field 13, view of areas of differential drying. These	SE	Sun

	proved to be natural subsoil variation		
40	Field 13, view of areas of differential drying. These proved to be natural subsoil variation	NE	Sun
41-43	Field 13 (Site 1), general and close-up views of a furrow exposed in section in the drainage trench along the W side of the pipeline wayleave	E	Sunny
44	General view of the completed and filled drainage trench along the W side of the pipeline wayleave	NE	Sunny
45-51	Field 13 (Site 1), general views after heavy rain showing the start of the second strip at the southern end of the field (16/06/09)	Various	Overcast & sunny
52-53	Excavations TR2, NE-facing section	NE	Bright
54	Trench 2, SW-facing section	SW	Sun/shade
55	Trench 2, general shot from bund	NW	Sun/shade
56	Sheep burial 066/067	North	Sun/shade
57-58	Trench 3, general view from bund	North	Sun/shade
59-60	Trench 3, general view from bund	West	Sun/shade
61-62	Natural feature at SW end plus stripped section	East/SE	Sun
63-64	Trench 2, east-facing section of ditch 060	East	Overcast
65-66	Trench 2, north-facing section of furrow 055	North	Overcast
67-68	Trench 2, general view	South	Overcast
69-70	Trench 2, south-facing section	South	Overcast
71-72	Trench 1, general view	NW	Overcast
73-77	Trench 1, NE-facing section NW to SE	NE	Overcast
78-79	Trench 1, SW-facing section	SW	Overcast
80	Furrow 079 to north of trenches. NE-facing section	NE	Bright/shade
81-82	Trench 5, general view and NE-facing section of 060	NE	Bright
83-84	Trench 5, SW-facing section	SW	Sun
85	Trench 4-5	SW	Sun
86-87	Trench 4 general view	NW/West	Sun
88-89	Trench 4, SW-facing section	SW	Bright
90-91	Trench 4, NE-facing section	NE	Shade
92-93	Area to east cleaned and remaining ditch exposed	South	Bright
94-95	South end of ditch continuation	SSW	Bright
96-97	Possible rounded edge feature near north end of ditch	SSE	Bright
98-99	General view of unclear area at north end of ditch	WNW	Bright
100-102	General view of north end of ditch area from bund	West	Bright
103-106	General view of south end of ditch area in Trench 4 – 5 from bund, 86 and 87 with ranging rod	SW	Bright
107	Trench 7 general view	East	Sun
108	Trench 7, north-facing section	North	Sun
109	Trench 8, general view	SSE	Sun
110-111	Trench 8, SW-facing section	SW	Sun
112-115	Trench 8, NNE-facing section	NNE	Sun/shade
116	Trench 6 and Trench 8, general view	South	Bright
117-118	Trench 6, SE-facing section	SE	Bright
119-120	Trench 6, NW-facing section	NW	Sun
121-123	Trench 6, general view	SW	Bright
124-126	Trench 6, SE-facing section sondage into natural at SW end	SE	Bright
127-128	Trench 6, SE-facing section sondage into natural at SW edge of ditch 089 showing possible cut at high level	SE	Bright
129	Trench 3, tin (profile) sample 4 in situ	East	Bright
130-131	Kubiena tin sample 5 in situ in 056/natural	North	Sun/shade
132	Trench 9, south-facing section	South	Overcast
133	Trench 9, north-facing section	North	Overcast

*Site 2 Photographs (Digital)*

Shot	Description	From	Conditions
1-2	Pre-excavation shot of pit 125	NE	Rain
3-5	North-east facing section through pit 125	NE	Rain
6	Post-excavation shot of pit 125	NE	Rain

*Site 3 Photographs (Digital)*

Shot	Description	From	Conditions
1	General view of spread after topsoil strip		
2-3	General view of section of ditch 145	East	
4-5	Working shots of second strip		
6-7	Section of ditch 145 , slot 1	East	
8-10	Section of ditch 145, slot 2 (collapsed)	West	

*General Photographs (Digital)*

Shot	Description	From	Conditions
1-3	General working shots, Frogston Road to City Bypass	Various	Various
4-8	General working shots, Mortonhall	Various	Various
9-10	General working shots, Pentland Road	Various	Various
11-13	General working shots Frogston Road	Various	Various
14-32	General working shots, Alnwickhill	Various	Various
33-35	General working shots, Mortonhall to Alnwickhill	Various	Various
36-37	General working shots, Alnwickhill	Various	Various
38-47	General working shots, Damhead Holdings	Various	Various
48	General working shot, Alnwickhill	Various	Various
49-50	General working shots, Glencorse Burn	Various	Various
51-59	General working shots, Lothianburn	Various	Various
60-62	Mortonhall, pre-ex shots of field		

*Site 1 Photographs (Slide Film 1)*

Shot	Description	From	Conditions
1-2	Field 13, strip cleared to subsoil	SW	Sun
3-4	SW end of strip	NNE	Sun
5-6	Central part of strip	North	Sun
7-8	North central part of strip	South	Sun
9-10	Excavations TR2, NE-facing section	NE	Bright
11-12	Trench 2, SW-facing section	SW	Sun/shade
13-14	Trench 2, general shot from bund	NW	Sun/shade
15-16	Sheep burial 066/067	North	Sun/shade
17-18	Trench 3, general view from bund	North	Sun/shade
19-20	Trench 3, general view from bund	West	Sun/shade
21-22	Natural feature at SW end plus stripped section	East/SE	Sun
23-24	Trench 2, east-facing section of ditch 060	East	Overcast
25-26	Trench 2, north-facing section of furrow 055	North	Overcast
27-28	Trench 2, general view	South	Overcast
29-30	Trench 2, south-facing section	South	Overcast
31-32	Trench 1, general view	NW	Overcast

*Site 1 Photographs (Slide Film 2)*

<b>Shot</b>	<b>Description</b>	<b>From</b>	<b>Conditions</b>
1-6	Trench 1, NE-facing section NW to SE	NE	Overcast
7-8	Furrow 079 to north of trenches. NE-facing section	NE	Bright/shade
9-10	Trench 5, general view and NE-facing section of 060	NE	Bright
11-12	Trench 5, SW-facing section	SW	Sun
13-14	Trench 4-5	SW	Sun
15-16	Trench 4 general view	NW/West	Sun
17-18	Trench 4, SW-facing section	SW	Bright
19-22	Trench 4, NE-facing section	NE	Shade
23-24	Area to east cleaned and remaining ditch exposed	South	Bright
25-26	South end of ditch continuation	SSW	Bright
27-28	Possible rounded edge feature near north end of ditch	SSE	Bright
29-30	General view of unclear area at north end of ditch	WNW	Bright
31-32	General view of north end of ditch area from bund	West	Bright
33-36	General view of south end of ditch area in Trench 4 – 5 from bund, 86 and 87 with ranging rod	SW	Bright

*Site 1 Photographs (Slide Film 3)*

<b>Shot</b>	<b>Description</b>	<b>From</b>	<b>Conditions</b>
1-2	Trench 7 general view	East	Sun
3-4	Trench 7, north-facing section	North	Sun
5-6	Trench 8, general view	SSE	Sun
7-8	Trench 8, SW-facing section	SW	Sun
9-10	Trench 8, NNE-facing section	NNE	Sun/shade
11-14	Trench 6, SE-facing section	SE	Bright
15-18	Trench 6, NW-facing section	NW	Sun
19-22	Trench 6, general view	SW	Bright
23-24	Trench 6, SE-facing section sondage into natural at SW end	SE	Bright
25-26	Trench 6, SE-facing section sondage into natural at SW edge of ditch 089 showing possible cut at high level	SE	Bright
27-28	Trench 3, tin (profile) sample 4 in situ	East	Bright
29-30	Kubierna tin sample 5 in situ in 056/natural	North	Sun/shade
31-32	Trench 9, south-facing section	South	Overcast
33-34	Trench 9, north-facing section	North	Overcast

### APPENDIX 3: Drawings Register

Sheet No	Drawing No	Scale	Section/Plan	Contexts
DB	24	1:20	Section	Site 1, ESE-facing section of 051
DB	25	1:20	Section	Site 1, SE-facing section of 053
DB	26	1:10	Section	Site 1, SSE-facing section of 055
DB	27	1:20	Section	SW-facing section of 058
DB	28	1:20	Section	Site 1, Ditch 060, SE-facing section
DB	29	1:20	Section	Site 1, Ditch 063, E-facing section
6-12	30	1:100	Plan	Site 1, Field 13, Plan
13	31	1:20	Section	Site 1, SW-facing section of Trench 2
13	32	1:20	Section	Site 1, NE-facing section of Trench 2
13	33	1:20	Plan	Site 1, Plan of Trench 2
14	34	1:20	Section	Site 1, E-facing section of Trench 3 060-2, 065, 055-6
14	35	1:20	Plan	Site 1, Plan of Trench 3, 055,060
14	36	1:10	Section	Site 1, North-facing section of trench 3
15	37	1:20	Section	Site 1, Cut 070, SE-facing section
15	38	1:20	Plan	Site 1, Plan of 070
16	39	1:20	Section	Site 1, NE-facing section of Trench 1 through ditch 060
14	40	1:20	Section	Site 1, Trench 3, west-facing section 055-7, 060-2
14	41	1:10	Section	Site 1, Trench 3, north-facing section 055-7
16	42	1:20	Section	Site 1, Post-ex plan of Trench 1 through 060
15	43	1:10	Section	Site 1, NE-facing section 079, 080
17	44	1:20	Section	Site 1, West-facing section of Trench 4
17	45	1:20	Plan	Site 1, Plan of ditch cut in Trench 4
14	46	1:10	Section	Site 1, Trench 5, ditch 060, NE-facing section
14	47	1:10	Section	Site 1, Trench 5, ditch 060, SW-facing section
18	48	1:10	Section	Site 1, Trench 7, ditch 089, North-facing section
18	49	1:10	Section	Site 1, Trench 7, ditch 089, South-facing section
19-20	50	1:10	Section	Site 1, Trench 7, ditch 089, North-facing section
19-20	51	1:10	Section	Site 1, Trench 8, ditch 089, SW-facing section
19-20	52	1:20	Plan	Site 1, Trench 8, plan
18	53	1:20	Section	Site 1, Trench 6, NE-facing section
18	54	1:20	Section	Site 1, Trench 6, SW-facing section
18	55	1:20	Plan	Site 1, Plan of trench 6
20	56	1:10	Section	Site 1, East-facing section of Trench 9
20	57	1:10	Section	Site 1, West-facing section of Trench 9
23	62	1:10	Section	Site 2, NE-facing section of pit 125
23	63	1:20	Plan	Site 2, Post-ex plan of pit 125
23	71	1:200	Plan	Site 3, Ditch 145, plan
23	72	1:10	Section	Site 3, Ditch 145, east-facing section
23	73	1:10	Section	Site 3, Ditch 145, west-facing section

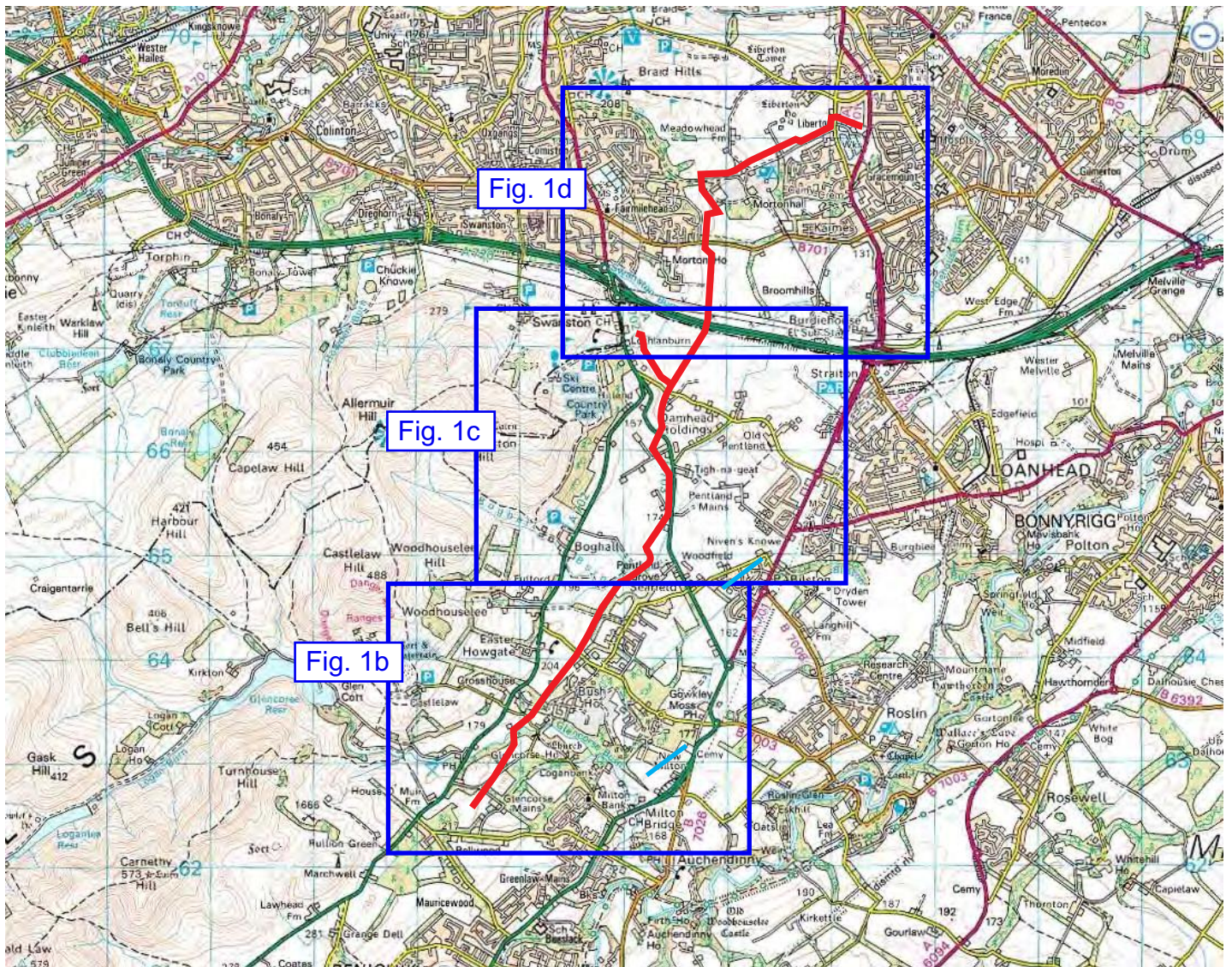
#### APPENDIX 4: Samples Register

Sample no.	Context	Site	Comment	Size
1	065	1	Charcoal deposit, TR3, ditch 60	0.5L
2	061	1	Charcoal within 061, TR4	0.25L
3	061	1	Bulk sample of ditch fill within TR4	12L
4	062, 065	1	TR3 natural profile sample	1 tin
5	056	1	Natural, TR3	1 tin
6	065	1	Charcoal lens in TR3	0.5L
7	061	1	Upper fill, gravelly-soil, TR3	12L
8	062	1	Lower fill, contains a few stones in soil, TR3	12L
9	057	1	Upper furrow fill, TR3	12L
10	056	1	Lower furrow fill, TR3	12L
11	090	1	Ditch fill TR8	12L
12	090	1	Ditch fill TR6	12L
13	061	1	Ditch fill TR1	12L
14	126	2	Fill of Pit 125	12L
15	127	2	Fill of Pit 125	3L

#### APPENDIX 5: Finds list

Context	Tr.	Find type	No	Wt (g)	Notes	Date
061		Burnt flint	1	9	heavily calcined, unworked	preh?
090	6	Pottery	5	9	creamware	18th c.
090	6	Glass	1	1	uncoloured window glass	modern
090	6	Shale?	1	2	fragment of cannel coal or shale bangle, tapered cross-section, broken at mid-section	preh/Rom
090	8	Pottery	3	11	2 creamware, 1 pearlware shell-edged rim	19th c.
090	-	Pottery	2	75	glazed redware base	18th/19th c.
126		Flint	1	14	honey-coloured flake with slight retouch on one edge	preh





Key:  
 route of pipeline



Fig. No: 1a Revision: A Client: ERM on behalf of Black and Veatch

Title: Location map and route of pipeline

Scale at A4:

Project: Edinburgh Drinking Water Project

**CFA**  
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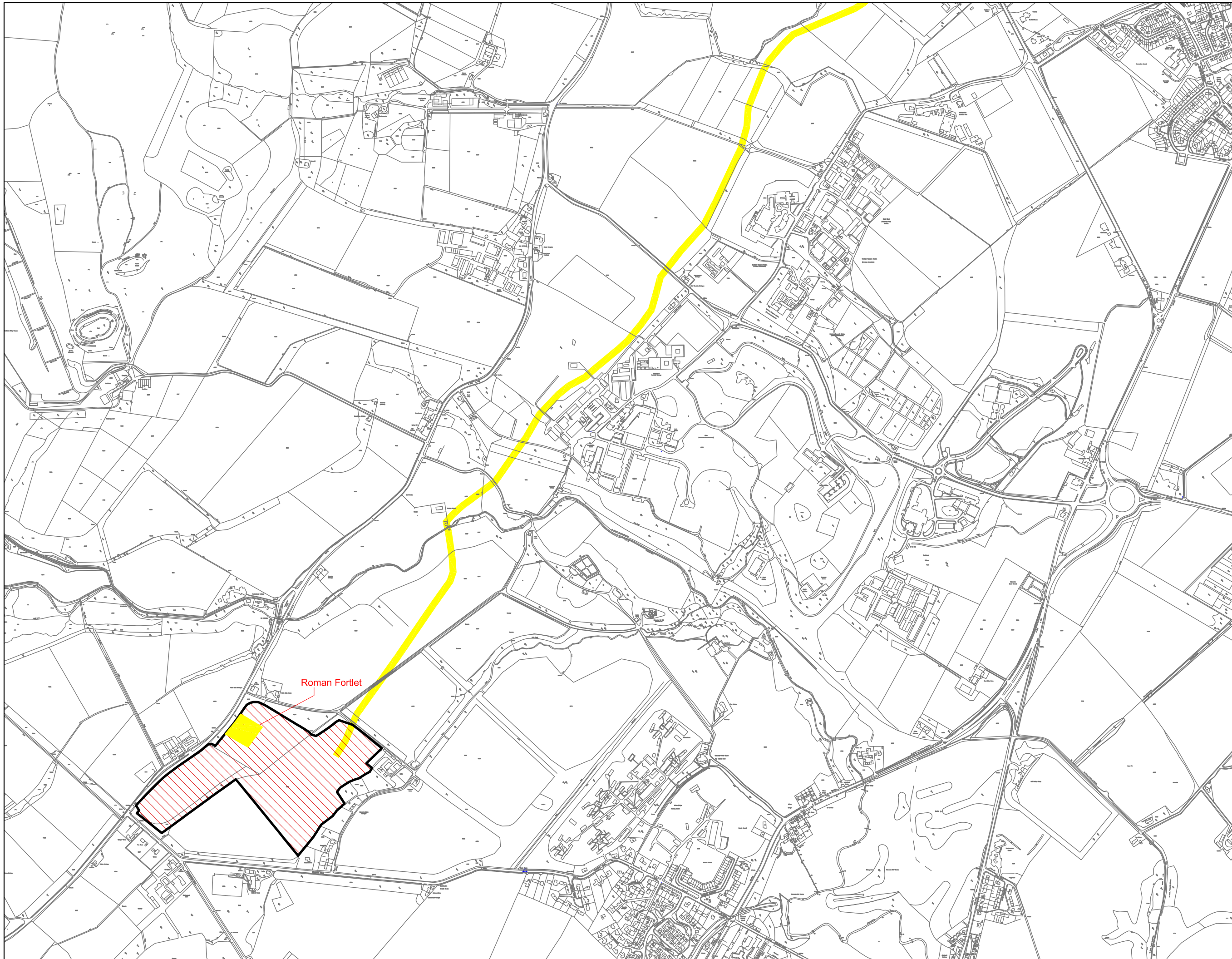
t: 0131 273 4380  
 f: 0131 273 4381  
 e: info@cfa-archaeology.co.uk  
 w: www.cfa-archaeology.co.uk

Drawn by: KH Checked: LW Report No: 1934



Key:

 Watching Brief Area



Roman Fortlet

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 f: 0131 273 4381  
 e: info@cfa-archaeology.co.uk  
 w: www.cfa-archaeology.co.uk

Fig. No: 1b Revision: A

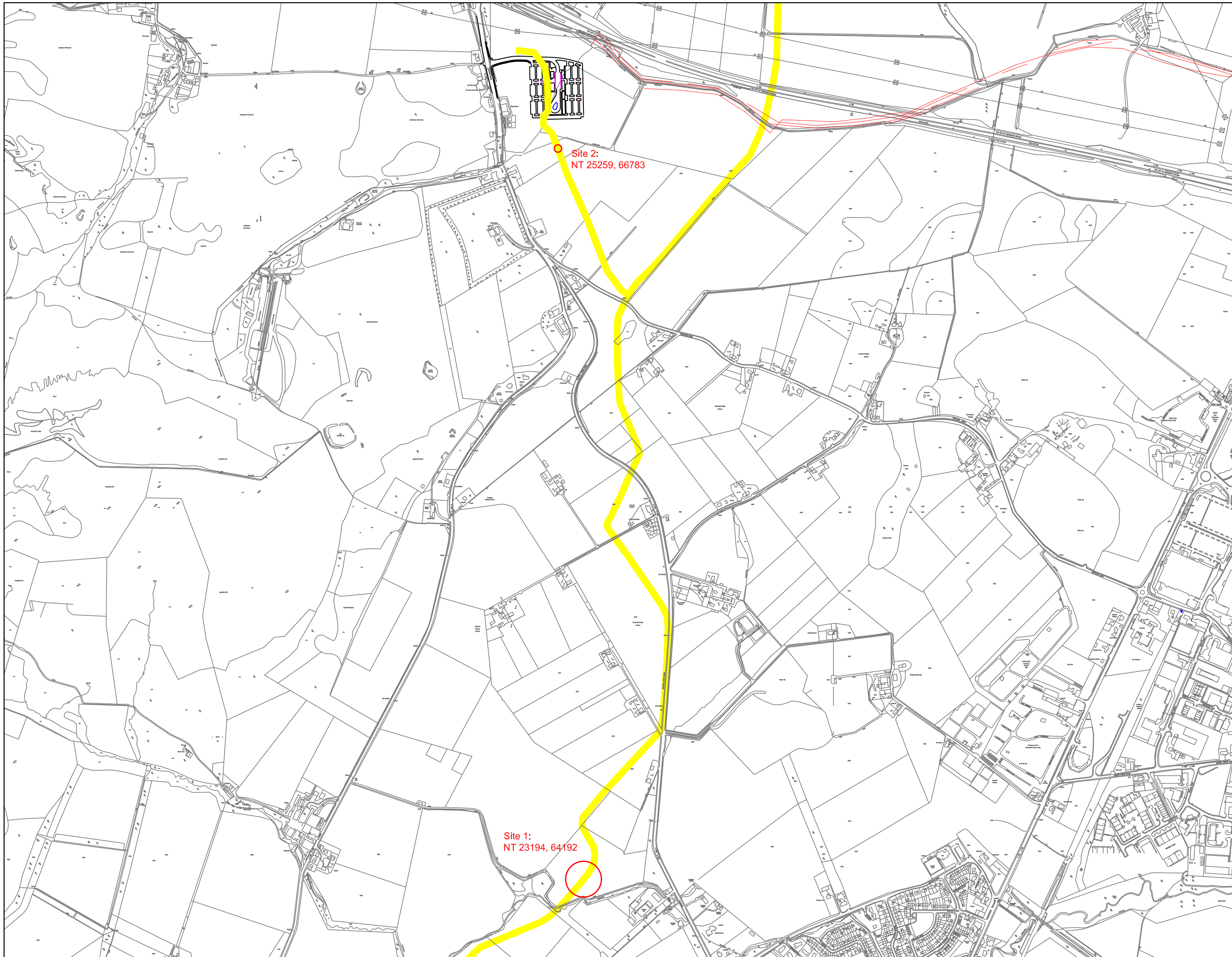
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Project: Edinburgh Drinking Water Project

Client: ERM on behalf of Black and Veatch

Scale at A3: 1:10 000





Key:

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 w: www.cfa-archaeology.co.uk

Fig. No: 1c Revision: A

Title: Location map

Project: Edinburgh Drinking Water Project

Client: ERM on behalf of Black and Veatch

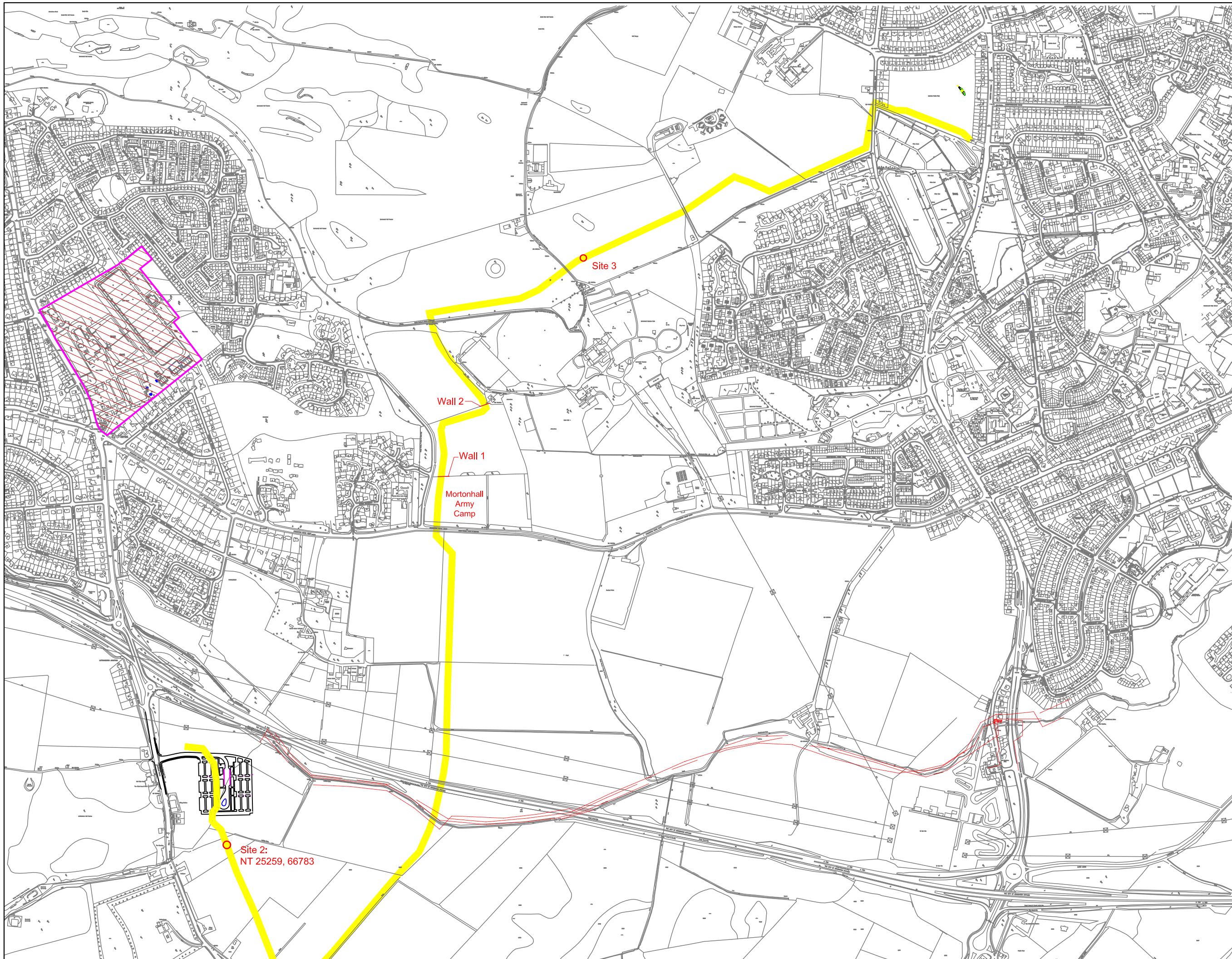
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Key:

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 w: www.cfa-archaeology.co.uk

Fig. No: 1d Revision: A

Title: Location map

Project: Edinburgh Drinking Water Project

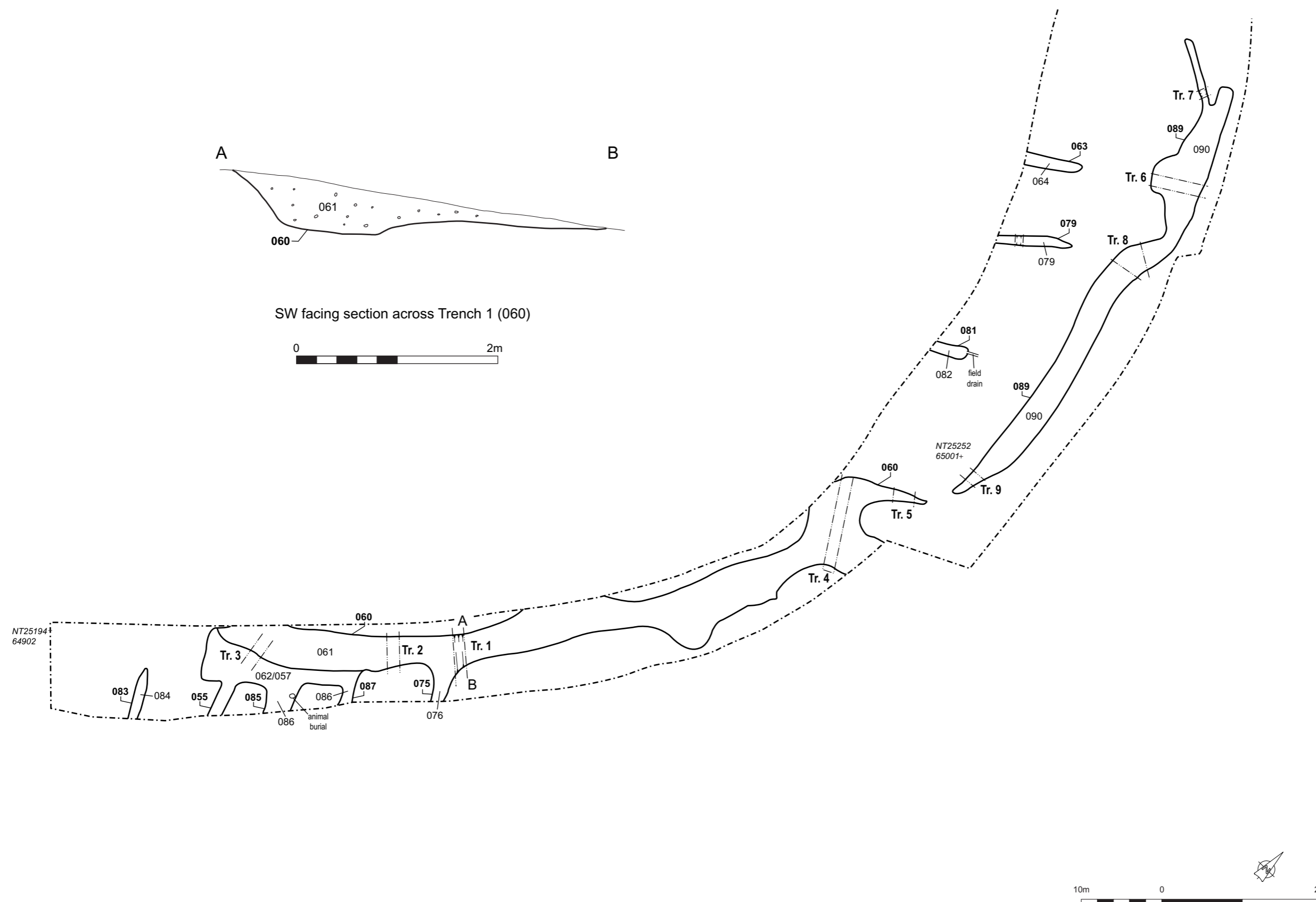
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Drawn by: KH Checked: LW Report No: 1934

Key:



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 w: www.cfa-archaeology.co.uk

Fig. No:	2	Revision:	A
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Title:  
**Site 1: Plan and section**

Project:  
**Edinburgh Drinking Water Project**

Scale at A3:  
**1:500**

Client:  
**ERM on behalf of Black and Veatch**

Drawn by:	Checked by:	Report No:
GC	LW	1934

Key:

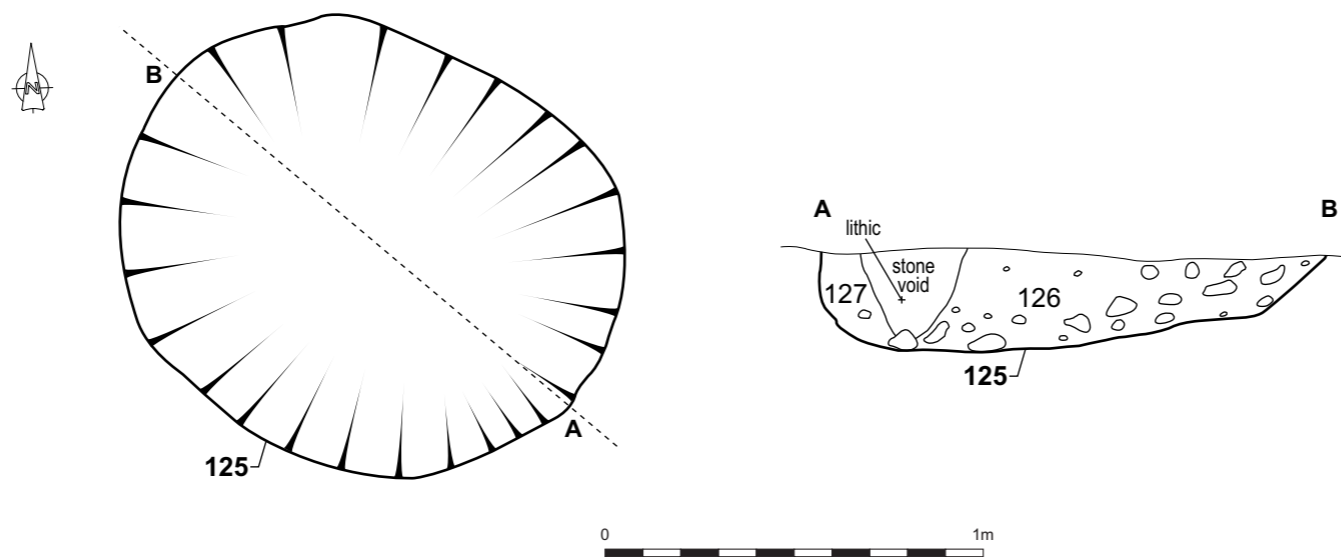


Fig. 3 Plan and NE-facing section of Site 2

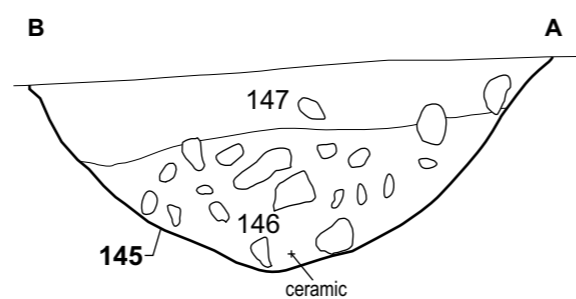
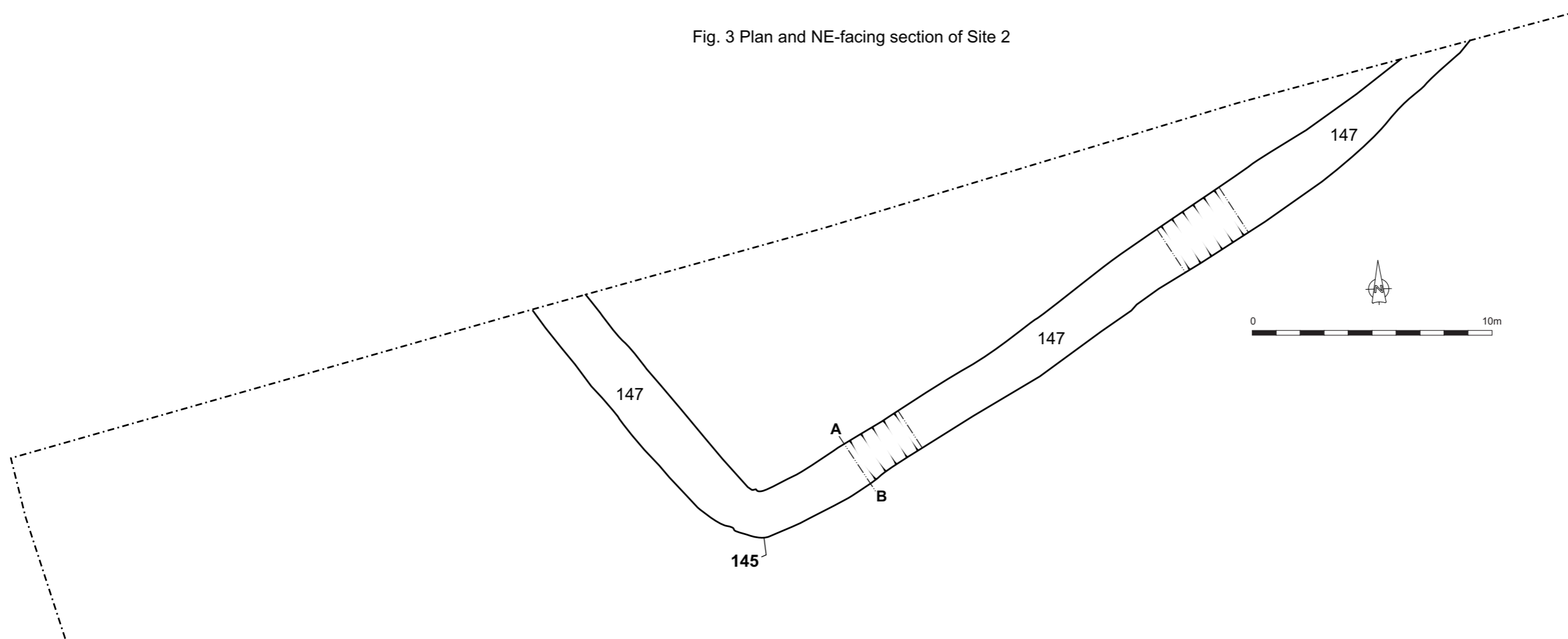


Fig. 4 Plan and NE-facing section of Site 3

Key:



Fig. 5 - General shot of Site 1

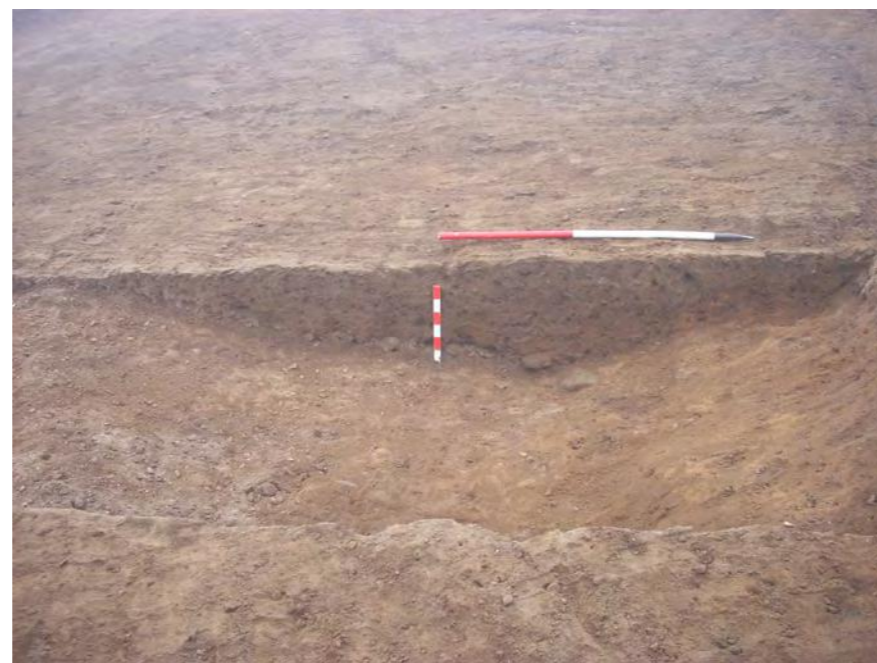


Fig. 6 - Site 1: Trench 1, NE-facing section across ditch 060



Fig. 7 - Site 2, NE-facing section of Pit 125



Fig. 8 - Site 3, E-facing section of Ditch 145



Fig. 9 - Wall 1, general shot from SE prior to demolition



Fig. 10 - Wall 2, general shot from S prior to demolition