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Linlithgow Loch Combined Sewer Outflow, Linlithgow, West Lothian. Archaeological Watching Brief

**Data Structure Report
No. 1703**

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CONTENTS

1.	Introduction	3
2.	Working Methods	4
3.	Archaeological Results	4
4.	Conclusions	5
5.	References	5

Appendices

1.	Context Register	6
2.	Photograph Register (Digital Photographs)	6
3.	Drawing Register	6
4.	Discovery & Excavation in Scotland entry	7

Illustrations (bound at rear)

Fig. 1 Site location plan

Fig. 2 View of CSO chamber excavation

Fig. 3 View of access track excavation

1. INTRODUCTION

1.1 General

1.1.1 This report presents the results of an archaeological Watching Brief undertaken by CFA Archaeology Ltd (CFA) in October 2009 during excavation for the construction of a Combined Sewer Overflow (CSO) and short access track on the shore of Linlithgow Loch, Linlithgow, West Lothian (NGR NT 000 771). The work was commissioned by Scottish Water Solutions.

1.1.2 A Written Scheme of Investigation (WSI) designed to fulfil the requirements of West Lothian Council, as advised by the West of Scotland Archaeology Service (WoSAS), was produced by CFA and approved by WoSAS. The work was permitted development and took place under Scottish Water's policies relating to the treatment of archaeological remains.

1.2 Archaeological Background

1.2.1 The environs of Linlithgow Loch, including the loch, Linlithgow Palace, Peel and Royal Park, form a Scheduled Ancient Monument (SAM) defined by the line of the present Royal park boundary (Fig. 1).

1.2.2 The excavation was undertaken on grassed areas within a modern housing development. A search of the SMR and NMRS showed no previous archaeological discoveries in the immediate vicinity.

1.2.3 A watching brief was undertaken by CFA in April 2009 on site investigation works at the site, including borehole starter pits and trial pits (Mitchell 2009). This work indicated that disturbed ground was present to a depth of at least 1.25m due to the construction of the surrounding buildings and the installation of services, with made ground, rubble and blaes present throughout. No significant archaeological remains or deposits were recorded but the possible location of a domestic midden was identified in the area of CP2 and CP3 at a depth of c.3m.

1.3 Objectives

1.3.1 The aims of the watching brief were:

- To conduct an appropriate programme of archaeological investigation (watching brief) during the excavation of all groundbreaking works associated with the construction of the CSO and report on its findings.

2. WORKING METHODS

2.1 General

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

2.2 Excavation

2.2.1 A single pit was excavated by the contractors using plant (eight ton tracked excavator) and hand tools under constant archaeological supervision. These methods were also used during soil stripping for a short access track.

2.2.2 All on-site recording was carried out according to standard CFA procedures, principally by drawing, and digital photography and by completing standard CFA record forms.

3. ARCHAEOLOGICAL RESULTS

3.1 Context numbers are in bold and in parentheses and listed in Appendix 1. The CSO pit measured c.7m by 4.2m by a maximum c.1.75m in depth.

3.2 A large sewerage pipe, clad in concrete and laid on a concrete base, was recorded at the base of the pit. The top of the concrete cladding of the pipe (**005**) was at a depth of c. 0.7m from ground level. Its dimensions were approximately 0.75m in width and 0.65m in height. A 7m length of the pipe was exposed and continued outside the area of excavation to the east and west. A concrete base (**006**) extended c.0.5m out from either side of the pipe and continued in the same directions. The thickness of this base could not be ascertained, and excavation was halted at this depth.

3.3 No archaeological features were revealed within the pit. All deposits were of modern made ground, containing brick rubble, sandstone rubble, stone and blaes (**002, 003, 004**). Groundwater was present at the level of (**004**).

3.4 The access track area was stripped of topsoil to a depth of c.0.2m. A modern plastic pipe, identified as either electricity or communications, was revealed, as were the settings for two manholes. No archaeological features were revealed and deposits consisted of made ground of brick rubble, stone and blaes (**002**). The access track itself was laid using Type One bedding.

4. CONCLUSIONS

- 4.1 The watching brief at The Vennel, Linlithgow revealed no significant archaeological remains or deposits within the CSO pit or in the area of the access track.
- 4.2 The area excavated for the CSO had been disturbed to a depth of 1.75m during the installation of a concrete clad sewerage pipe, with made ground, rubble and blaes present throughout the area.
- 4.3 No further work is deemed to be necessary within the area of the CSO, although the decision lies with WoSAS.
- 4.4 The project archive, comprising all CFA record sheets, maps and reports will be deposited with the National Monuments Record of Scotland (NMRS).
- 4.5 A summary statement will be submitted for publication in *Discovery and Excavation in Scotland* (Appendix 4).

5. REFERENCES

Mitchell, S 2009 *Linlithgow Loch Combined Sewer Outflow, Linlithgow, West Lothian. Archaeological Watching Brief. Data Structure Report No. 1622*. CFA Archaeology Ltd.

APPENDIX 1. Context Register

Context No.	No.	Description
001	All	Turf and topsoil
002	CSO/Access	Made ground of brick rubble, stone and blaes
003	CSO	Dark brown soil made ground with brick rubble, sandstone rubble and stone
004	CSO	Wet silty clay made ground with brick rubble, sandstone rubble and stone
005	CSO	Concrete cladding around sewage pipe
006	CSO	Concrete base underneath sewage pipe

APPENDIX 2. Photograph Register (Digital Photographs)

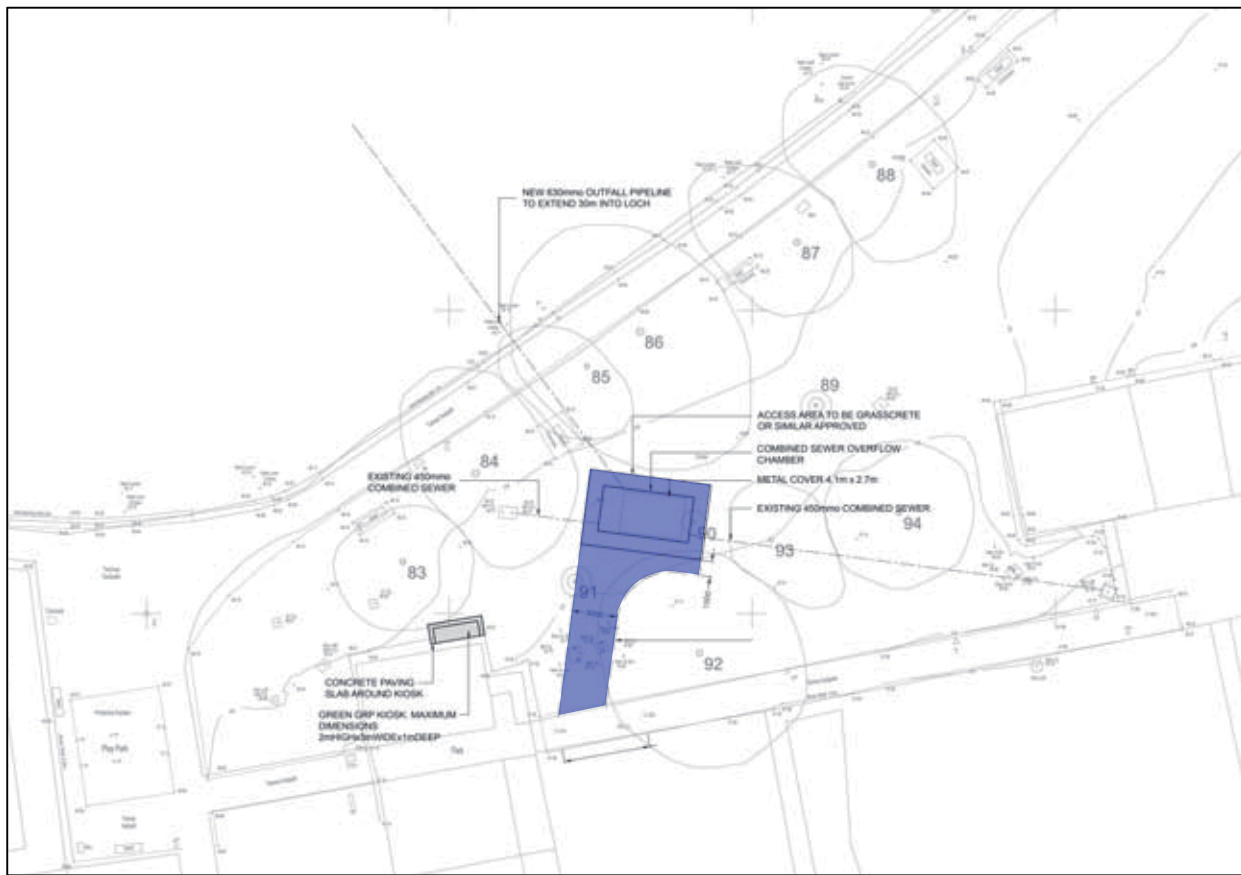
Photo No.	Description	From
1	General shot of CSO area	SE
2	General shot of access track area	E
3	General shot of CSO area	W
4	General shot of access track area	N
5	Soil stripped for access track, showing modern utilities pipe	E
6	Soil stripped for CSO	NE
7	Access track levelled	NE
8	Access track levelled showing manholes	S
9	General shot at south end of access track	S
10	General shot at south end of access track	W
11	General shot at south end of access track	N
12	Laid access track	E
13	Laid access track	S
14	Top of concrete clad pipe [005]	E
15	Top of concrete clad pipe [005]. Showing general section of (002) and (003)	S
16	Top of concrete clad pipe [005]	N
17	Concrete clad pipe [005] and concrete base [006]	E
18	Concrete clad pipe [005] and concrete base [006]	E
19	Working shot, concrete pipe [005] being exposed	E
20	Concrete clad pipe [005] and concrete base [006] exposed	E
21	Concrete clad pipe [005] exposed	S
22	Concrete clad pipe [005] exposed	SW
23	Concrete clad pipe [005] and concrete base [006] exposed	E
24	General shot of fully excavated CSO	NE
25	General shot of fully excavated CSO	N
26	General shot of fully excavated CSO	SW
27	General shot of fully excavated CSO	W
28	General shot of fully excavated CSO, showing section of (002), (003) and (004)	SSW

APPENDIX 3. Drawing Register

Drawing No.	Description/Contexts	Scale
1	South facing section through CSO pit, half-excavated	1:50
2	Profile through CSO pit showing concrete pipe	1:20
3	South facing section through CSO pit, fully excavated	1:10

APPENDIX 4. Discovery & Excavation in Scotland Entry

LOCAL AUTHORITY:	West Lothian Council
PROJECT TITLE/SITE NAME:	The Vennel, Linlithgow, West Lothian
PROJECT CODE:	LIL0
PARISH:	Linlithgow
NAME OF CONTRIBUTOR:	Stuart Mitchell & Dean Williams
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Watching brief
NMRS NO(S):	N/A
SITE/MONUMENT TYPE(S):	
NGR (2 letters, 6 figures)	NT 000 771
START DATE (this season)	13-04-2009
END DATE (this season)	16-10-2009
PREVIOUS WORK (incl. <i>DES</i> ref.)	N/A
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	<p>A watching brief was carried out at The Vennel, Linlithgow during works associated with the construction of a combined sewerage outflow. Initial excavation of four trial holes for site investigation works showed 1.2m depth of significant disturbance from modern building and services. A concentration of animal bones were recovered from two drill cores at a depth of c.3m.</p> <p>The area excavated for the CSO had been disturbed to a depth of 1.75m during the installation of a concrete clad sewerage pipe, with made ground, rubble and blaes present throughout the area. The watching brief on the trial holes and the excavation of the CSO pit and associated access track revealed no significant archaeological remains or deposits.</p>
PROPOSED FUTURE WORK:	N/A
CAPTION(S) FOR ILLUSTRS:	
SPONSOR OR FUNDING BODY:	Scottish Water Solutions
ADDRESS OF MAIN CONTRIBUTOR:	The Old Engine House, Eskmills Park, Musselburgh, East Lothian EH21 7PQ
EMAIL ADDRESS:	smitchell@cfa-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	Report to be submitted to NMRS and West Lothian Council's Historic Environment Record Archive to be submitted to NMRS



Key:
 Watching Brief Area



Fig. No: 1
 Revision:
 Client: Scottish Water Solutions
 Title: Site Location Plan
 Project: Linlithgow Loch, West Lothian - Watching Brief


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Figure 2 - View of CSO chamber excavation



Figure 3 - View of access track excavation

Key:	Fig. No:	2-3	Revision:		Client:	Scottish Water Solutions
	Title:					
	Project:	Linlithgow Loch, West Lothian - Watching Brief				
Scale:						 <p>CFA ARCHAEOLOGY LTD The Old Engine House Eskmills Park Musselburgh East Lothian, EH21 7PQ t: 0131 273 4380 f: 0131 273 4381 e: info@cfa-archaeology.co.uk w: www.cfa-archaeology.co.uk</p>
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