

CFA Archaeology Ltd

archaeological consultants

Advice on Archaeology & Planning

Environmental Impact Assessment

Intpretation, Design & Display

Finds/ Environmental Analysis

Field Evaluation & Excavation

Historic Building Recording

Site & Landscape Survey

Geophysical Survey

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

**Data Structure Report
No. 1622**

CFA ARCHAEOLOGY LTD

The Old Engine House
Eskmills Business Park
Musselburgh
East Lothian
EH21 7PQ

Tel: 0131 273 4380
Fax: 0131 273 4381
email: info@cfa-archaeology.co.uk
web: www.cfa-archaeology.co.uk

Author	Stuart Mitchell MA AIfA
Illustrator	Kevin Hicks BA FSA Scot MAAIS
Editor	Melanie Johnson MA PhD FSA Scot MIfA
Commissioned by	Scottish Water Solutions
Date issued	June 2009
Version	1
OASIS Reference	cfaarcha1-60518
Planning Application No	-
Grid Ref	NT 000 771

This document has been prepared in accordance with CFA Archaeology Ltd
standard operating procedures.

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

**Data Structure Report
No. 1622**

CONTENTS

1.	Introduction	3
2.	Working Methods	4
3.	Archaeological Results	5
4.	Conclusions	6

Appendices

1.	Context Register	7
2.	Photograph Register (Digital Photographs)	7
3.	Photograph Register (35mm colour slide)	7
4.	Discovery & Excavation in Scotland entry	8

Illustrations (bound at rear)

Fig. 1 Site plan showing location of trial pits

Fig. 2 View of HP3

Fig. 3 View of HP4

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 April 2009 during trial pit excavation for geotechnical site investigation works for the construction of a Combined Sewer Overflow (CSO) 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 trial pit excavations were 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.

1.3 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, including geotechnical trial pits, and report on its findings.
- To determine the presence or absence, location, extent, date, character, condition, significance and quality of any surviving archaeological remains liable to be threatened by the proposed development and to provide mitigation measures where necessary.

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 Trial Pit Excavation

2.2.1 Four hand-dug trial pits (HP) were excavated by the contractors using hand tools under constant archaeological supervision. Hand excavation of starter pits for boreholes TR1, TR1A and TR2 were also observed.

2.2.2 All on-site recording was carried out according to standard CFA procedures, principally by drawing, by 35mm and digital photography and by completing standard CFA record forms.

3. ARCHAEOLOGICAL RESULTS

3.1 The results are presented in Tables 1 and 2 below. Context numbers are in bold and in parentheses and listed in Appendix 1. Prefixes to hand pit and starter pit numbers refer to the locations of site investigations as shown on the plan (Fig. 1). Hand pits measured no more than c.1m by 1m; starter pits measured no more than 0.5m by 0.5m.

3.2 A large stone sewerage main pipe was revealed in TR1A at a depth of 1.25m. Several fragments of animal bone and horn core, most likely sheep, were discovered in drill cores CP2 and CP3 (Fig. 1) from a depth of c.3m. Their black colour and lack of sawn butchery marks suggests a medieval or earlier date. It is likely that the drills had passed through a midden.

3.3 No archaeological features were revealed or deposits were recorded in the hand pits and starter pits.

No.	Depth	Description
HP1	N/A	Abandoned at a depth of c.0.2m after discovery of asbestos. Deposits comprised 0.2m topsoil (001) .
HP2	N/A	Abandoned due to concrete foundation (003) . Deposits comprised c.0.2m topsoil (001) followed by c.0.2m of rubble (002) .
HP3	1m	0.2m topsoil (001) ; overlying 0.2m dark mixed soil/sand matrix (004) ; overlying a loose deposit of rubble, harling and stone (005) ; overlying 0.4m mixed clay and rubble deposit (006) . A layer of soft sandy mud (007) underlay 006 which rapidly became waterlogged, and was probed to a depth of 0.85m below the water level.
HP4	N/A	Abandoned due to presence of live electrical services. Deposits comprised topsoil (001) to 0.2m depth followed by loose rubble, harling and sand (008) .

Table 1: Summary of results from Hand Pit excavation

No.	Depth	Description
TR1	1.25m	The starter pit contained 0.21m of topsoil (001) followed by 0.26m of made ground (009), followed by 0.3m of very compact blaes (010), followed by 0.5m of grey clay with blaes and ash (011).
TR1A	1.25m	The starter pit contained 0.25m of topsoil (001), followed a mixed deposit of soil and blaes (012) of 0.4m depth, followed by 0.6m of compact blaes (013).
TR2	1.3m	The starter pit contained 0.5m of topsoil (001) followed by 0.7m of made ground containing rubble (014).

Table 2: Summary of results from starter pit excavation for terrier rig boreholes

4. CONCLUSIONS

- 4.1 The Watching Brief at The Vennel, Linlithgow revealed no significant archaeological remains or deposits within the hand pits. The possible location of a domestic midden has been identified in the area of CP2 and CP3 at a depth of c.3m.
- 4.2 The areas investigated within the Vennel appear to have been disturbed to a depth of at least 1.25m during the construction of the surrounding buildings and the installation of services, with made ground, rubble and blaes present throughout.
- 4.3 A further watching brief will take place during the construction phase of the CSO, including pipework and all other associated groundbreaking works; these stages will be reported on separately.
- 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) and will be updated following the second phase of watching brief.

Appendix 1. Context Register

Context No.	No.	Description
001	All	Turf and topsoil
002	HP2	Modern building rubble
003	HP2	Concrete foundation
004	HP3	Dark mixed soil and sand matrix
005	HP3	Loose rubble, harling and stone matrix
006	HP3	Clay and rubble matrix
007	HP3	Sandy mud
008	HP4	Loose harling and sand
009	TR1	Made ground
010	TR1	Compacted blaes
011	TR1	Made ground: grey clay with blaes and ash
012	TR1A	Soil and blaes
013	TR1A	Compact blaes
014	TR2	Made ground containing rubble

Appendix 2. Photograph Register (Digital Photographs)

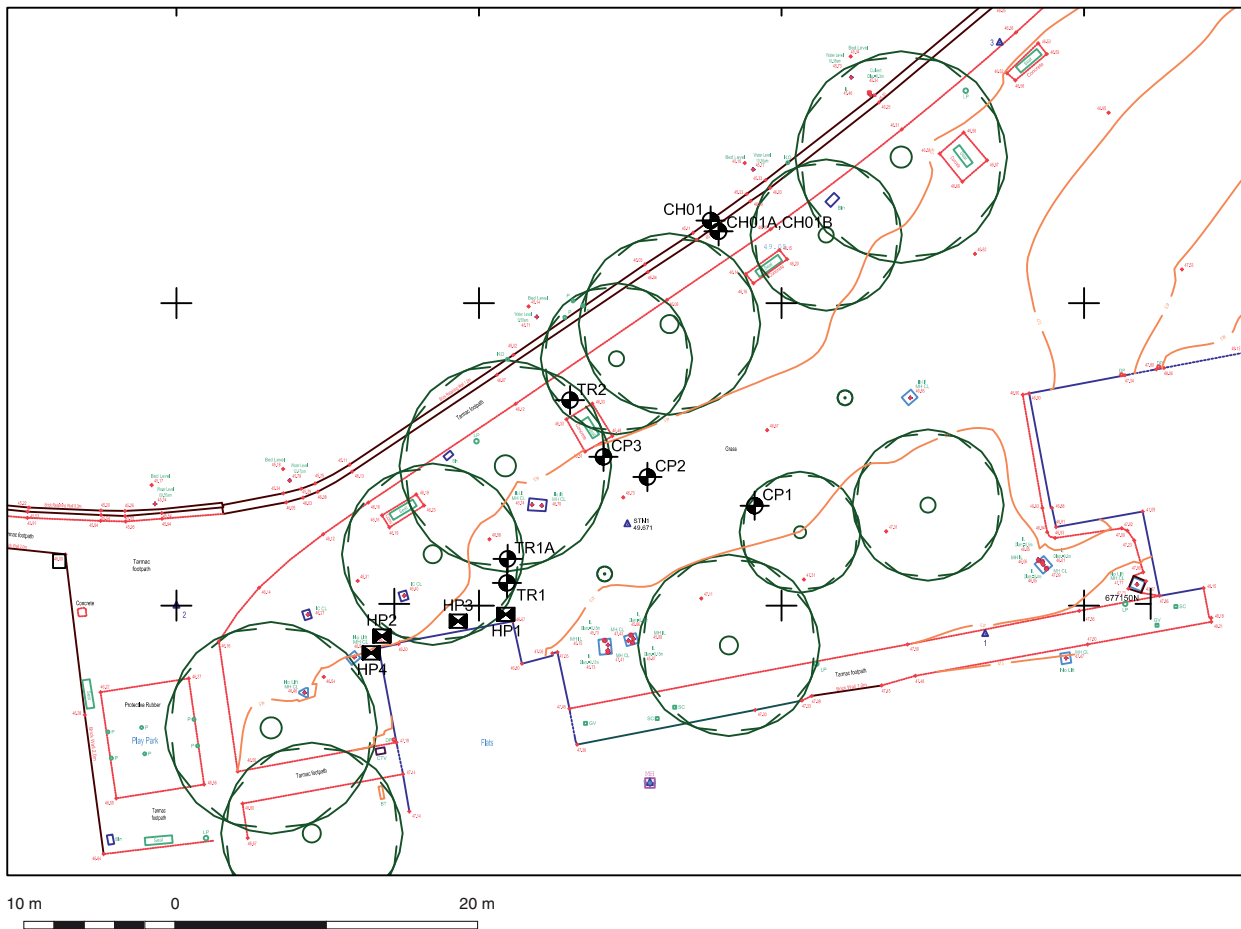
Photo No.	Description	From
1	General view of site prior to work	SE
2	General view of site and manhole covers	E
3	General work shot, HP1	N
4	HP1	NE
5	General work shot, HP2	N
6	General work shot, HP3	W
7	General view of site	NW
8	HP3 work shot	W
9	HP3	NW
10	HP4 showing electrical conduit	N
11	TR1 general shot	S
12	TR1 showing sewerage pipe	
13	TR1A general work shot	S
14	TR2	N

Appendix 3. Photograph Register (35mm colour slides)

Photo No.	Description	From
1	Registration	
2-5	General view of site	SE
6-7	HP1	NE
8-9	General work shot, HP2	N
10-11	General work shot, HP3	W
12-13	HP3	NW
14-15	HP4 showing electrical conduit	N
16-17	TR1 general shot	S
18-19	TR1 showing sewerage pipe	
20-21	TR2	N

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
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)	17-04-2009
PREVIOUS WORK (incl. <i>DES</i> ref.)	N/A
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	A watching brief was carried out on the excavation of four trial holes in advance of a combined sewerage outflow. The upper 1.2m showed significant disturbance from modern building and services. No archaeological remains or deposits were discovered within the trial holes. A concentration of animal bones were recovered from two drill cores at a depth of c.3m.
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 East Lothian Council's Historic Environment Record Archive to be submitted to NMRS




- Key:
-  Borehole
 -  Hand Pit



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



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



Fig. 2 - View of HP3



Fig. 3 - View of HP4

Key:



Fig. No: **2-3** Revision: Client: **Scottish Water Solutions**

Title:

Project: **Linlithgow Loch, West Lothian - Watching Brief**

Scale:



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

Drawn by: **NK**

Page No:

Report No: **1622**