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E Kirriemuir WwTW, Kirriemuir, Angus – FE Transfer Sewer Upgrade

Archaeological Watching Brief & Excavation Report No. 1979

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**Kirriemuir WwTW,
Kirriemuir, Angus –
FE Transfer Sewer Upgrade**

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& Excavation
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1. INTRODUCTION

1.1 General

This report presents the results of an archaeological watching brief and subsequent excavation during the construction of a new transfer pipeline to convey final effluent from Kirriemuir WwTW to a new discharge point located on the Dean Water (Fig. 1). The watching brief and excavation was undertaken by CFA Archaeology Ltd (CFA) in November 2011. The work was commissioned by Scottish Water Solutions.

A Written Scheme of Investigation (WSI) for the project was produced by CFA in response to information provided by Aberdeenshire Council Archaeology Service (ACAS) and Simon Wall of Scottish Water Solutions.

The WSI specified that a watching brief was required of that part of the pipeline route which crossed the route of a Roman Road (SMR no. NO35SE9906) to the south-west of Logie. An addendum to the WSI covered Phase 2 works comprising excavation of archaeological features, in the form of 6 pits, discovered during the watching brief (NGR: NO 392 518).

1.2 Background

The site was in an arable field to the south-west of Logie (Fig. 1). The proposed work involves the construction of a new transfer pipeline to convey final effluent from Kirriemuir WwTW to a new discharge point located on the Dean Water.

The pipeline crosses the route of a Roman Road (SMR No. NO35SE 9906), requiring a watching brief for all topsoil stripping works within that portion of the pipeline wayleave and any off-easement areas. The Roman Road is only visible in aerial photography.

No previous invasive archaeological fieldwork is known to have taken place within the proposed development area prior to the watching brief.

1.3 Objectives

The aims of the watching brief were to determine the location, character, extent and quality of any features or objects of archaeological importance that may have survived within the watching brief area, and which may be damaged or destroyed by this development, and propose mitigation measures where necessary.

2. WORKING METHODS

2.1 General

CFA Archaeology Ltd follows the Institute for Archaeologists' Code of Conduct, Standards and Guidance for Archaeological Fieldwork. Recording of all elements followed established CFA methods, as detailed in the approved WSI.

2.2 Watching Brief

An archaeological watching brief was carried out during the topsoil stripping works for the pipeline wayleave in the area where the route crosses the Roman Road at (NO 392 518), for a distance of c.150m. There were no off-easement areas within this portion of the pipeline.

3. ARCHAEOLOGICAL RESULTS

3.1 General

The topsoil throughout the site predominantly consisted of a homogenous mid greyish brown silt plough soil with an average depth of 0.4m **(001)**. Underlying this was firm mottled reddish/yellowish-brown sandy clay representing the natural substrate **(002)**.

Numbers in bold in the following text refer to contexts, a full list of which is contained in Appendix 1.

3.2 Watching Brief Results

No trace of the Roman Road was found and there was no geological reason recorded for a cropmark to be present on this alignment.

A scatter of 6 pits, measuring between 1.1m-1.5m across, found under the topsoil **(001)** and cut into the natural subsoil **(002)** (Fig. 1-2), was identified during the watching brief. These were the subject of further excavation.

Pit 003

This was a sub-rounded pit **(003)** 1.38m in length by 1.25m wide and 0.21m deep, with steep sides and a flat bottom. The pit was filled with a moderately soft mid greyish brown silt **(002)** with numerous medium to large sub-rounded and sub-angular stones (Fig. 2-4).

Pit 005

This was a circular pit **(005)** 1.35m in diameter and 0.19m deep with steep sides and a flat bottom, filled with a moderately compact mid greyish-brown silt **(006)** with a low density of medium sub-angular stones (Fig. 2-3). The pit was cut into the **(002)** natural substrate overlaid with a shallow spread of dark greyish-brown peat.

Pit 008

This was a sub-rounded pit **(008)** 1.48m in length by 1.40m wide and 0.19m deep, with moderately steep sides and a flat bottom. The pit was filled with a moderately compact mid greyish-brown silt **(009)** with a low density of small to medium sub-angular stones (Fig. 2-3). One piece of plate window glass was found in the upper regions of **(009)** and a very small piece of green bottle glass was found midway through.

Pit 010

This was a sub-rounded pit **(010)** 1.50m in length by 1.40m wide and 0.19m deep, with steep sides and a base which was flat to the south and irregular stony to the north. The pit was filled with mid greyish-brown silt **(011)** of moderate compaction with numerous medium to large sub-rounded and sub-angular stones (Fig. 2-3, 5).

Pit 012

This was a sub-rounded pit **(012)** 1.35m in length by 1.29m wide and 0.13m deep, with moderately steep south and steep north sides and a flat bottom. The pit was filled with soft mid greyish-brown silt **(013)** with a low density of small to medium sub-angular stones (Fig. 2-3).

Pit 014

This was a sub-rounded pit **(014)** 1.28m in length by 1.10m wide and 0.16m deep with steep sides and a flat stony bottom, truncated on the north end by field drain **(016)** (Fig. 2-3, 6). The pit was filled with moderately soft mid greyish-brown silt **(015)** with occasional small to medium sub-angular stones. Small pieces of modern plate window glass and white glazed pottery were found in the upper and lower regions of **(015)**.

Field Drain

A very large rubble field drain **(016)** running south-east to north-west through the site measured 3.0m wide and 0.84m deep; its full is length unknown. The field drain has a separate upper fill consisting of firm mid orangey-brown silty clay **(017)** with occasional small to large sub-angular and sub-rounded stones, overlaying the main fill of medium-large sub-angular and sub-rounded rubble **(018)**. The field drain cuts the earlier pit **(014)** on the north end (Fig. 6).

4. CONCLUSION

An archaeological watching brief was carried out by CFA Archaeology Ltd during soil stripping for the construction of a new transfer pipeline to convey final effluent from Kirriemuir WwTW to a new discharge point located on the Dean Water. The pipeline route crossed the route of a Roman Road (SMR no. NO35SE9906) to the south-west of Logie.

This programme of work led to the identification of 6 pits and 1 field drain resulting in the excavation of the pits and a section of the field drain. The pits and field drain appear to be modern and of no archaeological significance. The watching brief found no archaeological trace of the aforementioned Roman Road.

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 Angus Council Sites and Monument Records.

A summary statement of the results of this watching brief will be submitted for publication in *Discovery and Excavation in Scotland* (Appendix 4) and an online OASIS form will be completed.

APPENDIX 1: Context Register

Context no.	Fill of	Description
001		Topsoil- mid grayish-brown silt
002		Subsoil- mottled reddish/yellowish brown sandy clay
003		Cut of pit
004	003	Fill of 003- mid grayish-brown silt with numerous stones
005		Cut of pit
006	005	Fill of 005- mid grayish-brown silt
007		Cut for possible linear feature (determined to be natural)
008		Cut for pit
009	008	Fill of 008- mid grayish-brown silt
010		Cut for pit
011	010	Fill of 010- mid grayish-brown silt with numerous stones
012		Cut of pit
013	012	Fill of 012- mid grayish-brown silt
014		Cut of pit
015	014	Fill of 014- mid grayish-brown silt
016		Cut of field drain
017	016	Upper fill of 016- mid orangey-brown silty clay with numerous stones
018	016	Lower fill of 016- rubble

APPENDIX 2: Photographic Registers

Digital

Shot No.	Summary description of subject	Taken from	Conditions
1-2	Watching Brief Pre Ex Views	NW	Overcast
3	Looking NE	SW	Overcast
4	Looking SW	NE	Overcast
5	Watching Brief Pre Ex Views	SE	Overcast
6	Wet Area to the SW	NW	Overcast
7-8	Watching Brief Pre Ex Views	SE	Overcast
9	Soil Profile at NW End of Strip	NE	Overcast
10	General View of Above	NNW	Overcast
11-12	Working Shot, First Strip	SE	Overcast
13-14	Working Shot First Strip Complete	SE	Overcast
15-17	Working Shots	E	Overcast
18	Circular Pit Cleaned	SW	Overcast
19-20	Circular Pit Cleaned	SW	Overcast
21-23	Striping Finished	NW	Sunny
24-25	Stripping Finished Pits Fenced	SE	Sunny
27-28	Stripping Finished Pits Fenced	SE/NW	Sunny
29-30	Pre Ex Shot of Pit 003	S	Overcast
31-32	Pre Ex Shot of Pit 005	SE	Low Sun from SE
33-34	E Facing Section of Pit 003	E	Low Sun from SE
35-36	Pre Ex Shot of Possible Linear Feature 007	S	Overcast
37-38	SE Facing Section of Pit 005	SE	Overcast
39-40	Pre Ex Shot of Pit 008	SW	Overcast
41-42	Pre Ex Shot of Pit 010	E	Overcast
43-44	S Facing Section of Pit 008	SW	Overcast
45-46	Pre Ex Shot of Pit 012	NE	Overcast
47-48	NE Facing Section of Pit 012	NE	Overcast

49-50	E Facing Section of Pit 110	E	Overcast
51-52	Post Ex Plan of Pit 110	E	Overcast
53-54	NW Facing Section of Pit 014 and Field Drain 016	NW	Rain
55-56	NW Facing Section of Pit 014 and Edge of Field Drain 016	NW	Rain
57-58	Oblique Shot of Pit 014 and Field Drain 016	W	Rain

35mm Register

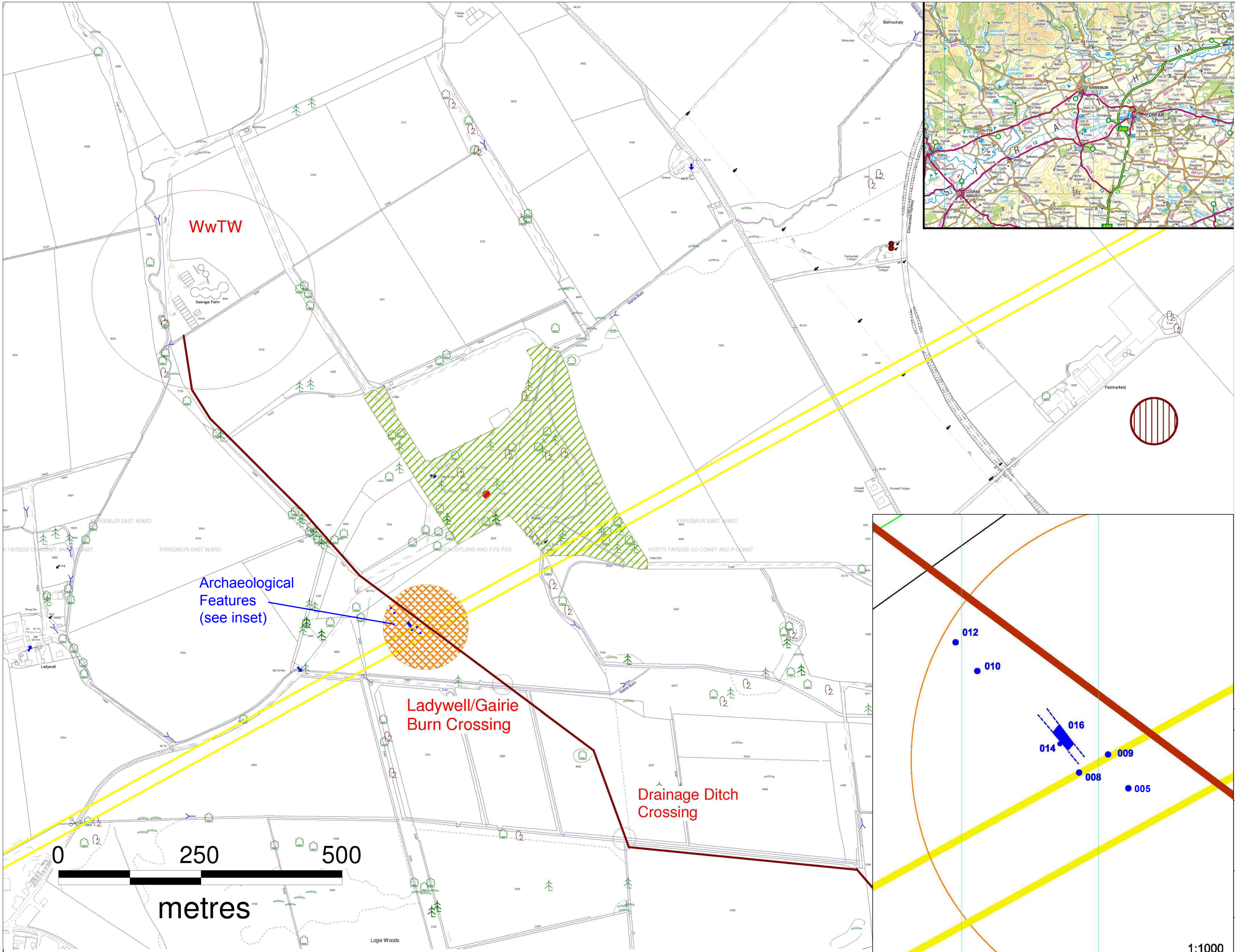
Shot No.	Summary description of subject	Taken from	Conditions
1-2	Pre Ex Shot of Pit 003	S	Overcast
3-4	Pre Ex Shot of Pit 005	SE	Low Sun From SE
5-6	E Facing Section of Pit 003	E	Low Sun From SE
7-8	Post Ex Shot of Possible Linear Feature 007	S	Overcast
9-10	SE Facing Section of Pit 005	SE	Overcast
11-12	Post Ex Shot of Pit 005	SE	Overcast
13-14	Pre Ex Shot of Pit 008	SW	Overcast
15-16	Pre Ex Shot of Pit 010	E	Overcast
17-18	S Facing Section of Pit 008	SW	Overcast
19-20	Pre Ex Shot of Pit 012	NE	Overcast
21-22	NE Facing Section of Pit 012	NE	Overcast
23-24	E Facing Section of Pit 010	E	Overcast
25-26	Post Ex Plan of Pit 010	E	Overcast
27-28	NW Facing Section of Pit 014 and Field Drain 016	NW	Rain
29-30	NW Facing Section of Pit 014 and Edge of Field Drain 016	NW	Rain
31-32	Oblique Shot of Pit 014 and Field Drain 016	W	Rain


APPENDIX 3: Drawings Register

Dwg No.	Sheet No.	Scale	Plan / Section	Description/contexts
1	1	1:20	Section	E Facing Section of Pit 003
2	1	1:20	Plan	Post Ex Plan of Pit 003
3	1	1:10	Section	SE Facing Section of Pit 005
4	1	1:20	Plan	Post Ex Plan of Pit 005
5	1	1:20	Section	S Facing Section of Pit 008
6	1	1:20	Plan	Post Ex Plan of Pit 008
7	1	1:10	Section	NE Facing Section of Pit 012
8	1	1:20	Plan	Post Ex Plan of Pit 012
9	1	1:10	Section	E Facing Section of Pit 010
10	1	1:20	Plan	Post Ex Plan of Pit 010
11	2	1:20	Section	NW Facing Section of Pit 014 and Field Drain 016
12	2	1:20	Plan	Post Ex Plan of Pit 014 and Field Drain 016









APPENDIX 4: Discovery and Excavation in Scotland Entry


LOCAL AUTHORITY:	Angus
PROJECT TITLE/SITE NAME:	Kirriemuir WwTW, Angus – Upgrade FE Transfer Sewer
PROJECT CODE:	RIEM
PARISH:	Kirriemuir
NAME OF CONTRIBUTOR:	Leigh A. Garst
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Watching Brief
NMRS NO(S):	N/A
SITE/MONUMENT TYPE(S):	N/A
SIGNIFICANT FINDS:	N/A
NGR	NO 392 518
START DATE (this season)	November 2011
END DATE (this season)	November 2011
PREVIOUS WORK (incl. <i>DES</i> ref.)	N/A
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	An archaeological watching brief was carried out by CFA Archaeology Ltd during soil stripping for the construction of a new transfer pipeline to convey final effluent from Kirriemuir WwTW to a new discharge point located on the Dean Water. The pipeline route crossed the route of a Roman Road (SMR no. NO35SE9906) to the south-west of Logie. This programme of work led to the identification of 6 pits and 1 field drain resulting in the excavation of the pits and a section of the field drain. The pits and field drain appear to be modern and of no archaeological significance. The watching brief found no archaeological trace of the aforementioned Roman Road.
PROPOSED FUTURE WORK:	-
CAPTION(S) FOR ILLUSTRS:	-
SPONSOR OR FUNDING BODY:	Scottish Water Solutions
ADDRESS OF MAIN CONTRIBUTOR:	The Old Engine House, Eskmills Park, Musselburgh, EH21 7PQ
EMAIL ADDRESS:	cfa@cfa-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	National Monuments Record of Scotland Angus Council Sites and Monuments Record





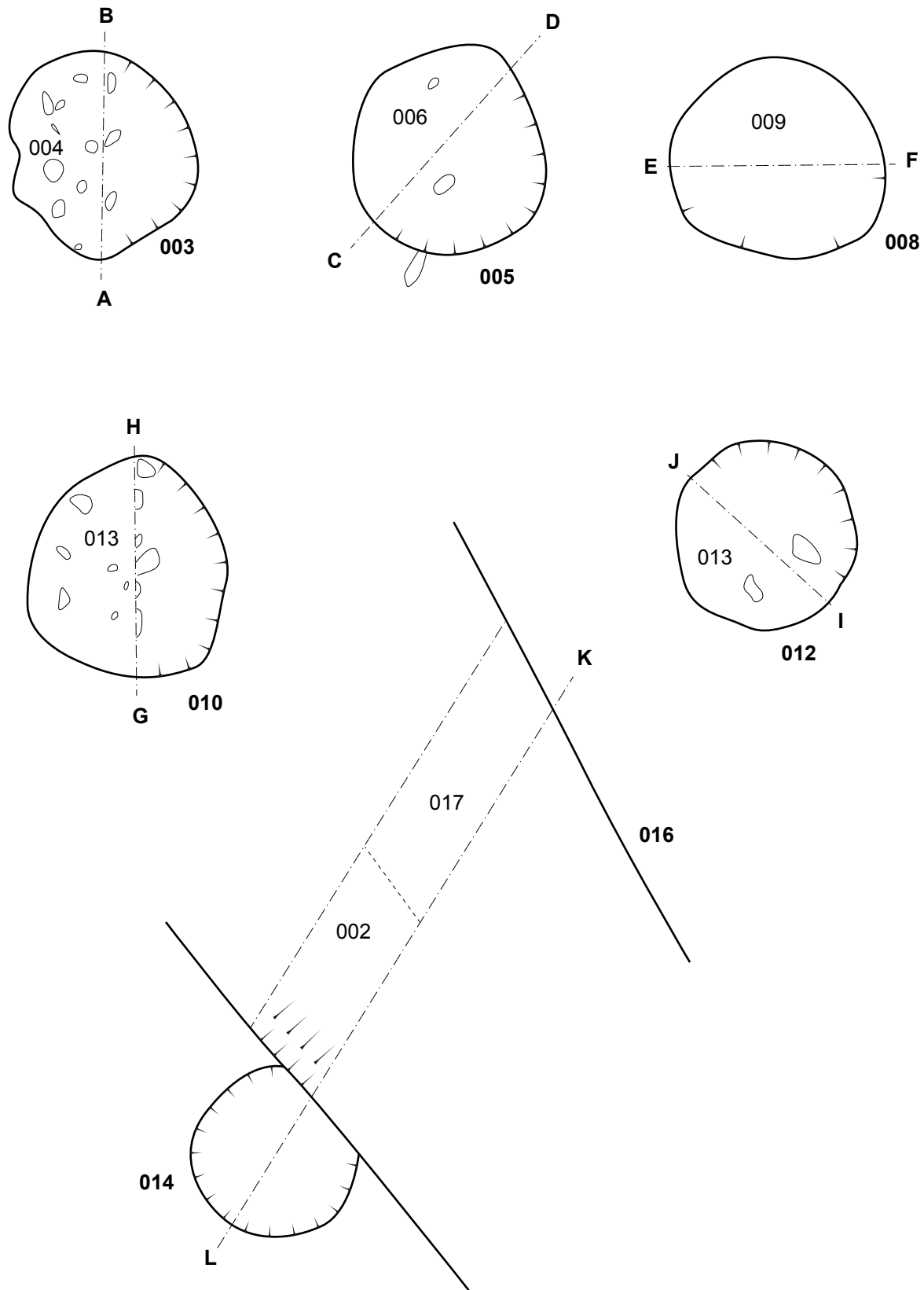
Key:


-  Scheduled Ancient Monument
-  Listed Building
-  Ancient Woodland
-  Indicative Pipe Route
-  Indicative Route of Roman Road
-  Logie House
-  Indicative Watching Brief Area
-  Ladywell/Gairie Burn Crossing (NO3935 5174)

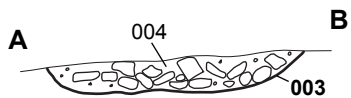


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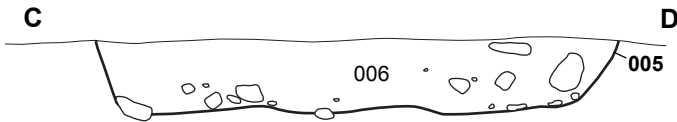
Fig. No:	1	Revision:	A
Title: Location Map			
Project: Kirriemuir WwTW			
Scale at A3: 1:6000			
Client: Scottish Water Solutions			
Drawn by:	Checked by:	Report No:	
GC	LW	1979	



Key:	Fig. No: 2	Revision: A	Client: Scottish Water Solutions	<div><div>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</div></div>
	Title: Plans of features			
	Project: Kirriemuir WwTW			
Scale at A4: 1:40				<div>Drawn by: GC</div> <div>Checked: LW</div> <div>Report No: 1979</div>



East-facing section of pit 003



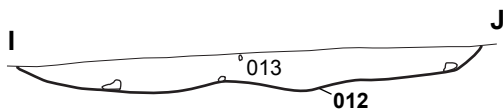
South-east-facing section of pit 005



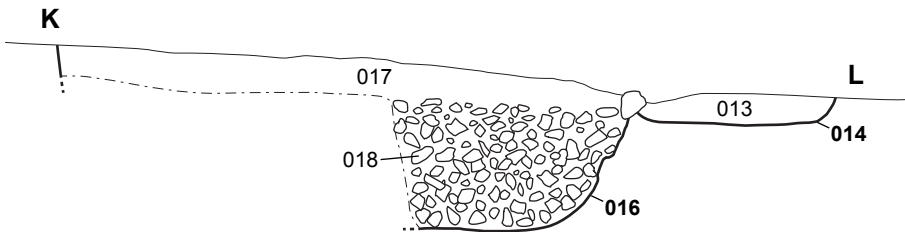
South-facing section of pit 008



East-facing section of pit 010



North-east-facing section of pit 012



North-west-facing section of pits 016, 014

Key:

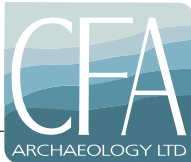
Fig. No: 3 Revision: A Client: Scottish Water Solutions

Title:

Project:

Kirriemuir WwTW

Scale at A4:
1:20



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Fig 4 - Pit 003, east-facing section



Fig 5 - Pit 010, east-facing section



Fig 6 - Oblique shot of pit 014 and field drain 016

Key:



Fig. No:	4-6	Revision:	A	Client:	Scottish Water Solutions
Title:					
Project:					
Kirriemuir WwTW					



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