CFA Archaeology Ltd

archaeological consultants

Advice on Archaeology & Planning

Environmental Impact Assessment

Interpretation, Design & Display

Finds/ Environmental Analysis

Field Evaluation & Excavation

Historic Building Recording

Site & Landscape Survey

Geophysical Survey

North Third Reservoir
Mini Hydro Scheme,
Stirling

Archaeological Metal Detecting Survey
Report no. 3135

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North Third Reservoir
Mini Hydro Scheme,
Stirling

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CONTENTS

Appendices

Illustration (bound at rear)

1. INTRODUCTION

1.1 General

This report presents the results of an archaeological metal detector survey undertaken by CFA Archaeology Ltd (CFA) in February 2014 on land between Murrayshall Farm and the Bannock Burn, Stirling (Fig. 1). The work was commissioned by Scottish Water. Scottish Water intend to utilise the redundant reservoir and other assets at North Third Reservoir, near Stirling for a mini hydro scheme, which will involve the construction of a new pipeline and power house on the north side of the unclassified road running adjacent to the Bannock Burn near Murrayshall Farm.

The Stirling Council Archaeologist requested a metal detector survey be carried out prior to construction and a monitored strip be carried out during all ground breaking works associated with the development.

A Written Scheme of Investigation (WSI), dated 01 May 2013, was prepared by CFA and approved by the Stirling Council Archaeologist.

This report describes the results of the metal detector survey and scanning during excavation of Trial Holes, which took place in February 2014.

1.2 Background

The new pipeline and power house lie in a landscape containing evidence for later prehistoric settlement. The dun known as Murrayshall Dun, is a Scheduled Monument and lies to the north of the working area. The Scheduled Monument known as Wester Craigend Dun lies 300m to the south of the Bannock Burn and thus lies well away from the working area. A further Scheduled Monument, Castlehill Hut Circle, lies further to the north of the working area. Other prehistoric sites survive in the vicinity.

1.3 Aims and Objectives

The objectives of the programmes of archaeological works were:

1. To conduct a metal detector survey (MDS) across the proposed development area, in order to detect and recover artefacts of archaeological or historical origins.

2. To metal detect the topsoil from machine dug Trial Holes and recover artefacts of archaeological or historical origin.

3. To produce a report on the results of the fieldwork.

A further programme of works will take place during the construction of the pipeline and this will:

1. Protect the Scheduled Monument through its demarcation with an appropriate buffer zone.

2. Conduct an appropriate programme of archaeological investigation (monitored strip) to monitor all groundbreaking works for the construction of the hydro scheme, to ensure works are cleared of topsoil and other modern overburden to identify either undisturbed natural subsoil or archaeological features (whichever comes first).
3. Mitigate the effects of construction on any archaeological deposits or features identified through excavation and recording.

1.3 Weather Conditions

Cold, overcast and long periods of heavy showers and hail prevailed over the three days of the works.

2. WORKING METHODS

2.1 Metal detecting Survey

CFA staff carried out the metal detector survey over the footprint of the development. A 30m wide wayleave centred on the route of the pipeline, as pegged out by an engineer from the contractors, was divided into 20m long grids each of which was divided into 2m wide transects. These were detected systematically to ensure that the whole area was covered.

No discrimination was set on the equipment. The positions of the grids were recorded using industry-standard surveying equipment.

All metal finds were retained for recording by a finds specialist. All finds were bagged according to which block and transect they came from.

2.2 Trial Holes

The twenty-three Trial Holes were machine dug by a 13 ton 360° machine using a 1.2m wide toothed bucket to a target depth of 1.7m, although underlying geology meant that a number of the Trial Holes were shallower.

The topsoil from the Trial Holes was separated from the subsoil and was metal detected. No discrimination was set on the equipment.

The locations of the Trial Holes were recorded by using industry-standard surveying equipment.

3. RESULTS

3.1 Metal Detector Survey

The metal detecting survey resulted in the recovery of 2 iron and 1 lead object. Due to contemporary land use and the proximity of the unclassified road, numerous modern objects such as tin cans, lengths of barbed wire, fence staples and shotgun cartridges were also recovered and none of these were retained.

The iron finds were nails, square in profile. The lead object is a musketball. All the metal detected finds are probably post-medieval or modern in date and are the result of farming and hunting (Fig. 2b).

An area approximately 20m by 80m to the south of Murrayshall Farm Dun was not subject to the metal detector survey or trial holes as the area and the surroundings of the Dun contained livestock, namely pigs (Fig. 2b).

3.2 Trial Holes

Twenty-three Trial Holes were excavated (Fig. 2a & 2b), each measuring 1.2m by 2m, and dug down to a maximum death of 1.7m (Fig. 4). However, underlying bedrock meant that some of the pits were as shallow as 0.1m. The topsoil varied across the site from 0.1m to 0.9m and was kept separate from the underlying geology and metal detected. No artefacts were recovered from this process.

4. CONCLUSIONS

The materials recovered from the metal detector survey are post-medieval or modern in date. This reflects the historical land use of the area. Cartographic evidence shows land surrounding the metal detector area has been farmed and used for industry from at least the early 19th century. The now abandoned Castlehill Farm, (NS79SE 205), to the north-east of Murrayshall Farm, appears on the First Edition map by The Ordnance Survey, (1865). Also to the immediate south of the metal detecting area across the Bannock Burn are the remains of the early 19th century Craigend Lime Works, (NS79SE 166).

No further work is recommended.

The project archive, comprising all CFA record sheets, maps and reports will be deposited with the National Monuments Record of Scotland (NMRS). A summary statement of the results of this programme of work will submitted for publication in *Discovery and Excavation in Scotland* 2014.

APPENDIX 1: Photographic Register

Photo Number	Contexts/Description	Taken From
1	West end of site looking east showing boggy ground	W
2	Grid C looking east showing gorse bushes	W
3	Grid E showing pipeline markers and dense vegetation	W
4	TH2 post ex	W
5	TH3 post ex	W
6	TH4 post ex	W
7	TH5 post ex	W
8	TH6 post ex	W
9	TH7 post ex	W
10	TH8 post ex	E
11	TH9 post ex	W
12	TH10 post ex	W
13	TH11 post ex	W
14	TH12 post ex	W
15	TH13 post ex	W
16	TH14 post ex	E
17	TH15 post ex	W
18	TH16 post ex	W
19	TH17 post ex	W
20	View of dense vegetation and sloping topography in Grid P	W
21	TH18 post ex	E
22	TH19 post ex	W
23	TH20 post ex	W
24	TH21 post ex	W
25	TH22 post ex	W
26	TH23 post ex	W

APPENDIX 2: Finds Register

Find type	No.	Notes	Spot date
Musketball	1	Flattened face, 28mm diameter	Post medieval/Modern
Square nail	2	69mm x 17mm	Modern
Square nail	3	52mm x 4mm	Modern

APPENDIX 3: Discovery and Excavation in Scotland Entry

LOCAL AUTHORITY:	City of Stirling
PROJECT TITLE/SITE NAME:	North Third Reservoir Mini Hydro Scheme, Stirling
PROJECT CODE:	NOTR
PARISH:	St Ninians
NAME OF CONTRIBUTOR:	Graeme Carruthers
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Metal Detecting Survey
NMRS NO(S):	N/A
SITE/MONUMENT TYPE(S):	N/A
SIGNIFICANT FINDS:	N/A
NGR (2 letters, 8 or 10 figures)	NT 28933 70940
START DATE (this season)	February 2014
END DATE (this season)	February 2014
PREVIOUS WORK (incl. *DES* ref.)	N/A
MAIN (NARRATIVE) DESCRIPTION:	This report presents the results of an archaeological metal detector survey by CFA Archaeology Ltd in February 2014 on land between Murrayshall Farm and the Bannock Burn, Stirling. The materials recovered from the metal detector survey are post medieval or modern.
PROPOSED FUTURE WORK:	N/A
CAPTION(S) FOR ILLUSTRS:	N/A
SPONSOR OR FUNDING BODY:	Scottish Water
ADDRESS OF MAIN CONTRIBUTOR:	CFA Archaeology Ltd, Old Engine House, Eskmills Park, Musselburgh, EH21 7PQ
EMAIL ADDRESS:	cfa@cfa-arcaheology.co.uk
ARCHIVE LOCATION (intended/deposited)	NMRS Stirling Council SMR

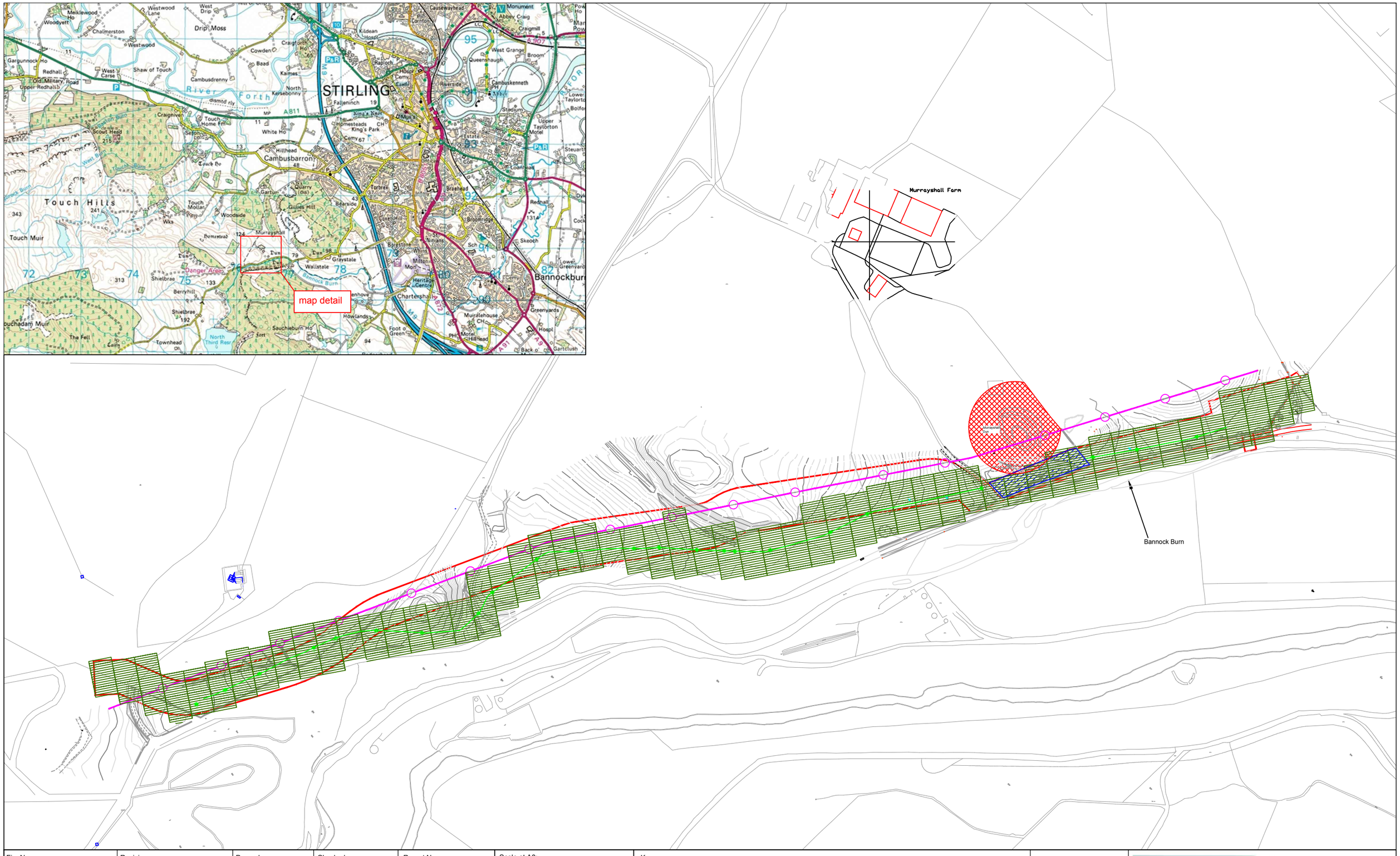

Fig. No:	Revision:	Drawn by:	Checked:	Report No:	Scale at A3:
1	A	GC	LW	3135	1:3000 @ A3

Title: Site location and location of wayleave, marked out pipeline and Test Holes

Project: North Third Reservoir Mini Hydro Scheme,Stirling, Archaeological Metal Detecting Survey

Client: Scottish Water

Key:
- Overhead powerline
- Original wayleave
- Pegged out line of pipe
- Test Holes
- Find spots
- Not surveyed
- Scheduled Ancient Monument Limit

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Fig. 2a

0 100m

Murrayshall Dun

Bannock Burn

Fig. 2b

0 100m

Fig. No:	Revision:	Drawn by:	Checked:	Report No:	Scale at A3:
2a & b	A	GC	LW	3135	1:1250 @ A3

Title:
Location of wayleave, marked out pipeline,Test Holes and Small Find locations

Project:
North Third Reservoir Mini Hydro Scheme,Stirling, Archaeological Metal Detecting Survey

Client:
Scottish Water

Key:
- Overhead powerline
- Original wayleave
- Pegged out line of pipe
- Test Holes
- Find spots
- Not surveyed
- Scheduled Ancient Monument Limit

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Fig. 3 View of western extent of area looking east showing vegetation cover of thick grass, gorse bushes and clumps of trees

Fig. 4 Post excavation shot of Trial Hole 2 showing topsoil depth and water table

Fig. No: 3-4		Revision: A	Project: North Third Reservoir Mini Hydro Scheme, Stirling, Archaeological Metal Detecting Survey	
Drawn by: GC	Checked: LW	Report No: 3135	Client: Scottish Water	

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