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North Third Reservoir, Mini Hydro Scheme, Stirling

Archaeological Watching Brief

Report No. 3365

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

**North Third Reservoir,
Mini Hydro Scheme,
Stirling**

Archaeological Watching Brief

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1. INTRODUCTION

1.1 General

This report presents the results of a watching brief undertaken by CFA Archaeology Ltd (CFA) between September 2015 and October 2015 during construction of a new pipeline and powerhouse associated with the North Third Reservoir mini hydro scheme. The work took place north of an unclassified road running adjacent to the Bannock Burn, near Murrayshall Farm, City of Stirling. The work was conducted between NGR: NS 76876 90860 and NGR: NS 75841 90568 (Fig. 1). The work was commissioned by Scottish Water.

A Written Scheme of Investigation (WSI), dated 01 May 2013, was produced by CFA and approved by the Stirling Council Archaeologist. The Stirling Council Archaeologist requested a metal detector survey to be carried out prior to the construction and a monitored strip carried out during all ground breaking works associated with the development. The metal detector survey and monitored test-pitting was reported under separate cover (Carruthers 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 (also known as Castlehill Dun), is a Scheduled Monument (NMRS No. NS79SE 50) and lies to the north of the working area. The Scheduled Monument known as Wester Craigend Dun (also known as Sauchie Craig) (NMRS: NS79SE 51) lies 300m to the south of the Bannock Burn, therefore, well out with the working area. A further Scheduled Monument, Castlehill Wood Dun (NMRS: NS79SE 49) lies approximately 1.4km to the west of Murrayshall Farm.

1.3 Objectives

The objectives of the programme of works were:

- To conduct a photographic survey of the baseline condition of the Murrayshall Dun.
- To protect the Scheduled Monument through its demarcation with an appropriate buffer zone.
- To conduct an appropriate programme of archaeological investigation (monitored strip) to monitor all groundbreaking works for the construction of the hydro scheme.
- To mitigate the effects of construction on any archaeological deposits or features identified through excavation and recording.
- To produce a report on the results of the field work.

2. WORKING METHODS

2.1 General

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

2.2 Photographic Survey

A photographic survey of Murrayshall Dun was carried out ahead of any ground works within the vicinity. The Dun was recorded from all directions and the interior was photographed in order to record the current state of preservation (Figs. 2-4).

2.3 Site Demarcation

Initially, an orange netlon fence was planned to be erected along the southern side of Murrayshall Dun to protect the Scheduled Monument. However, this was not possible as there were pigs being housed within the vicinity of the monument and the fencing would have posed a danger to the livestock. As a result, the monument was demarcated using canes and bunting. However, these were similarly unsuitable and were constantly knocked over by the livestock. A more substantial fence post and wire fence, demarcating the working area, was erected and all work was confined to the southern side of the fencing (Fig. 5), protecting it from accidental damage and spoil storage.

2.4 Monitored Strip

A watching brief was carried out during all ground-breaking works associated with the excavation of the pipe trench and power house. Topsoil was removed using a mechanical excavator equipped with a flat bladed ditching bucket. All groundbreaking work was carried out under constant archaeological supervision.

During the initial strip of vegetation and topsoil, the natural was not reached due to the depth of topsoil and subsoil (Fig. 6). The natural was only exposed when excavating the actual trench, which measured 1.8m wide by 1.5m deep.

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

3. ARCHAEOLOGICAL RESULTS

Number in bold in the following text refer to contexts, a full list of which is contained in Appendix 2.

Across the development area the soils varied but generally consisted of dark brown silty topsoil (**001**) overlying compact, reddish-brown silty clays, sandy clays or sandy silts (**003**).

The entire penstock pipeline route was monitored during initial stripping of vegetation and topsoil down to subsoil. The monitoring of the pipe trench down to natural was curtailed following agreement with the Stirling Council Archaeology Service once the pipeline route had passed by Murrayshall Dun.

The foundations for the power house were also monitored.

No features, deposits or artefacts of archaeological significance were identified.

The works did not impact upon the Scheduled Monument of Murrayshall Dun.

4. CONCLUSION

A watching brief was carried out during excavation of a pipe trench and power house foundations associated with the North Third Reservoir mini hydro scheme. No features, deposits or artefacts of archaeological significance were identified.

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

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 Stirling Council Sites and Monuments Record.

5. REFERENCES

Carruthers, G 2014 *North Third Reservoir, Mini Hydro Scheme, Stirling. Archaeological Metal Detector Survey*. CFA Archaeology Ltd Report no. 3135.

APPENDIX 1: Digital Photographic Register

Shot	Description	From	Conditions
1-2	Start point (c. NS 76876 90860), pre-strip	W and E	Overcast
3	Northern half of Murrayshall Dun	W	Overcast
4	Southern half of Murrayshall Dun	W	Overcast
5	General shot from the west showing Murrayshall Dun	W	Overcast
6	South-west-facing side of Dun	SW	Overcast
7	South-facing side of Dun	S	Overcast
8	Showing fencing demarcating Dun on southern side	SW	Overcast
9	South-facing side of Dun, taken from fenceline. Shows distance from Dun	S	Overcast
10	East-facing side of the Dun	E	Overcast
11-12	North-east-facing side of Dun	NE	Overcast
13-15	North-facing side of Dun from E->W	N	Overcast
16	Interior/summit of the Dun showing denuded state and vegetation	SE	Overcast
17	Tumble of stones, possible remains of revetment wall	NW	Overcast
18	As above	SE	Overcast
19	Shows topsoil strip only revealing subsoil	SW	Sunny
20	Demolition of dry stone dyke	NW	Overcast
21	Shot of stripped area to west of access track leading to Murrayshall farm	W	Overcast
22	Post-stripping shot showing depth of topsoil strip	E	Overcast
23	Working shot as removing vegetation and trees	W	Overcast
24	Working shot, post-stripping	W	Light rain

APPENDIX 2: Context Register

Context No.	Fill of	Description
001		Mid-brown silty topsoil
002		Mid-brown/reddish subsoil
003		Reddish brown natural

APPENDIX 3: Discovery and Excavation in Scotland Entry

LOCAL AUTHORITY:	City of Stirling
PROJECT TITLE/SITE NAME:	North Third Mini Hydro Scheme, Stirling
PROJECT CODE:	NOTR
PARISH:	St. Ninians
NAME OF CONTRIBUTOR:	Gary Savory
NAME OF ORGANISATION:	CFA Archaeology Ltd
TYPE(S) OF PROJECT:	Monitored Strip
NMRS NO(S):	NS79SE 50
SITE/MONUMENT TYPE(S):	Dun
SIGNIFICANT FINDS:	None
NGR (2 letters, 6 figures)	NS 75841 90568 – NS 76876 90860
START DATE (this season)	February 2014
END DATE (this season)	October 2015
PREVIOUS WORK (incl. DES ref.)	
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	An archaeological metal detector survey followed by a monitored strip was undertaken by CFA Archaeology Ltd between September 2015 and October 2015 on land adjacent to the Bannock Burn at Murrayshall Farm, Stirling. The materials recovered from the metal detector survey are post medieval or modern. No archaeological features were identified during the watching brief.
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	None
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-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	Archive to be deposited in NMRS. Stirling Council SMR

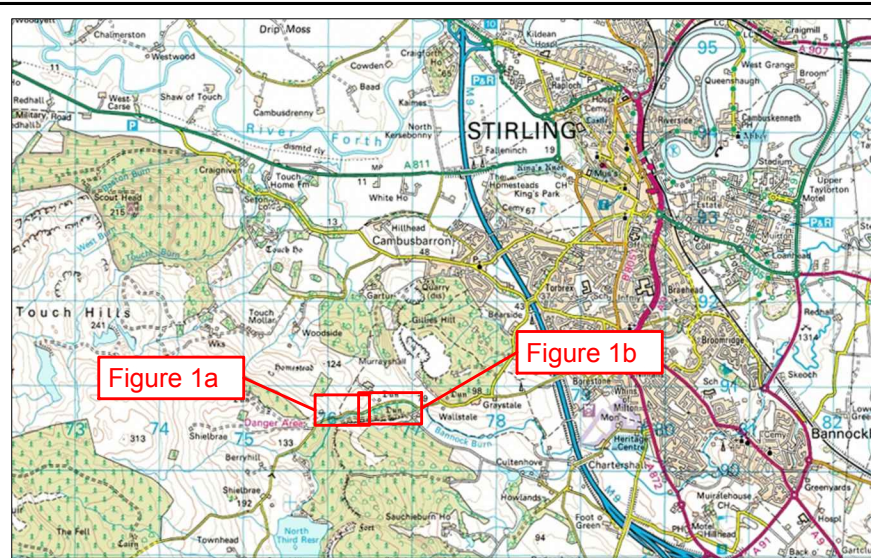





Figure 1a

Figure 1b

Key:

-  Working Area
-  Route of Penstock
-  Scheduled Monument

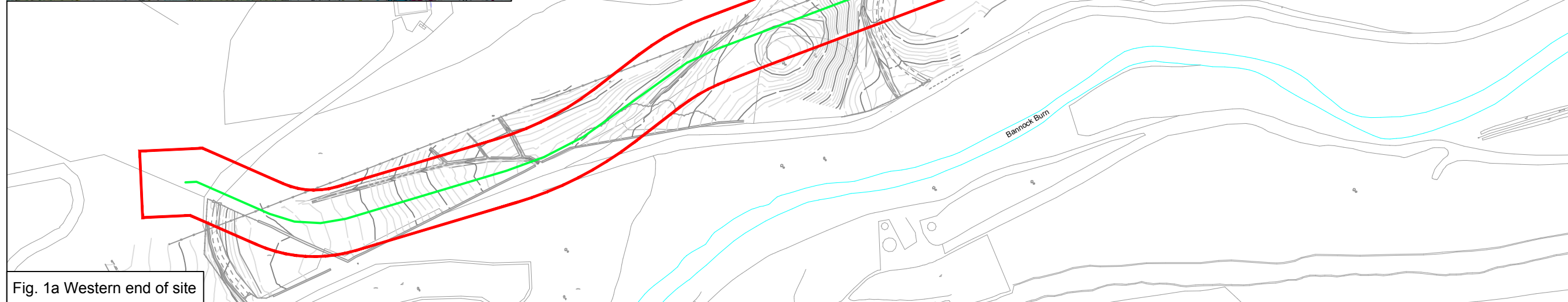


Fig. 1a Western end of site

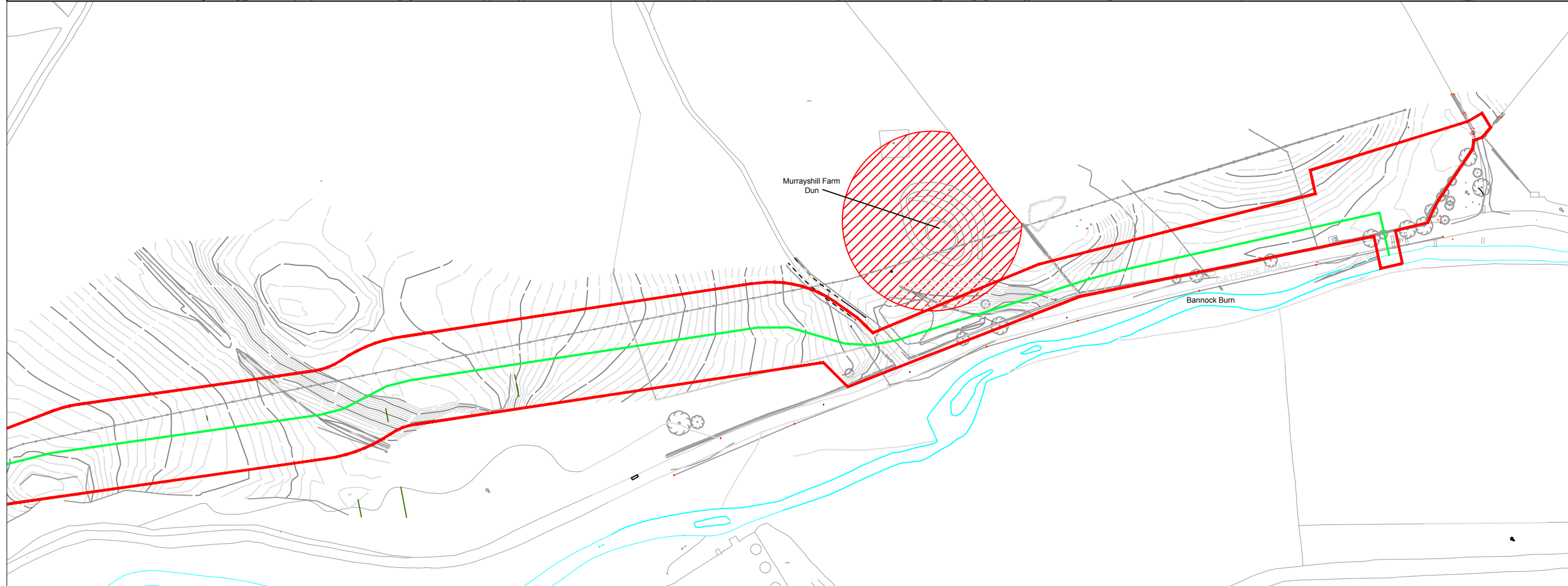


Fig. 1b Eastern end of site

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Fig. No: **1a-b** Report No: **3365**

Title:
Site location and site plan

Project:
North Third Reservoir, Mini Hydro Scheme, Stirling, Monitored Strip

Client:
Scottish Water

Scale at A3:
1:2000

Drawn by:	Checked:	Date:
GC	SW	03/12/2015

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Fig. 2 Murrayshall Dun from the east



Fig. 3 Murayshall Dun from the north



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	Client: Scottish Water				
Project: North Third Reservoir, Mini Hydro Scheme, Stirling, Monitored Strip					



Fig. 4 Interior/summit of the Dun showing denuded state of vegetation, from the south-east



Fig. 5 Wayleave fence line acting as demarcation and relative distance from Murrayshall Dun



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Fig. 6 Initial topsoil strip exposed to subsoil depth



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Title:	Fig. 6	Report: 3365	Drawn: GC	CKD: SW	Date: 03/12/15
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Project: North Third Reservoir, Mini Hydro Scheme, Stirling, Monitored Strip					