

Upper Berryhill, Kirkwall and St Ola, Orkney



Archaeological Watching Brief: Data Structure Report

February 2013



UPPER BERRYHILL BATTERY

KIRKWALL, ORKNEY

KW15 1SF

ARCHAEOLOGICAL WATCHING BRIEF: DATA STRUCTURE REPORT

PROJECT No: 384

PROJECT CODE: N/A

ORCA

Orkney College UHI
East Road
Kirkwall
Orkney College UHI
KW15 1LX

PROJECT MANAGER: Nick Card MIfA FSA Scot

REPORT AUTHOR: Andrew Hollinrake

REPORT FIGURES: Andrew Hollinrake

CLIENT: DAVID LEASK

This document has been prepared in accordance with ORCA standard operating Procedures and IFA standards	
Authorised for Distribution by: Nick Card	Date: March 2013

EXECUTIVE SUMMARY

This report sets out the results of a watching brief undertaken by Orkney Research Centre for Archaeology (ORCA) at Upper Berryhill Battery, Kirkwall, Orkney KW15 1UE.

Following the recommendations by the Local Authority Planning Archaeologist, intrusive works were monitored near the remains of the World War II anti-aircraft battery at Upper Berryhill, Kirkwall, Orkney KW1 1SF on 7 November 2012. These works were to excavate two c 5.5m square areas and a narrow trench for the installation of bases for two new wind turbines and associated cables.

During the monitoring there were no features seen which could be positively identified as part of the WWII battery. There were no finds of archaeological significance.

CONTENTS

1	Introduction.....	4
2	Site Location	4
3	Archaeological Background	4
4	Fieldwork Aims and Objectives.....	6
5	Fieldwork Methodology.....	6
6	Fieldwork Results	8
6.1	Area 1	8
6.2	Area 2	9
6.3	Area 3	9
7	Discussion	10
8	Conclusions and recommendations	11
9	Publication and Archiving	12
10	Acknowledgements.....	12
11	Bibliography/ Sources consulted	12
12	NMRS OASIS Form.....	14
13	Appendix 1: Context Register	17
14	Appendix 2 Photographic Register.....	18

FIGURES

Figure 1. Site location.....	15
Figure 2. Watching brief location.....	16

PLATES

Plate 1: Area 1 after excavation, looking north-east.....	9
Plate 2: Area 2 after excavation, looking north-east.....	10
Plate 3: Area 3 after excavation, looking north-east.....	11

1 INTRODUCTION

This report forms the Data Structure Report for an archaeological watching brief carried out at (hereafter known as 'the site').

The works monitored were:

- the stripping of topsoil from two areas both measuring 5.5 x 5.5m,
- the stripping of topsoil to create a shallow trench measuring c 110m by 5m into which cables were to be laid.

This report has been prepared in accordance with the Standards and guidance specified by the Institute for Archaeologists (IfA 2001, 2008).

2 SITE LOCATION

The site (NMRS No. HY40NW 16, centred HY 41235 08495) is located c 4km to the southwest of Kirkwall on high ground, c 97m OD, overlooking part of Kirkwall and Scapa Bay.

The field in which the WWII battery was sited is well-cultivated land, part of a regularly divided system of enclosed fields. Upper Berryhill lies at the north-western limit of cultivated land, while to the north, the ground is boggy, uncultivated, heathery moorland sloping up towards the summit of Keelylang Hill (221m OD).

The ground is fairly level around the gun emplacements themselves, but slopes down gently to the south, towards the remains of hut bases believed to be the remains of an accommodation camp for the battery at the south edge of the square field.

3 ARCHAEOLOGICAL BACKGROUND

Orkney is home to several internationally important prehistoric sites such as those within *The Heart of Neolithic Orkney*, a designated UNESCO World Heritage Site and there is an abundance of evidence indicating the island's focus for Neolithic,

Bronze and Iron Age and possibly Mesolithic activity. However, there is no recorded evidence for prehistoric activity in the immediate vicinity of the site itself.

The 1st Edition (surveyed 1882) and 2nd Edition Ordnance Survey (1902) both show a small, roofed building with an adjoining small enclosure close to or on the site of the partly buried concrete shelter at the centre of the WWII battery. Presumably a croft or dwelling, it is marked as 'Mid Berryhill', and whatever remained of the structure appears to have been completely destroyed during the construction of the WWII site.

The site for the WWII anti-aircraft battery (given the code name 'M5') was chosen in late 1939 as part of a scheme of defences known as 'Q' Plan. The battery was ready to fire in 1940 and was one of a group of heavy anti-aircraft batteries installed around Scapa Flow to defend the Royal Navy's Home Fleet, which had made the Flow its main base.

The battery was equipped with four 3.7-inch calibre anti-aircraft guns, while just to the northwest a Mk II gun-laying radar unit was installed (NMRS No. HY40NW 16.01, NGR HY 41072 08528).

The network of anti-aircraft batteries was one of the most important elements of Orkney's defences during WWII, creating what became known as the 'Scapa Barrage', the simultaneous firing of all the batteries to create a layer of exploding shells through which any attacking bomber would have to pass in order to attack the ships of the Fleet. This proved very effective and in the face of heavy losses, the Luftwaffe did not carry out any significantly concentrated bombing raids beyond the summer of 1940.

The site was visited and surveyed by RCAHMS in 1999 and 2000. At that time, it was noted that the eroded earth banks of four decoy emplacements were visible to the west of the battery, also visible on WWII RAF vertical air photographs (NLA/16, 905-907, flown 22 June 1941) and post-war RAF vertical air photographs (CPE/Scot/UK 188, 4168-4169, flown 10 October 1946).

The battery continued as an active defensive site throughout the war, although the exact date of decommissioning has not been discovered as part of the research for this report. The battery was most likely put into a state of 'care and maintenance' either just before the end of the war in Europe, or very soon afterwards. It is not recorded as being used by the local Territorial Army unit at any stage after the war, and most likely the guns were 'returned to Ordnance' in 1945, that is, to the Royal Arsenal, Woolwich.

4 FIELDWORK AIMS AND OBJECTIVES

Following the recommendations of the Local Authority Planning Archaeologist, a watching brief was undertaken on the site in order to record any deposits or features of archaeological significance. The most likely features to be encountered were those associated with the World War II anti-aircraft battery. This archaeological monitoring was intended to mitigate the impact of the proposed development on potential archaeological features present, and if destruction of any wartime remains was unavoidable, to record them in as much detail as was appropriate and feasible.

5 FIELDWORK METHODOLOGY

All works were carried out in accordance with the Written Scheme of Investigation for the works (ORCA 2012) and the ORCA Standard operating procedures as set out in the ORCA fieldwork Manual (*in prep*), as follows.

1. Properly arranged, a watching brief will cause minimal disruption to site works and will take place within agreed constraints. Watching briefs are not recommended in circumstances where important or complex archaeological remains are liable to be discovered, resulting in a risk of conflict between the need to record archaeological finds and the need to allow building works to proceed.
2. Initial location of areas to be monitored in the watching brief will be monitored by ORCA staff.
3. Where a machine is used, a flat-bladed bucket will be required to excavate non-archaeological deposits.
4. In areas of archaeological interest the excavation and removal of deposits will proceed according to the reasonable advice and guidance given by the attending archaeologist.
5. Archaeologists will be allowed reasonable access in relevant areas of groundworks, so that deposits can be examined and recorded.
6. Provision will be made, at the earliest stage of development programming, for specified blocks of time to be made available for unrestricted archaeological access to areas of groundworks.
7. In addition to the excavation of man-made deposits, some assessment of any exposed 'naturally deposited' levels will be necessary, especially if these are

organically preserved and laid down within archaeological timescales; for example alluvial deposits.

8. If deep cut features are found, such as pits and wells, they may need to be excavated to a greater depth than anticipated in the construction works, provided this is consistent with site safety.
9. Any finds of human remains will be left *in situ*, covered and protected and the client, the Regional Archaeologist and the police informed immediately (it is a legal requirement to inform the local police). The Historic Scotland guidance *The Treatment of Human Remains in Archaeology* will be followed. If removal is essential it can only take place under appropriate Faculty jurisdiction, Department for Constitutional Affairs, Coroner's Division licence, environmental health regulations, coroner's permission, and if appropriate, in compliance with the Disused Burial Grounds (Amendment) Act 1981 or other local Act.. Prior written notice will also be given to the local planning authority. It will be necessary to ensure that adequate security is provided.
10. Where archaeological remains are to be preserved *in situ* they will be adequately protected from deterioration. Normally this involves covering or wrapping the deposits and features in a geo-textile such as Terram and sealing this with a layer of sand or other suitable soft materials.
11. An Archaeological Project Officer will monitor the work and record any archaeological remains revealed in the appropriate manner (plans, sections, field notes and/or pro-forma 'context sheets'). Observations will be transformed onto the Ordnance Survey National Grid Projection and heights measured in metres above Ordnance Datum, by direct measurement from verified Ordnance Survey control points. Masonry will be photographed in colour digital media.
12. If significant archaeological deposits survive in any area of the proposed groundworks, the contractors will allow the archaeologist(s) to record deposits as required. The work will be recorded using the standard excavation recording systems, such as pro forma record sheets, notebooks, scale drawings and photography (comprising digital photographs, plus slide and monochrome film if significant archaeological deposits are encountered) and related to the national Ordnance Survey grid.
13. Monitoring will comply with national planning policy set out in *Scottish Planning Policy* (SPP) 2010, with the companion Planning Advice Note (PAN 2/2011): *Planning and Archaeology, The Ancient Monuments and Archaeological Areas Act 1979* and the *Scottish Historic Environment Policy* 2009.

14. Any significant developments, especially those likely to cause delay or special requirements (e.g. discovery of human remains, artefacts requiring conservation etc) will be communicated immediately both to the client and Historic Scotland.

6 FIELDWORK RESULTS

6.1 AREA 1

This first area to be excavated lay the closest to the existing WWII concrete remains. A square area 5.5 x 5.5m was marked out with its southwest corner 13.70m northwest of the northeast corner of the concrete command post. The topsoil was stripped to reveal the glacial till. Further excavation was required below this depth to allow the concrete foundations for turbine bases to be installed, but monitoring beyond this depth was not necessary.

Only turf and topsoil were encountered over stony clay till. The topsoil (**100**) was loose, mid to dark greyish brown silty, sandy clay with occasional small stones, with a minimum depth of 200mm and a maximum depth of 350mm. The glacial till (**101**) was very compact, stony orange-brown clay.



Plate 1: Area 1 after excavation, looking north-east

6.2 AREA 2

Area 2 was located 20.40m from the fence on the west side of the field, c 64.0m southwest from Area 1. This area was identical in shape and dimension to Area 1, and showed a similar profile, although with not quite the same depth of topsoil. Again, excavation was only monitored to the point where the undisturbed clay till was revealed.

The topsoil (**200**) was loose, mid to dark greyish brown silty, sandy clay with occasional small stones, a minimum depth of 150mm and a maximum depth of 250mm. The glacial till (**201**) was very compact, stony orange-brown clay.



Plate 2: Area 2 after excavation, looking north-east

6.3 AREA 3

A cable trench was excavated running from Area 1, to Area 2, then beyond to the southwest. Only the part of the trench connecting Areas 1 and 2 was monitored. Only until the upper surface of the glacial till was revealed.

The area of trench connecting Areas 1 & 2 was 64.0m in length and 0.5m wide. The maximum depth excavated was 350mm, although most of the trench was very shallow, only excavated to a depth of 150mm before reaching glacial till.

The topsoil profile was much as seen in Areas 1 and 2, but the ground surface was uneven, particularly towards the west end of the excavation. This area appeared to

have been disturbed in relatively recent times – that is, post-WWII – and this was confirmed by the landowner, who also pointed out that some waste material had been deposited here and in the general area of the field's northwest corner (*pers. comm.* D Harcus).

The topsoil (**300**) was loose, mid to dark greyish brown silty, sandy clay with occasional small stones, a few small sherds of white-glazed china, fragments of bottle glass and several (mostly ferric) metal fragments, with a minimum depth of 150mm and a maximum depth of 350mm. The glacial till (**301**) was compact, stony orange-brown clay.



Plate 3: Area 3 after excavation, looking north-east

7 DISCUSSION

Since no WWII remains or finds were encountered, there was no need for any detailed recording. The size of the areas exposed and their close proximity to the WWII battery were well-placed to reveal any surviving wartime features below ground level.

The uneven ground encountered towards the west end of Area 3 seems most likely to be a result of post-war activity, both ploughing and dumping of various materials, amongst which the metal fragments and china sherds were scattered. However, some of the low banks may have been remnants of the earthworks of the WWII decoy emplacements observed during the 1999 and 2000 RCAHMS visits.

The fate of the small dwelling or croft shown as 'Mid Berryhill' on the early Ordnance Surveys is not clear. There was no obvious sign of any remains but the glass, metal and china fragments could very well be associated with the former structure. It is also possible that material from the demolition of whatever was left of Mid Berryhill in 1939-40 may have been used to help create the defensive earthworks of the battery, including the banks either side of the entrance on the south side of the concrete command post, and the decoy emplacements on the west side of the battery.

8 CONCLUSIONS AND RECOMMENDATIONS

The preliminary desk-based assessment of the area showed that there were no sites of prehistoric date within the immediate vicinity, and so the potential for previously undisturbed prehistoric structures was not high, particularly when the likely disturbance caused by wartime activities is considered.

The initial assessment suggested that there was some potential for the discovery of remains of WWII date during the excavations, but there was nothing in the way of evidence below ground associated with the wartime structures, in stark contrast to the abundant evidence above ground.

The archaeological monitoring carried out during the works in the form of a watching brief presence during the excavation was a sufficient level of mitigation and provided adequate protection for the WWII battery. The conditions in which the watching brief were carried out were satisfactory, and would have allowed the identification of any significant remains should they have been uncovered.

The results of the watching brief have shown that there was little preservation of wartime remains in the areas exposed, but there is still a significant potential for important archaeological features to be present on site. No further archaeological work or presence on site is deemed necessary unless further intrusive groundbreaking works are to be carried out.

Given the lack of any significant archaeological remains being discovered a short report to Discovery and Excavation Scotland, as generated by the OASIS form, will suffice.

9 PUBLICATION AND ARCHIVING

Archive preparation and deposition will be undertaken with reference to the appropriate repository guidelines and standards, and, where necessary, the Museums and Galleries Commission (MGC) and the United Kingdom Institute for Conservation (UKIC) standards and guidelines. The project archive containing the original site records will be submitted to the RCAHMS or the Orkney SMR, as appropriate.

No materials were recovered from the investigation.

Findings will be submitted to the national record via the OASIS system (see Section 9), and a short report for Discovery and Excavation Scotland will be generated.

Information on the results of the report will be made public in digital form so as to be included in any further research into the archaeology, history and development of Orkney's wartime heritage.

10 ACKNOWLEDGEMENTS

The author would like to thank the client, Mr D Leask, and the landowner and excavator operator, Mr D Marcus, for their co-operation during the works.

11 BIBLIOGRAPHY/ SOURCES CONSULTED

Orkney Islands. World War One and Two Defences. A survey by John Guy. Volumes 1 & 2. Guy, J. 1993. Copy held at Orkney SMR.

Admiralty, and Ministry of Defence, Navy Department: Confidential Reference Books (CB Series): ADM 239/297 Scapa Flow: chart Z48 showing defences, 1943

Institute of Field Archaeologists (IFA), supplement 2001, *By-Laws, Standards and Policy Statements of the Institute of Field Archaeologists: Standards and guidance* □ *the collection, documentation conservation and research of archaeological materials*

Institute for Archaeologists 2008, *Standard and Guidance for Archaeological Watching Briefs* Consulted at:

http://www.archaeologists.net/sites/default/files/node-files/ifa_standards_watching.pdf 2012

ORCA in prep: Archaeological Site Manual

Orkney Local Development Plan 2004

Historic Scotland 2008 *Heart of Neolithic Orkney World Heritage Site Management Plan 2008-2013* Historic Scotland, Edinburgh

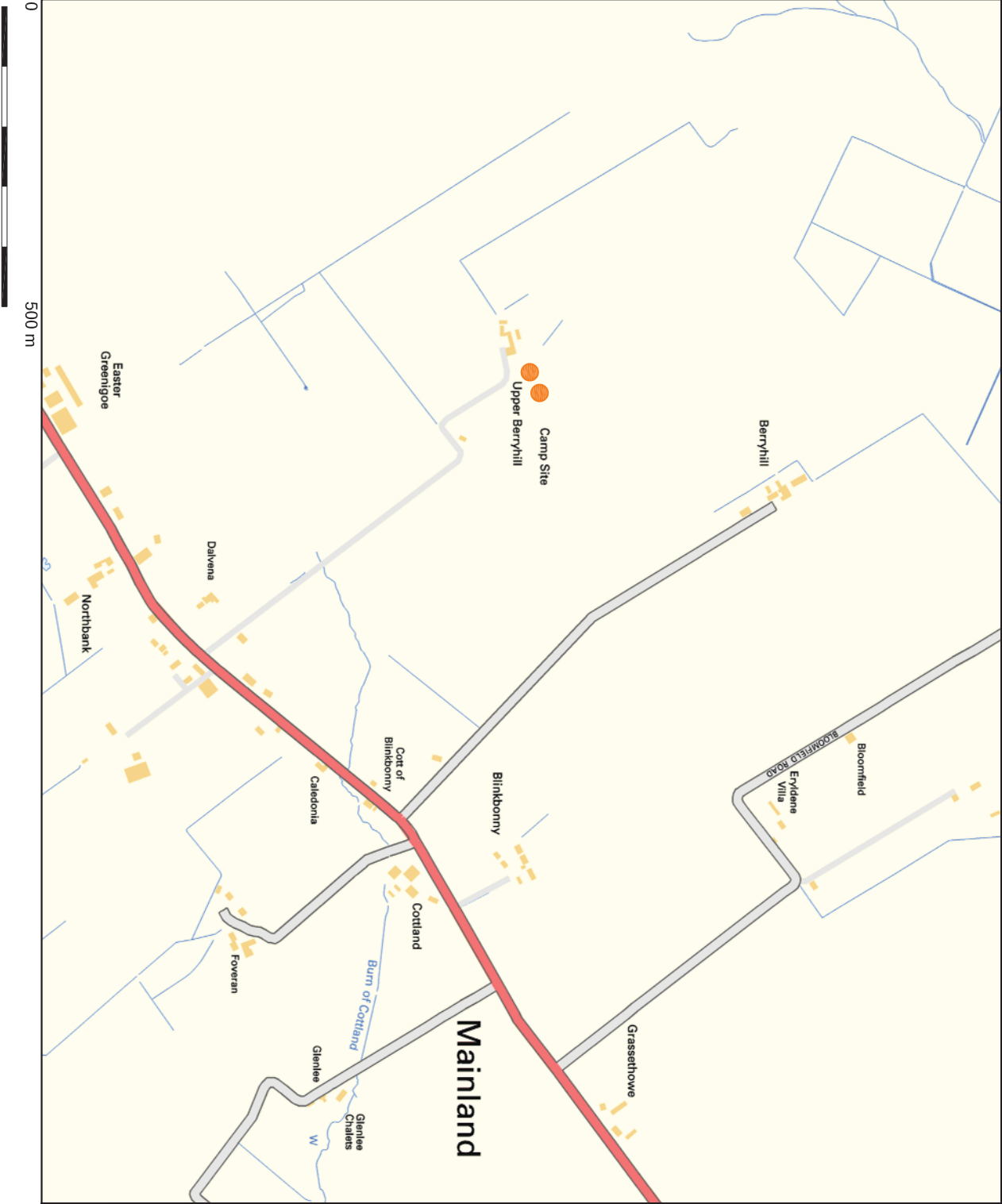
12 NMRS OASIS FORM

OASIS on line form at : <http://www.oasis.ac.uk/scotland/>



 Turbine location

Figure.1. Site location	
Project Name	Upper Berryhill
Project No.	384
Date	February 2013
Creator	LS
Scale	1:10000
ORCA, Orkney College, East Road, Kirkwall, KW15 1LX	
This contains OS OpenData map data © crown copyright/ database right and original survey data collected by ORCA 2013 ©	





OS Map data



ORCA Survey data



Watching brief areas

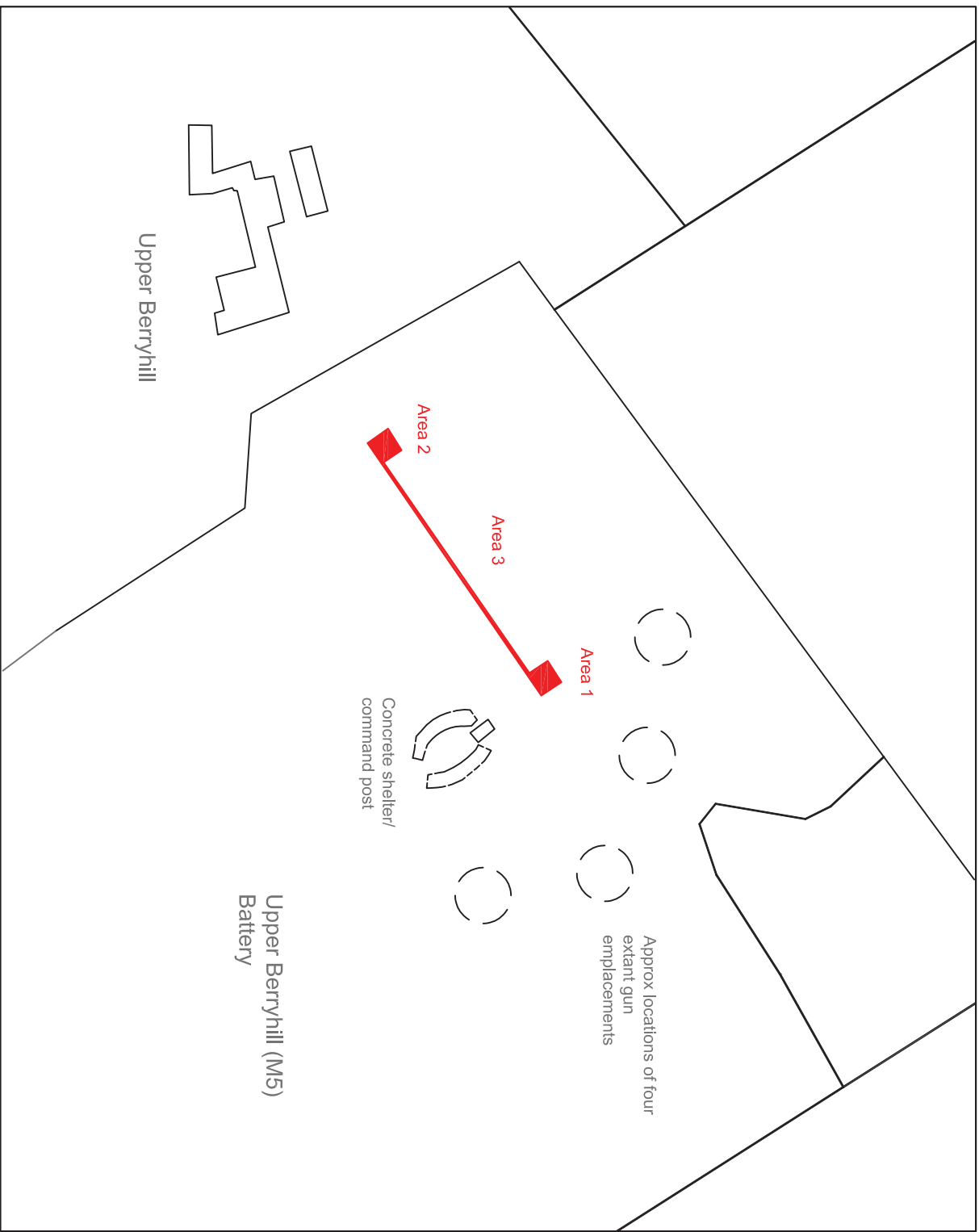


Figure 2. Watching brief location

Project Name	Upper Berryhill
Project No.	384
Date	February 2013
Creator	LS
Scale	1:1500
ORCA, Orkney College, East Road, Kirkwall, KW15 1LX	
This contains OS OpenData map data © crown copyright/ database right and original survey data collected by ORCA 2013 ©	

13 APPENDIX 1: CONTEXT REGISTER

Context	Site Subdivision	Type	Description
100	Area 1	Deposit	Topsoil. Loose, mid to dark greyish brown silty, sandy clay with occasional small stones, with a minimum depth of 200mm and a maximum depth of 350mm
101	Area 1	Deposit	Natural clay till. Very compact, stony orange-brown clay.
200	Area 2	Deposit	Topsoil. Loose, mid to dark greyish brown silty, sandy clay with occasional small stones, a minimum depth of 150mm and a maximum depth of 250mm.
201	Area 2	Deposit	Natural clay till. Very compact, stony orange-brown clay.
300	Area 3	Deposit	Topsoil. Loose, mid to dark greyish brown silty, sandy clay with occasional small stones, a few small sherds of white-glazed china, fragments of bottle glass and several (mostly ferric) metal fragments, with a minimum depth of 150mm and a maximum depth of 350mm.
301	Area 3	Deposit	Natural clay till. Very compact, stony orange-brown clay.

14 APPENDIX 2 PHOTOGRAPHIC REGISTER

Frame	Site Subdivision	Description	Direction of shot
1	Area 1	Area 1 after excavation	NE
2	Area 1	Area 1 after excavation	N
3	Area 1	Area 1 after excavation	W
4	Area 1/3	Area 1, SE end, after excavation, showing NE end of Area 3	SW
5	Area 3	Area 3, NE end, after excavation	SW
6	Area 2	Area 2 after excavation	NE
7	Area 2	Area 2 after excavation and general view	NE
8	Area 3	Area 3, SW end, after excavation	NE
9	Area 2	Area 3, after excavation	NNE
10	Area 1	Working shot, excavation of clay till in Area 1	E