



Consultancy - Desk-Based Assessments - Fieldwork - Surveys



Buildings - Post-Excavation - Research and Teaching - Specialised Services

Freelands Road, Ratho  
Data Structure Report  
Project 3113

**GUARD**



University  
of Glasgow

Glasgow University Archaeological Research Division

# Freelands Road, Ratho Data Structure Report

**On behalf of:** CALA Homes (East) Ltd

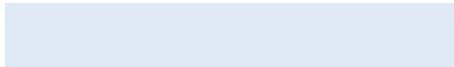
**NGR:** NT 1420 7105

**Project Number:** 3113

**Project Manager:** Ronan Toolis

**Report by:** Iraia Arabaolaza

**Illustrations:** Fiona Jackson & Gillian McSwan

**Approved by:** 

**Date:**  16/06/2010

*This document has been prepared in accordance with GUARD standard operating procedures.*

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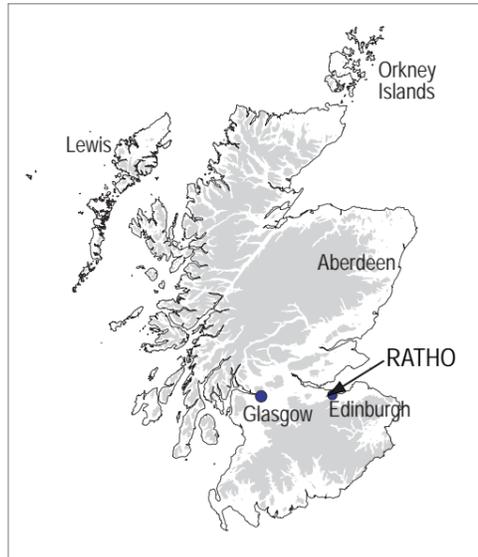
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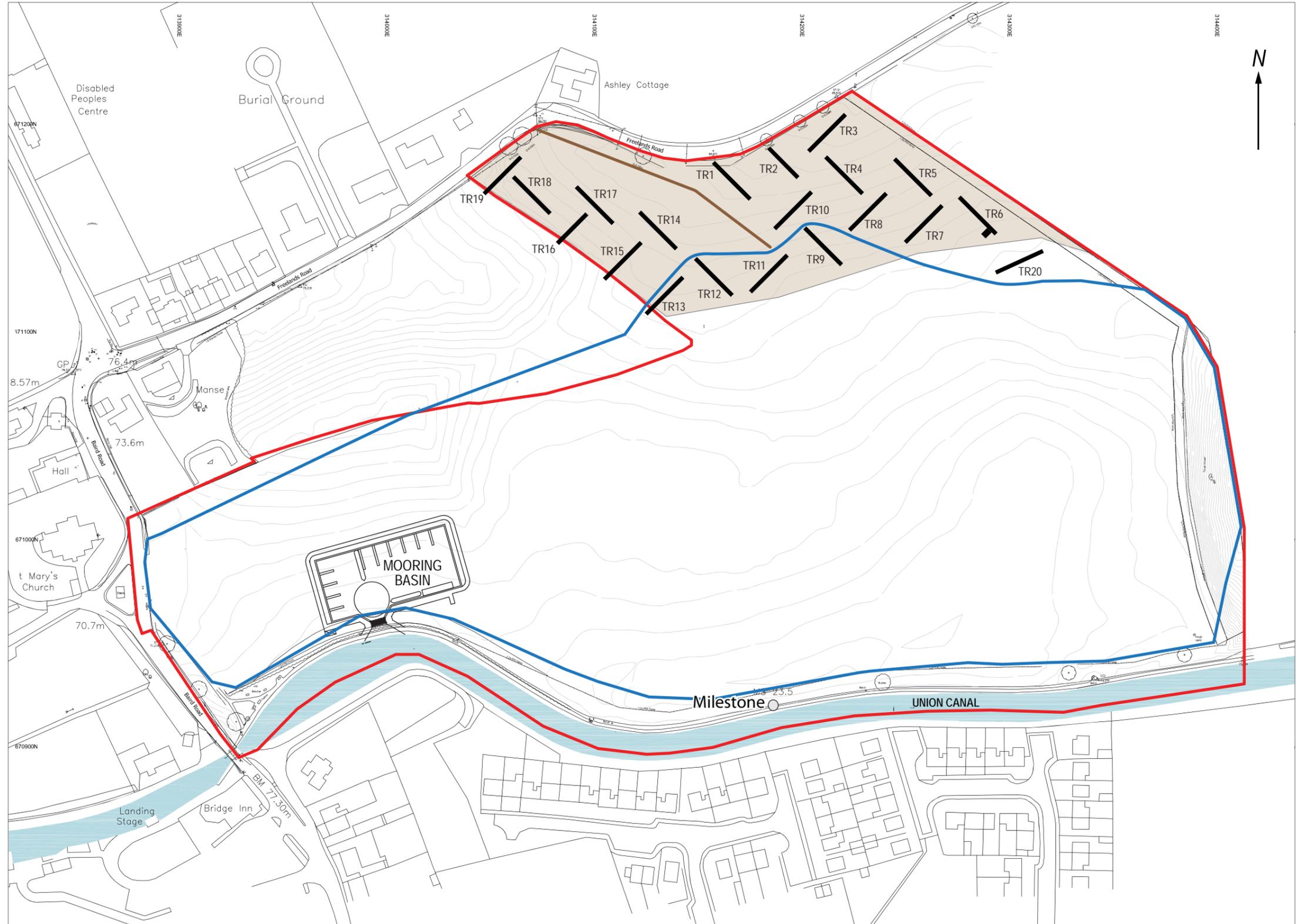


- Key**
- Development area boundary
  - Estimated limits of landfill disturbance
  - Area subject to evaluation
  - / Evaluation trenches
  - Approximate location of power line



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Figure 1:  
Site Location



## Executive Summary

- 1.1 An archaeological evaluation was carried out by Glasgow University Archaeological Research Division (GUARD), on behalf of CALA Homes (East) Ltd, on an area proposed for development at Freelands Road, Ratho. The trial trench evaluation comprised 5% of the undisturbed part (1.87 ha) of the proposed development area. No significant archaeological features were encountered during the evaluation. The work was undertaken between 26 and 27 May 2010.

## Introduction

- 2.1 This report sets out the results of an archaeological evaluation undertaken by GUARD, on behalf of CALA Homes (East) Ltd on a site proposed for development at Freelands Road, Ratho (Planning Reference: 09/01067/FUL). During the course of the evaluation a total of 990 square metres of trenching was undertaken, spread over 20 individual trenches arranged across the site.

## Site Location, Topography and Geology

- 3.1 The proposed development location lies to the east of Ratho (NGR NT 1420 7105). The undisturbed part of the development area, subject to evaluation, covers approximately 1.87 hectares.
- 3.2 The development area is bounded by Freelands Road to the north, by the Union Canal to the south and by fields to the east and Ratho village to the west, and currently consists of gently sloping down fields of rough grassland (Figure 1).
- 3.3 The underlying drift geology consists of Devensian Till, while the solid geology consists of Calders member rock (Geology Digimap <http://digimap.edina.ac.uk/>).

## Archaeological Background

- 4.1 While no known archaeological sites are recorded within the area of the development site subject to evaluation, several prehistoric, medieval and post-medieval sites have been identified within the wider area (Oleksy 2008, 8-9). The prehistoric sites include a standing stone, several settlements and cist burials and various prehistoric findspots while the medieval sites include Ratho parish church, which originated in the 12<sup>th</sup> century. Most of the known archaeological sites in the wider area belong to the post-medieval period and indicates extensive occupation of the surrounding area at this time, including Ratho village to the west, various farmsteads and other residential and non-residential buildings, and several transport remains such as the Union Canal, a canal basin, associated milestones and bridges.
- 4.2 An aerial photograph taken in 1995 shows that much of the proposed development area was disturbed by landfill operations (Oleksy 2008, 9). Site investigation works undertaken for Cala Homes further demonstrate the extent of landfill and that the shoulders of the landfill fall off very sharply to a depth of 17 m. The deepest impact from the development works will comprise a culvert at a localised depth of 8 m, while the majority of drainage will only reach depths of between 2 m and 3.5 m from the present ground surface. Remaining development works such as road boxes and building foundations will be around 1.5 m depth from the present ground surface. Given these depths, it is clear that the construction activities will be retained within the mass of the modern landfill and will therefore not impact upon original ground other than the undisturbed parts of the development area highlighted in Figure 1.

## Aims and Objectives

- 5.1 The aims of the archaeological works were to:
- evaluate 5% of the undisturbed part of the development area by machine-cut trial trench excavation.
- 5.2 The objectives of these archaeological works were to:
- establish the presence or absence of any archaeological remains;
  - determine the character, extent and significance of any archaeological deposits encountered;
  - establish whether there are any archaeological issues resulting from the proposed development and recommend how they may be addressed.

## Methodology

- 6.1 The programme of archaeological works (Appendix E) commenced with a 5 % evaluation of the 1.87 ha undisturbed area of the development site. Nineteen trenches were planned to be excavated; all but two measuring 25 m long and 2 m wide, with the exception of one trench which was 20 m long and 2 m wide and another 26 m long and 2 m wide. An additional trench, 25 m long by 2 m wide, was excavated at the request of the City of Edinburgh Council Curator of Archaeology. The trenches totalled 990 m<sup>2</sup> and were arranged in a herring bone pattern (Figure 1).
- 6.2 All trenches were excavated by mechanical excavator, utilizing a toothless ditching bucket under direct supervision of an archaeologist, down to the first archaeological horizon or to natural subsoil, whichever is encountered first. The depth of stratigraphy apparent in all trenches was recorded.
- 6.3 All significant archaeological features encountered were sample excavated. All finds were to be recovered and a bulk soil sampling strategy as adopted for discrete negative features as exposed within trenches. All on-site recording, written, drawn and photographic, was to the standards normally pertaining in archaeological fieldwork.
- 6.4 Trenches were surveyed and located within the National Grid using a GPS sub-centimetre. The location and perimeter of the milestone located to the immediate south of the development area, on the north bank of the Union Canal, was also surveyed in order to accurately plot its location on the site drawing.
- 6.5 If features of archaeological significance were found within the evaluation trenches then further phases of work to mitigate the archaeologically adverse effects of the development may be required, subject to further discussion with the Council's Curator of Archaeology, on behalf of the Planning Authority.
- 6.6 Should significant archaeological remains be identified, Stage 2 would involve the implementation of appropriate archaeological mitigation measures, which may consist of further evaluation and/or excavation and recording of features that will be destroyed by development works. Stage 3 will include suitable post-excavation analysis, reporting, and publication of discovered archaeological remains, if appropriate.



Plate 1: Post-ex of Trench 20.

## Results

- 7.1 Twenty trenches were excavated, totalling 990 m<sup>2</sup>, the results of which are set out in [Appendix A](#). An additional trench, 25 m long by 2 m wide, was excavated to the immediate south of the undisturbed part of the development area, at the request of the City of Edinburgh Council Curator of Archaeology.
- 7.2 For the majority of the area, trenches revealed a mid brown silty loam topsoil (0.25 to 0.4 m thick), which lay over natural subsoil. A possible feature, apparent in trench 6, was on excavation revealed to contain modern glass and consequently considered to be of no archaeological significance. Four trenches (9 & 11-13) revealed a mixture of blueish grey silty clay with debris which was part of landfill deposit. Sondages were excavated in all of them in order to investigate the depth of the landfill material; trench 9 had a depth of 2.2 m, trench 11 was 3.1 m deep, trench 12 was 3.2 m and trench 13 was 1.8 m. Finally, the trenches located at the north end (1-3 & 17-19) revealed made ground, 0.3 m deep, consisting of grey brown clayish silt with stone and brick inclusions.



Plate 2: Voided feature in Trench 6.



Plate 3: North facing section of sondage in Trench 13.

## Discussion

- 8.1 The evaluation trenching encountered no features of archaeological significance.
- 8.2 The canal milestone located immediately to the south of the development area, within the Union Canal Scheduled Ancient Monument, was surveyed and its location is highlighted in [Figure 1](#).

## Recommendations

- 9.1 The evaluation work has proved that no archaeologically sensitive deposits or features exist within the undisturbed parts of the development area. In consequence, it is recommended that no further archaeological work is required prior to the development of this part of the proposed development area.
- 9.2 It is also recommended that, in accordance with the request of the City of Edinburgh Council Curator of Archaeology, care should be taken during site set up and construction to avoid impacting the canal milestone, immediately to the south of the development area, within the Union Canal Scheduled Ancient Monument ([Figure 1](#)).

## Acknowledgements

- 10.1 GUARD would like to thank Cala Homes (East) Ltd for their assistance. Plant and drivers were supplied by Brown Plant. Technical support was from Aileen Maule and John Kiely. A survey of trench locations was conducted by Fiona Jackson. The illustrations were also produced by Fiona Jackson. The report was desk top published by Gillian McSwan. The project was managed for GUARD by Ronan Toolis.

## Freelands Road, Ratho Data Structure Report

### Section 2: Appendices



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## Appendices

### Appendix A: References

Oleksy, V 2008 *Freelands Road, Ratho Archaeological Desk-Based Assessment*, unpublished AOC report for Cala Homes.

### Appendix B: Trench Descriptions

Tr No	L	W	D	Topsoil/ Overburden	Intermediate	Intermediate	Intermediate	Subsoil	Details
001	25	2	0.7	Loose mid brown silty loam with rubble and root inclusion and occasional ceramic. Depth: 0.25 m.	Moderately compacted grey brown clayish silt with stone and brick inclusions. Depth: 0.35 m.	-	-	Moderately com-pacted yellowy brown sandy clay with occasional cobbles	Several modern field drains
002	25	2	0.8	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.35 m	Moderately compacted grey brown clayish silt with stone and brick inclusions. Depth: 0.3 m	-	-	Moderately com-pacted yellowy brown sandy clay with occasional cobbles	Several modern field drains
003	25	2	0.6	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.25 m	Moderately compacted grey brown clayish silt with stone and brick inclusions. Depth: 0.3 m	-	-	Moderately com-pacted yellowy brown sandy clay with occasional cobbles	Several field drains
004	25	2	0.75	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.3 m	Loose reddish light brown silty loam. Depth: 0.3 m	-	-	Moderately com-pacted yellowy brown sandy clay with occasional cobbles	Several field drains
005	26	2	0.75	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.4 m	Loose reddish light brown silty loam. Depth: 0.25 m	-	-	Moderately com-pacted yellowy brown sandy clay with occasional cobbles	-
006	25	2	0.65	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.3 m	Loose reddish light brown silty loam. Depth: 0.15 m	-	-	Moderately com-pacted yellowy brown sandy clay with occasional cobbles	Possible feature revealed non-archaeological significance
007	25	2	0.43	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.38 m	-	-	-	Moderately com-pacted yellowy brown sandy clay with occasional cobbles	-

Tr No	L	W	D	Topsoil/Overburden	Intermediate	Intermediate	Intermediate	Subsoil	Details
008	25	2	0.45	Loose mid brown silty loam with root inclusion and occasional ceramic.	-	-	-	Moderately compacted yellowy brown sandy clay with occasional cobbles	-
009	25	2	0.6	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.35 m	Moderately compacted grey brown clayish silt with stone and brick inclusions. Depth: 0.15 m	Moderately com-pacted blueish grey silty clay with frequent inclusions of stones and ceramic. Depth: n/a	Mixture of blueish grey silty clay with debris. Depth: 2.2 m	Moderately compacted yellowy brown sandy clay with occasional cobbles	-
010	25	2	0.55	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.35 m	-	-	-	Moderately compacted yellowy brown sandy clay with occasional cobbles	Modern trial pit
011	25	2	1.2	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.2 m	Mixture of blueish grey silty clay with debris. Depth: 3.1 m	-	-	Moderately compacted yellowy brown sandy clay with occasional cobbles	-
012	25	2	1.5	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.35 m	Mixture of blueish grey silty clay with debris. Depth: 3.2 m	-	-	Moderately compacted yellowy brown sandy clay with occasional cobbles	-
013	25	2	1.2	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.35 m	Mixture of blueish grey silty clay with debris. Depth: 1.8 m	-	-	Moderately compacted yellowy brown sandy clay with occasional cobbles	-
014	25	2	0.6	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.3 - 0.4 m	-	-	-	Moderately compacted yellowy brown sandy clay with occasional cobbles	Several field drains
015	25	2	0.5	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.35 m	-	-	-	Moderately compacted yellowy brown sandy clay with occasional cobbles	-
016	20	2	0.6-1.5	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.45 - 1.2 m	-	-	-	Moderately compacted yellowy brown sandy clay with occasional cobbles	-

Tr No	L	W	D	Topsoil/Overburden	Intermediate	Intermediate	Intermediate	Subsoil	Details
017	25	2	0.9	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.4 m	Moderately compacted grey brown clayish silt with stone and brick inclusions. Depth: 0.3 m	-	-	Moderately compacted light brown silty clay	-
018	25	2	0.6	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.3 m	Moderately compacted grey brown clayish silt with stone and brick inclusions. Depth: 0.25 m	-	-	Loose light grey silty clay	-
019	25	2	0.6	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.25 - 0.4 m	Moderately compacted grey brown clayish silt with stone and brick inclusions. Depth: 0.3 m	Loose mid brown silty loam mixed with rubble	-	Moderately compacted light brown silty clay	-
020	25	2	0.4	Loose mid brown silty loam with root inclusion and occasional ceramic. Depth: 0.3 m	-	-	-	Moderately compacted light brown silty clay	-

## Appendix C: Site Records

### List of Photographs

#### Film No 001

Frame	Area	Context No	Subject	Taken From
1	-	-	ID shot	-
2	TR1	-	TR1 ID shot	-
3	TR1	-	NE facing section	NE
4	TR1	-	Post-ex shot of TR1	NW
5	TR2	-	TR2 ID shot	-
6	TR2	-	NE facing section	NE
7	TR2	-	Post-ex shot of TR2	NW
8	TR3	-	TR3 ID shot	-
9	TR3	-	N facing section	N
10	TR3	-	Post-ex shot of TR3	E
11	TR4	-	TR4 ID shot	-
12	TR4	-	E facing section	E
13	TR4	-	Post-ex shot of TR4	N
14	TR5	-	TR5 ID shot	-
15	TR5	-	E facing section	E
16	TR5	-	Post-ex shot of TR5	NE
17	TR6	-	TR6 ID shot	-
18	TR6	-	E facing section	E
19	TR6	-	Post-ex shot of TR6	N
20	TR7	-	TR7 ID shot	-
21	TR7	-	N facing section	N
22	TR7	-	Post-ex shot of TR7	E

Frame	Area	Context No	Subject	Taken From
23	TR8	-	TR8 ID shot	-
24	TR8	-	N facing section	N
25	TR8	-	Post-ex shot of TR8	E
26	TR9	-	TR9 ID shot	-
27	TR9	-	SW facing section	SW
28	TR9	-	Post-ex shot of TR9	NW
29	TR10	-	TR10 ID shot	-
30	TR10	-	S facing section	S
31	TR10	-	Post-ex shot of TR10	E
32	TR11	-	TR11 ID shot	-
33	TR11	-	N facing section	N
34	TR11	-	Post-ex shot of TR11	E
35	TR12	-	TR12 ID shot	-
36	TR12	-	SW facing section	SW
37	TR12	-	SW facing section at south end of trench	SW
38	TR12	-	Post-ex shot of TR12	NW
39	TR13	-	TR13 ID shot	-
40	TR13	-	S facing section	S
41	TR13	-	Post-ex shot of TR13	W
42	TR14	-	TR14 ID shot	-
43	TR14	-	SW facing section	SW
44	TR14	-	Post-ex shot of TR14	SE
45	TR15	-	TR15 ID shot	-
46	TR15	-	S facing section	S
47	TR15	-	Post-ex shot of TR15	W
48	TR16	-	TR16 ID shot	-
49	TR16	-	S facing section	S
50	TR16	-	Post-ex shot of TR16	W
51	TR17	-	TR17 ID shot	-
52	TR17	-	SW facing section	SW
53	TR17	-	Post-ex shot of TR17	SE
54	TR18	-	TR18 ID shot	-
55	TR18	-	SW facing section	SW
56	TR18	-	Post-ex shot of TR18	NW
57	TR19	-	TR19 ID shot	-
58	TR19	-	N facing section	N
59	TR19	-	Post-ex shot of TR19	E
60	TR13	-	N facing section (sondage)	N
61	TR11	-	N facing section (sondage)	N
62	TR12	-	SW facing section (sondage)	SW
63	TR9	-	SW facing section (sondage)	SW
64	TR6	-	Possible posthole pre-ex	E
65	TR6	-	Possible posthole pre-ex	E
66	TR6	-	Possible posthole VOID	E
67	TR6	-	Possible posthole VOID (detail)	E
68	TR20	-	TR20 ID shot	-
69	TR20	-	S facing section	S
70	TR20	-	Post-ex shot of TR20	E
71	-	-	General shot post-ex	SE
72	-	-	General shot post-ex	S
73	-	-	General shot post-ex	W
74	-	-	Milestone	S
75	-	-	General shot post-ex	SE

## Appendix D: Discovery and Excavation in Scotland Report

LOCAL AUTHORITY:	Edinburgh City
PROJECT TITLE/SITE NAME:	Freelands Road, Ratho
PROJECT CODE:	3113
PARISH:	Ratho
NAME OF CONTRIBUTOR(S):	Iraia Arabaolaza
NAME OF ORGANISATION:	Glasgow University Archaeological Research Division
TYPE(S) OF PROJECT:	Evaluation
NMRS NO(S):	-
SITE/MONUMENT TYPE(S):	-
SIGNIFICANT FINDS:	None
NGR (2 letters, 6 figures)	NT 1420 7105 (centred)
START DATE (this season)	26 May 2010
END DATE (this season)	27 May 2010
PREVIOUS WORK (incl. <i>DES</i> ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	Due to the proximity of prehistoric, medieval and post-medieval sites within the surrounding area, an archaeological evaluation was undertaken by GUARD of an area proposed for development at Freelands Road, Ratho. No significant archaeological features were encountered during the evaluation.
PROPOSED FUTURE WORK:	None
SPONSOR OR FUNDING BODY:	Cala Homes (East) Ltd
CAPTION(S) FOR ILLUSTRS:	-
ADDRESS OF MAIN CONTRIBUTOR:	Gregory Building, Lilybank Gardens, University of Glasgow, G12 8QQ
EMAIL ADDRESS:	<a href="mailto:i.arabaolaza@archaeology.gla.ac.uk">i.arabaolaza@archaeology.gla.ac.uk</a>
ARCHIVE LOCATION (intended/deposited)	Archive to be deposited in NMRS.

## Appendix E: Written Scheme of Investigation

# FREELANDS ROAD, RATHO

## WRITTEN SCHEME OF INVESTIAGATION

PLANNING REFERENCE: 09/01067/FUL

PROJECT 3113

### 1.0 Introduction

1.1 This document sets out a Written Scheme of Investigation (WSI) for a phased programme of archaeological works for the proposed development of the site known as 3113: Freelands Road, Ratho (NGR NT 1420 7105). In the first instance, an evaluation of the site will be undertaken to establish whether any significant archaeological remains are associated with the site. A separate watching brief for all ground-breaking works within the Union Canal Scheduled Monument Area (SAM) and the immediately adjacent area will also be undertaken. Another separate watching brief for all ground-breaking works along the undisturbed parts of the western boundary of the development area will also be undertaken. Should significant remains be identified and it is not possible to preserve them *in situ* a further requirement for archaeological works to ensure their preservation through record is likely to be pursued.

1.2 This WSI outlines the entirety of the programme of archaeological works that may be needed to mitigate the effects of the proposed development. It details the methodology to be employed in implementing the Stage 1 archaeological works. The mitigation methodology to be employed during Stage 2 and Stage 3 post excavation analysis and publication, will be specified in *addenda* to this document. These *addenda*, if required, will be submitted for agreement of John Lawson acting on behalf of the City of Edinburgh Council, prior to the commencement of any archaeological work. All phases of work will be funded by the developer as required by the Planning Authority.

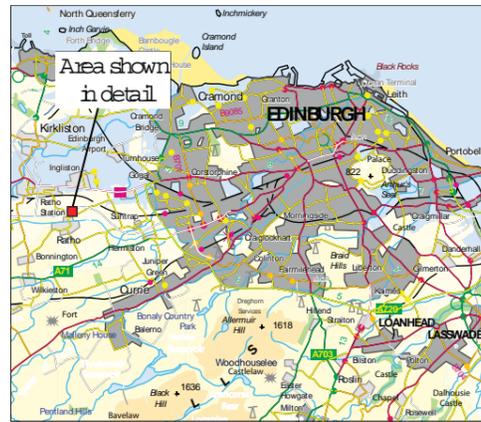
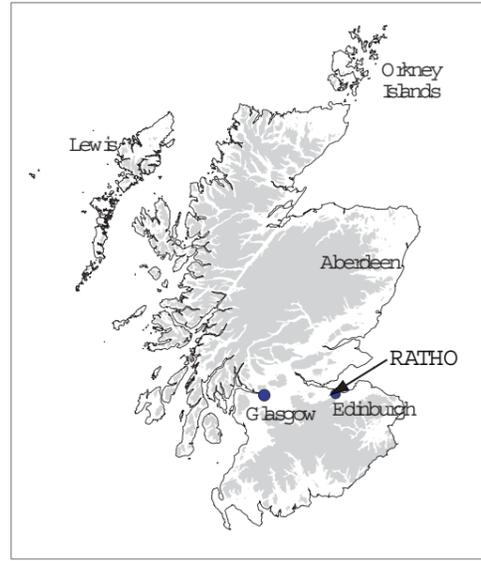
### 2.0 Site Location and Archaeological Background

2.1 The proposed development site covers an area of 1.87 ha and is located to the north-east of Ratho (Figure 1). The proposed site is bounded to the north by Freelands Road, by Ratho to the west, by the Union Canal to the south and a field to the east.

2.2 While no known archaeological sites are recorded within the area of the development site subject to evaluation, several prehistoric, medieval and post-medieval sites have been identified within the wider area (Oleksy 2008, 8-9). The prehistoric sites include a standing stone, several settlements and cist burials and various prehistoric findspots while the medieval sites include Ratho parish church, which originated in the 12<sup>th</sup> century. Most of the known archaeological sites in the wider area belong to the post-medieval period and indicates extensive occupation of the surrounding area at this time, including Ratho village to the west, various farmsteads and other residential and non-residential buildings, and several transport remains such as the Union Canal, a canal basin, associated milestones and bridges.

2.3 An aerial photograph taken in 1995 shows that much of the development area was disturbed by landfill operations (Oleksy 2008, 9). Site investigation works undertaken for Cala Homes further demonstrate the extent of landfill (Figure 1) and that the shoulders of the landfill fall off very sharply to a depth of 17 m. The deepest impact from the development works will comprise a culvert at a localised depth of 8 m, while the majority of drainage will only reach depths of between 2 m and 3.5 m from the present ground surface. Remaining development works such as road boxes and building foundations will be around 1.5 m depth from the present ground surface. Given these depths, it is clear that the construction activities will be retained within the mass of the modern landfill and will therefore not impact upon original ground other than the undisturbed parts of the development area highlighted in Figure 1.

2.4 It should also be noted that no development works will impact upon the SAM other than the localised breakthrough area proposed to link the development mooring basin with the Union Canal (Figure 1 and Appendix A). The Canal Milestone (Site 26 in Oleksy 2008) located immediately to the south of the development area is within the SAM and will therefore not be impacted by development works. Nevertheless, given the close proximity of this milestone to the development, it may be necessary to take measures to protect it during site set up and construction.



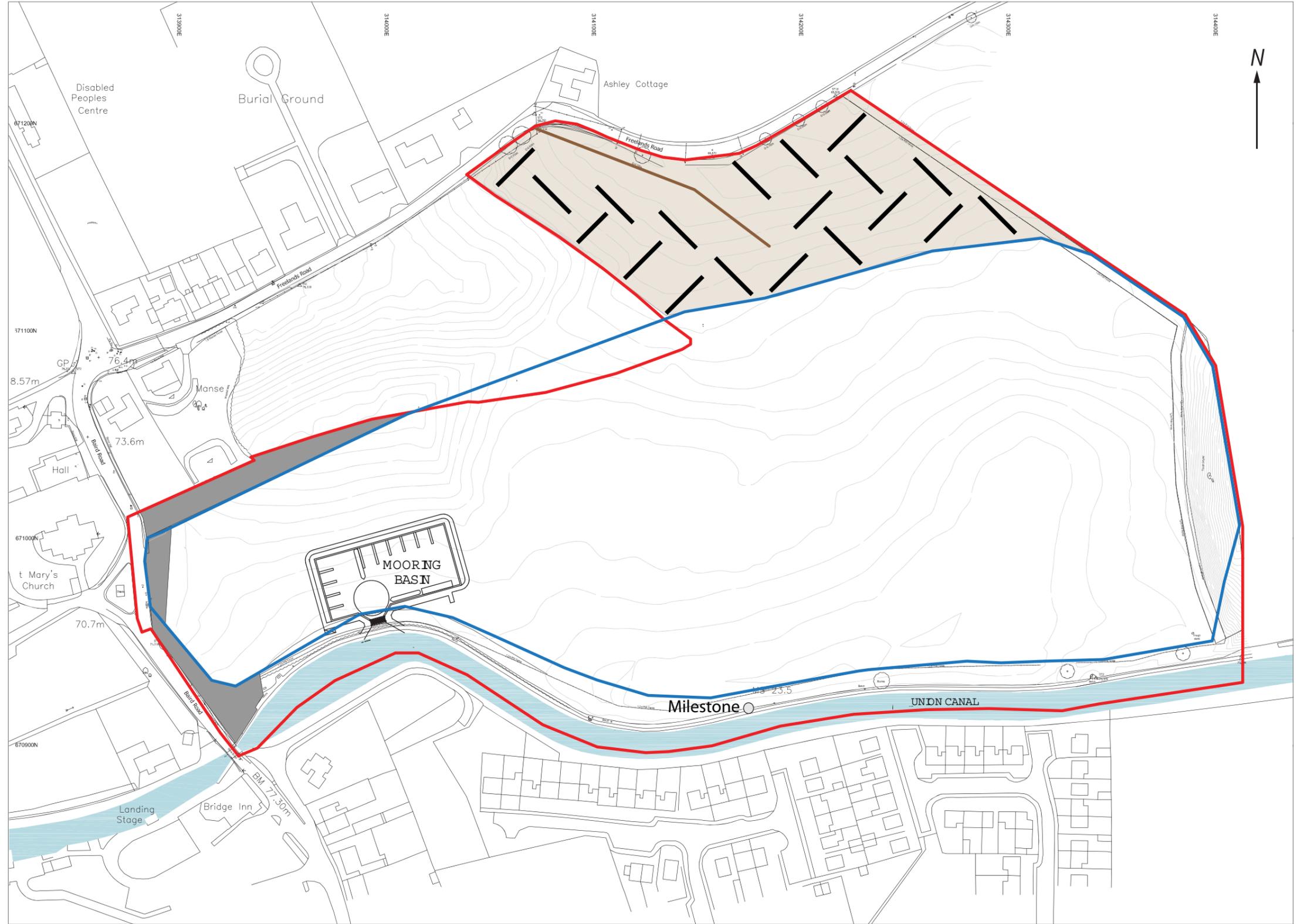
**Key**

- Development area boundary
- Area of landfill disturbance
- Area subject to evaluation
- Watching Brief area
- / — Evaluation trenches
- Approximate location of power line

0  100 m

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Figure 1: Site Location



### 3.0 *Planning Background*

3.1 This WSI has been drafted in response to Condition 3 set by the City of Edinburgh Council, as advised by the City Curator of Archaeology. This planning condition stipulates that no development shall take place until a programme of archaeological work has been implemented, in accordance with a written scheme of investigation approved in writing by the Head of Planning, having first been agreed by the City Curator of Archaeology.

### 4.0 *Aims and Objectives*

4.1 The aims of the archaeological works are to:

- evaluate 5% of the undisturbed part of the development area by machine-cut trial trench excavation;
- undertake a watching brief of groundbreaking works between the Union Canal SAM and the development area.
- undertake a watching brief of groundbreaking works along the western boundary of the development area.

4.2 The objectives of these archaeological works are to:

- establish the presence or absence of any archaeological remains;
- determine the character, extent and significance of any archaeological deposits encountered;
- establish whether there are any archaeological issues resulting from the proposed development and recommend how they may be addressed.

### 5.0 *Evaluation Methodology*

5.1 The programme of archaeological works will commence with a 5 % evaluation of the 1.87 ha undisturbed area of the development site. Nineteen trenches will be excavated; all but one will measure 25 m long and 2 m wide, while the remaining trench will measure 20 m long and 2 m wide. The trenches will total 940 m<sup>2</sup>.

5.2 All trenches will be excavated by mechanical excavator, utilizing a toothless ditching bucket under direct supervision of an archaeologist, down to the first archaeological horizon or to natural subsoil, whichever is encountered first. The depth of stratigraphy apparent in all trenches will be recorded.

5.3 A proportion of all significant archaeological features encountered will be sample excavated. All finds will be recovered and a bulk soil sampling strategy will be adopted for discrete negative features as exposed within trenches. All on-site recording, written, drawn and photographic, will be to the standards normally pertaining in archaeological fieldwork.

5.4 By the close of the evaluation the location and dimensions of each evaluation trench will be surveyed in order to tie it to the OS grid. The location and perimeter of the milestone located to the immediate south of the development area, on the north bank of the Union Canal, will also be surveyed in order to accurately plot its location on the site drawing.

5.5 If features of archaeological significance are found within the evaluation trenches then further phases of work to mitigate the archaeologically adverse effects of the development may be required, subject to further discussion with the Council's Curator of Archaeology, on behalf of the Planning Authority.

5.6 Should significant archaeological remains be identified, Stage 2 will involve the implementation of appropriate archaeological mitigation measures, which may consist of further evaluation and/or excavation and recording of features that will be destroyed by development works. Stage 3 will include suitable post-excavation analysis, reporting, and publication of discovered archaeological remains, if appropriate.

### 6.0 *Watching Brief Methodology*

6.1 The methodology for the watching brief of ground-breaking works within the Union Canal SAM has been approved by Historic Scotland as part of the SAM consent for this specific part of the development, and is attached to this document (Appendix A).

6.2 Due to the proximity of the western boundary of the development area to Ratho Parish Church and the Baird Road Bridge over the Union Canal, a watching brief will also be carried out during the ground-breaking works to ensure that no significant archaeological remains are disturbed, without first being recorded.

6.3 The westernmost undisturbed parts of the development area subject to ground-breaking works will be photographed and a brief written description made prior to the commencement of ground-breaking works.

6.4 The Watching Brief Archaeologist will monitor the machine excavation of topsoil and/or over-burden stripping along the western boundary of the development area, as marked in Figure 1.

6.5 The number of watching brief archaeologists required during stripping operations will be dependent on the number of machines employed at any one time (one watching brief archaeologist per machine). All machines used for topsoil stripping will be fitted with a flat-bladed (toothless) ditching bucket.

6.6 The topsoil will be removed in spits to the first archaeological horizon or, where none was found, to the natural subsoil or depth of ground-breaking works, whichever is encountered first. Any archaeological features encountered will be cleaned by hand by the Watching Brief Archaeologist to determine the date of the deposits, their character and extent. Such features will be recorded by written description on *pro forma* recording sheets, by photograph and by measured drawing.

6.7 Any significant archaeological features encountered will be dealt with by the on-site Archaeologist. Should negative-cut features be encountered they will be 50% excavated in order to determine their significance, date and function. In the event that they are deemed to be important discoveries, they will be fully excavated. Recording will include *pro forma* sheets, drawings and photographs.

6.8 Suitable down time will be provided to the Watching Brief Archaeologist in order to fully recover any archaeological evidence encountered on a site. If any archaeology encountered is sufficiently significant or complex to require more than one day to excavate and record, an on-site meeting would be arranged that same day between the GUARD Project Manager, the client's agent and the Council's Curator of Archaeology to agree appropriate mitigation measures.

### 7.0 *Reporting*

7.1 Following the completion of each stage of fieldwork, an illustrated Data Structure Report will be produced, detailing the results of the fieldwork and including recommendations for mitigation measures appropriate to any remains encountered by the relevant stage of fieldwork. Hard and digital copies of the reports will be produced and copies lodged, as a minimum, with the client, the Curator of Archaeology and the National Monuments Record for Scotland.

7.2 The evaluation report will include a site plan showing the location of each evaluation trench and any archaeological features encountered. This site plan will also include the location of the milestone located immediately south of the development area, on the north bank of the Union Canal, and will be used to draw the awareness of the Main Contractor to the importance of its preservation during site set up and construction.

7.2 GUARD will also implement the standards and requirements of the Archaeological Standard Protocol for the Integrated Reporting of Events (ASPIRE), Online Access to the Index of Archaeological Investigations (OASIS) and *Discovery and Excavation in Scotland*.

### 8.0 *Archive, Small Finds and Human Remains*

8.1 The resultant site archive will be deposited with the National Monuments Records for Scotland within six months of the completion of all work. Any small finds recovered will be declared to the Crown Agent in accordance with Scots Law, and if claimed, will be transferred to the appointed museum. In the unlikely event that human remains are encountered during the evaluation or watching brief, the local police and the

client will be notified immediately and no further work will take place on site until agreement on how to proceed has been reached with all parties.

#### 9.0 *Timetable and Staffing*

9.1 The precise dates for the work will be agreed between the developer and GUARD and notified to the Curator of Archaeology at least one week prior to work beginning on site. Once the dates for fieldwork have been agreed, a suitably qualified project officer from GUARD will be appointed. All project team members will be qualified and suitably experienced professional archaeologists and CVs will be supplied if required. The Client and the Curator of Archaeology will be informed of the site mobile phone number prior to work commencing in order to allow site monitoring visits to be undertaken if they wish. However, the GUARD Project Manager, Ronan Toolis, will remain the main point of contact for the duration of the project.

#### 10.0 *Health & Safety and Insurance*

10.1 GUARD will conduct the evaluation in accordance with Health and Safety legislation and with the guidelines and standards governing archaeological fieldwork set down in the IFA approved Health and Safety in Archaeological Fieldwork document prepared by SCAUM. Prior to fieldwork commencing a risk assessment of the project will be undertaken, giving rise to a project-specific safety plan. GUARD also possess all necessary insurance cover, including employer's and public liability insurance cover, proofs of which will be supplied upon request.

#### 11.0 *References*

Oleksy, V 2008 *Freelands Road, Ratho Archaeological Desk-Based Assessment*, unpublished AOC report for Cala Homes.

APPENDIX A – Union Canal SAM Mitigation Strategy

See following page.

## FREELANDS ROAD, RATHO

### ARCHAEOLOGICAL MITIGATION STRATEGY

PROJECT 2817

on behalf of  
Cala Homes (East) Ltd

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## 1.0 Executive Summary

This archaeological mitigation strategy was commissioned by Cala Homes (East) Ltd to support an application for Scheduled Monument Consent for proposed works at Freelands Road, Ratho, associated with the construction of a new mooring basin connected to the Union Canal. The Scheduled Monument is the Union Canal (SAM No 11097). The archaeological mitigation strategy proposes a watching brief for all ground-breaking works within the Scheduled Monument Area and the immediately adjacent area. The watching brief will include supervision of all machine plant movement within the Scheduled Ancient Monument and immediately adjacent areas. Should significant archaeology be encountered during the watching brief, the strategy outlines the methodology to be adopted for excavation and recording and the provision of a costed post-excavation plan that will take the results of the excavation to publication if necessary.

## 2.0 Introduction

This mitigation strategy sets out the written scheme of investigation for the watching brief of proposed ground-breaking works within the Union Canal Scheduled Monument Area (SAM No 11097).

## 3.0 Site Location

The site forms part of a development area totalling 9.84 ha, situated to the east of Ratho, which lies within the local authority area of the City of Edinburgh Council. The proposed ground-breaking works are centred at NGR NT 1400 7095, on the north side of the Union Canal, which forms the southern boundary of the proposed development area (Figure 1).

## 4.0 Review of the Cultural Significance of the Monument

A Desk-based Assessment, which examined all records for archaeological remains within 1km of the entire development area, was previously prepared for the planning application (Oleksy 2008) and is submitted alongside this mitigation strategy in support with the application for Scheduled Monument Consent.

The Union Canal was originally known as the Edinburgh and Glasgow Union Canal, to celebrate the uniting of the two cities by the new canal network. The canal was designed by Hugh Baird, who oversaw the engineering work while it was being built between 1818 and 1822. Two of its construction workers were the notorious murderers Burke and Hare. The soliton, a form of wave, was first observed on the Union Canal in 1834, while its discoverer John Scott Russell was travelling along the canal in a horse-drawn boat.

Originally used for transporting coal, competition from the railways caused it to close to commercial use in the 1930s. The locks, connecting it to the Forth and Clyde Canal at Falkirk, were filled in and built over. The canal is now largely restored, however, for both recreational boating and for walkers and cyclists on the towpath. A variety of local community groups promote the general use of the canal. The Millennium Link, a project to restore both the Union and Forth and Clyde Canals, saw the two canals joined once again at the Falkirk end of the Union Canal, in the year 2000, by means of the Falkirk Wheel. There are a number of current redevelopment projects along the Union Canal, for commercial and residential use.

During archaeological investigations, prior to one of these new housing developments further east along the Union Canal at Leamington Wharf within Edinburgh, the stern of a 21 metre long wooden barge was uncovered within an area which was to become a mooring for canal boats (Coleman 2004). The remains represented the final berth of an early to mid 19th century canal barge or scow, a type of horse drawn vessel that was the main freight carrier of the time. The vessel was dismantled and removed from the canal in order to record the techniques used in its construction.

Several sites associated with the canal survive within the area around the proposed development site at Ratho. These include a milestone which reads 'Division Betwixt the First and Second Stages'; another mile marker lies immediately east of this, while another milestone lies towards the west end of Ratho. Bridge No 15, which lies a short distance to the west of that part of the Scheduled Monument Area to be impacted by the proposed ground-breaking works, carries Baird Road (named after Hugh Baird, the engineer who designed the canal) over the Union Canal. The Bridge Inn, located at the southwest corner of Bridge No 15 was originally a farmhouse,

but was converted into an inn to serve as a staging post on the canal. The Ratho Canal Basin is located immediately west of the inn and sinks and issues have been noted west of this.

Vertical aerial photographs dating from the 1940s to the 1990s indicates that the proposed development area was under crop/pasture for the majority of the past 70 years. A photograph from 1980 indicates surface dumping in the western area of the development area. A photograph from 1988 indicates that the development area had been ploughed. An aerial photograph from 1995 showed that the eastern portion of the proposed development site was completely disturbed by landfill operations (Oleksy 2008, Figure 7).

## 5.0 Aims and Objectives

The aim of this mitigation strategy is:

- to ensure that any surviving archaeological remains associated with the Union Canal, encountered during ground-breaking works required for the construction of the new mooring basin, are recorded to an appropriate level in order to document any changes proposed to the Scheduled Monument and to retrieve as much artefactual material as possible.
- To ensure that no other archaeologically significant features within the Scheduled Monument Area of the Union Canal are disturbed during the movement of machine plant during the development works.

The objectives are therefore to

- Prepare a photographic and written record of that part of the canal prior to the commencement of ground-breaking works.
- Supervise the erection of temporary fencing either side of the affected bank of the canal, prior to the commencement of ground-breaking works.
- Supervise the movement of heavy machine plant within the Scheduled Monument Area during the course of ground-breaking works.
- Conduct an archaeological watching brief during the ground-breaking works within and immediately outwith the Scheduled Monument Area to establish the presence or absence of any archaeological remains, and their character, date and extent if surviving; determine the character, extent and significance of any archaeological deposits encountered; and excavate and salvage any information possible from any significant features encountered.
- On completion of all excavation works a report to data structure level and an accompanying post-excavation research design (PERD) and costing will be submitted for agreement with the client, if required. The PERD will also outline arrangements for final publication of the site.

## 6.0 Written Scheme of Investigation

1. The area of the canal bank subject to ground-breaking works associated with the construction of the mooring basin will be photographed and a brief written description made prior to the commencement of ground-breaking works. This will include recording that part of the canal face, such as original facing stones, revealed after this part of the canal has been dewatered, in order to produce a section drawing from the canal face, through the towpath to the edge of the Scheduled Monument Area. Any other archaeological features within the affected part of the Scheduled Ancient Monument will be recorded, photographed and planned using conventional proforma sheets and a digital camera.
2. The Watching Brief Archaeologist will supervise the erection of temporary fencing either side of the affected part of the Scheduled Ancient Monument, prior to the commencement of ground-breaking works, to ensure that the specific area of the Scheduled Ancient Monument subject to ground-breaking works is first defined and to further ensure that no disturbance is made by subsequent movement of machine plant during the works.
3. All movement of heavy machine plant within the Scheduled Monument Area will be supervised by the Watching Brief Archaeologist to ensure that no disturbance is made during the course of the ground-

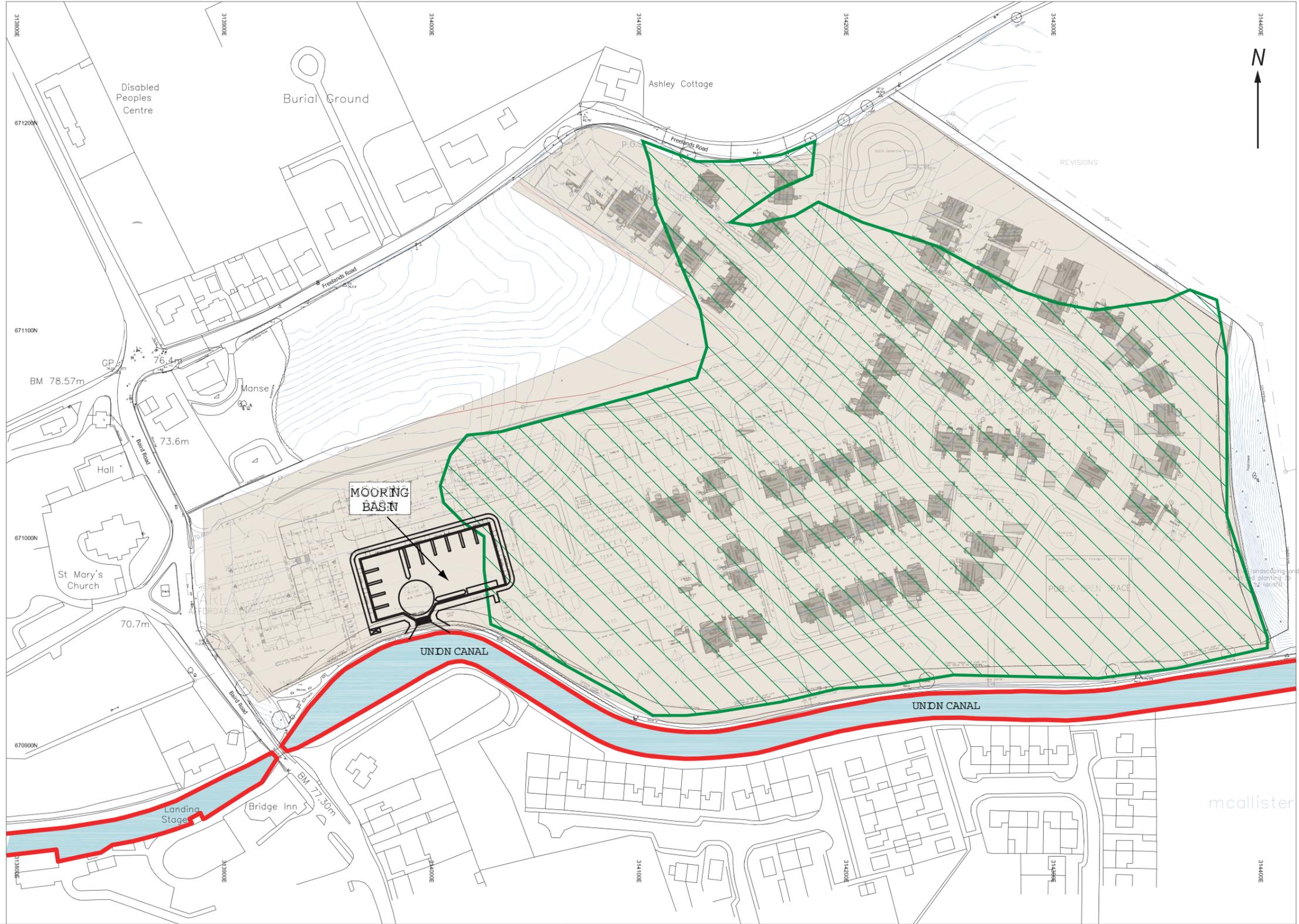
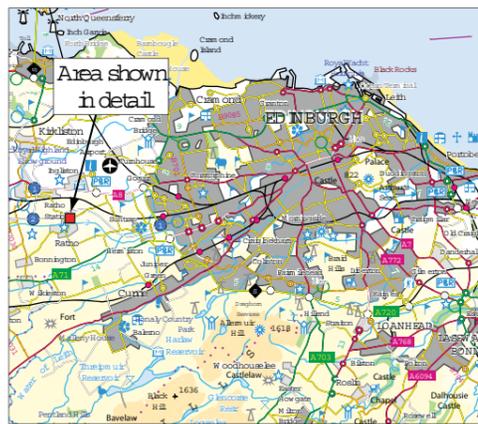
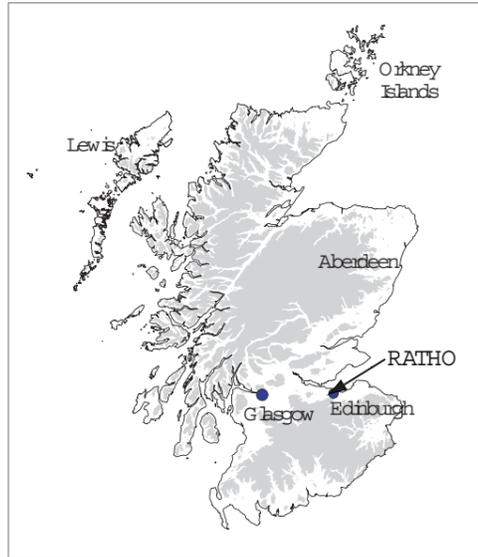
breaking works, beyond the proposed limits of ground-breaking works necessary for the construction of the mooring basin.

4. A watching brief will be carried out during the ground-breaking works to ensure that no significant archaeological remains are disturbed, without first being recorded. The watching brief will include the monitoring of all topsoil and/ or over-burden stripping operations by machine and excavation and recording of any feature encountered.
5. The number of watching brief archaeologists required during stripping operations will be dependent on the number of machines employed at any one time (one watching brief archaeologist per machine). All machines used for topsoil stripping will be fitted with a 1.6m flat-bladed (toothless) ditching bucket.
6. The topsoil will be removed in spits to the first archaeological horizon or, where none was found, to the natural subsoil. Any archaeological features encountered will be cleaned by hand by the Watching Brief Archaeologist to determine the date of the deposits, their character and extent. Such features will be recorded by written description on *pro forma* recording sheets, by photograph and by measured drawing.
7. Any significant archaeological features encountered will be dealt with by the on-site Archaeologist. Should negative-cut features be encountered they will be 50% excavated in order to determine their significance, date and function. In the event that they are deemed to be important discoveries, they will be fully excavated. Recording will include *pro forma* sheets, drawings and photographs.
8. Suitable down time will be provided to the Watching Brief Archaeologist in order to fully recover any archaeological evidence encountered on a site. If any archaeology encountered is sufficiently significant or complex to require more than one day to excavate and record, an on-site meeting would be arranged that same day between the GUARD Project Manager, the client's agent and the relevant Historic Scotland Inspector to agree appropriate mitigation measures to both minimise the impact of further works on the scheduled monument and minimise the impact of any archaeological works upon the schedule of the development works.
9. All archaeological finds will be dealt with by the on-site Archaeologist. The general practice will be to bulk recover all artefacts by context.
10. All excavated feature fills and horizons will be sampled, using bulk soil samples, for palaeo-environmental evidence. This may also include micromorphological sampling in order to address key issues on soil development at the site.
11. A representative section will be recorded from the canal face, through the towpath to the edge of the Scheduled Monument Area, denoting depth of topsoil, any stratigraphy present and the nature of the soil. This information will be logged in the day book together with a sketch drawn to scale and a photographic record of deposits.
12. On completion of the watching brief phase of work, a report suitable for submission to Historic Scotland and the City of Edinburgh Council Archaeologist will be produced.

## 7.0 Report Preparation and Contents

A report detailing the results of the investigation will be submitted to the client within four weeks of completion of fieldwork and, subject to client approval, submitted to Historic Scotland and the City of Edinburgh Council Archaeologist within six weeks of the completion of fieldwork. The report will take the form of a Data Structure Report as specified by Historic Scotland and will contain an interim analysis of the results of the watching brief. The report will include a full descriptive text that will characterise the date and extent of any archaeological deposits. It will also include plans at an appropriate scale showing the area subjected to ground-breaking works and archiving lists of all finds, samples, field drawings and photographs.

Subject to the watching brief encountering significant archaeology, the report will be accompanied by a costed PERD for material recovered during the watching brief, in order to bring the results forward for analysis and publication should this be required.



Project 2817  
Freelands Road, Ratho

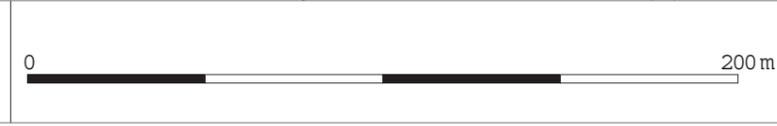


Figure 1:  
Site Location

**Key**

- Proposed development area
- disturbed ground
- scheduled area

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## 8.0 Copyright

Unless otherwise agreed copyright for any report resulting from the archaeological work undertaken as part of the project will be deemed the intellectual property of University of Glasgow.

## 9.0 Publication

A summary of the project results will be submitted to *Discovery and Excavation Scotland*. In the event of minor archaeological remains being encountered during the watching brief, it is proposed that a comprehensive report submitted to *Discovery and Excavation Scotland*, will form the final publication of the site.

## 10.0 Archive

The archive for the project will be submitted to the National Monuments Records for Scotland within three months of completion of the fieldwork. A copy of the report will be submitted to the *OASIS* online archive.

## 11.0 Finds Disposal

The laws relating to Treasure Trove and *Bona Vacantia* in Scotland apply to all finds where the original owner cannot be identified. This includes all material recovered during archaeological fieldwork. Accordingly, all assemblages recovered from archaeological fieldwork are claimed automatically by the Crown and must be reported to the Scottish Archaeological Finds Allocation Panel through its secretariat, the Treasure Trove Unit. In the event of the discovery of small finds at Freelands Road, a filled-out copy of the form "Declaration of an Archaeological Assemblage from Fieldwork" and two copies of the pertinent Data Structure Report will be submitted to the Panel at the conclusion of the fieldwork. The Panel will then be responsible for recommending to the Queen's and Lord Treasurer's Remembrancer (QLTR) which museum should be allocated the finds. All artefacts will be temporarily stored by GUARD until a decision has been made by the panel.

## 12.0 Personnel and Liaison

The project will be managed for GUARD by Mr Ronan Toolis, who will be the point of contact for the archaeological works. The Watching Brief Archaeologist will be a suitably qualified and experienced GUARD archaeologist. A full CV for individuals concerned can be made available on request.

## 13.0 Monitoring

Historic Scotland and the City of Edinburgh Council Archaeologist will be informed 1 week before the works start so that monitoring visits can be arranged.

## 14.0 Health & Safety and Insurance

GUARD, operating through the University of Glasgow, adhere to the guidelines and standards prescribed for archaeological fieldwork set down in the Institute of Field Archaeologists approved Health and Safety in Field Archaeology document, prepared under the aegis of the Standing Conference of Archaeological Unit Managers. It is standard GUARD policy, prior to any fieldwork project commencing, to conduct a risk assessment and to prepare a project safety plan, the prescriptions of which will be strictly followed for the duration of all archaeological fieldwork. Copies of the resultant project safety plan and of GUARD's Fieldwork Safety Policy Statement may be viewed upon request. GUARD, operating through the University of Glasgow, also possess all necessary insurance cover, proofs of which may be supplied upon request.

## 15.0 References

Coleman, R 2004 'Union Canal, Leamington Wharf', *Discovery and Excavation Scotland, New series, Volume 5*, 57.

Oleksy, V 2008 *Freelands Road, Ratho Archaeological Desk-based Assessment*, unpublished AOC report.

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