

GUARD ARCHAEOLOGY



Calder Park Road, Mid Calder Data Structure Report Project 4415

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Calder Park Road, Mid Calder Data Structure Report

On behalf of: Robertson Homes


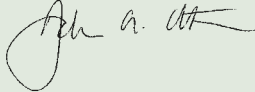
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*This document has been prepared in accordance
with GUARD Archaeology Limited standard operating procedures.*

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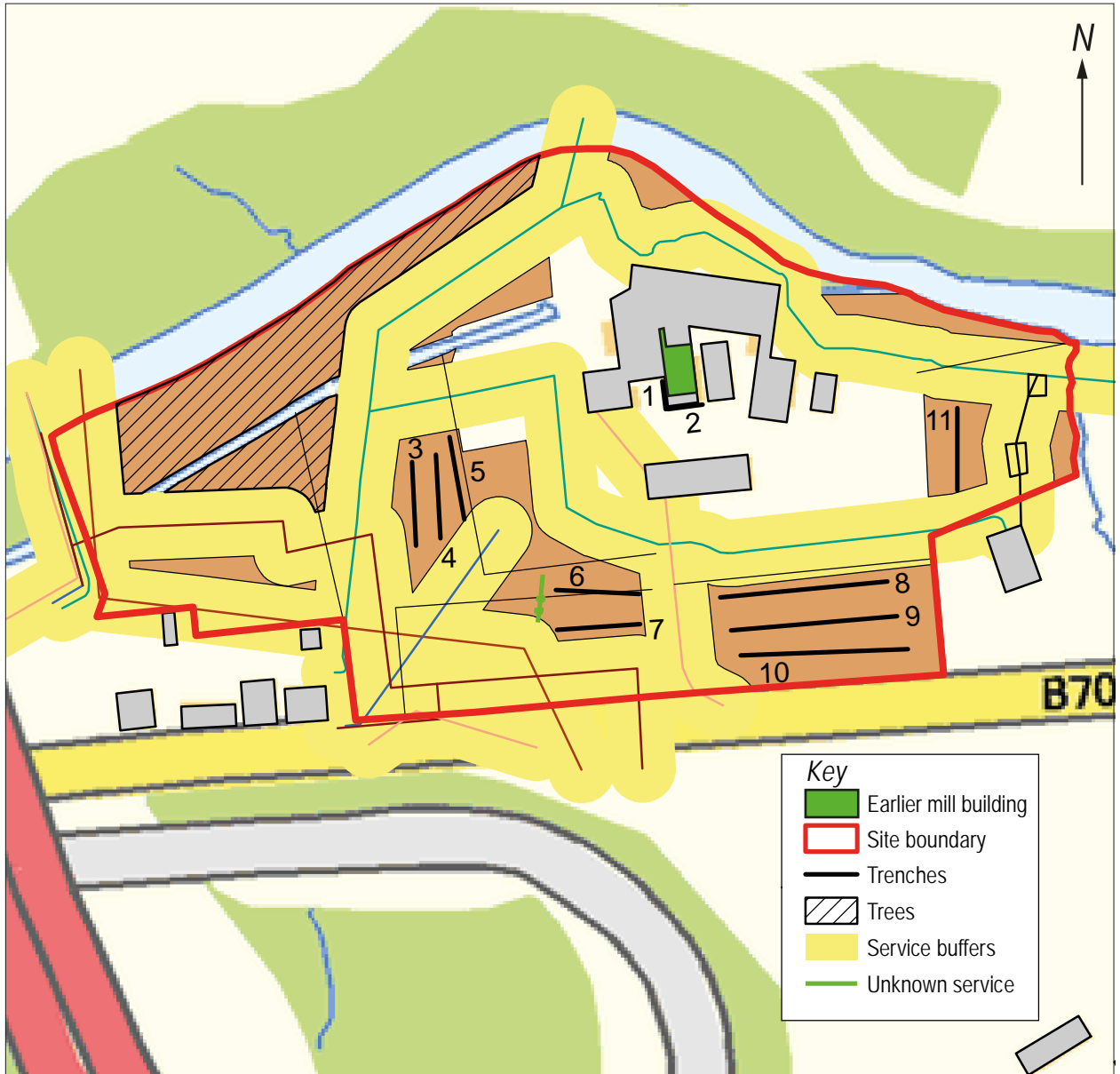
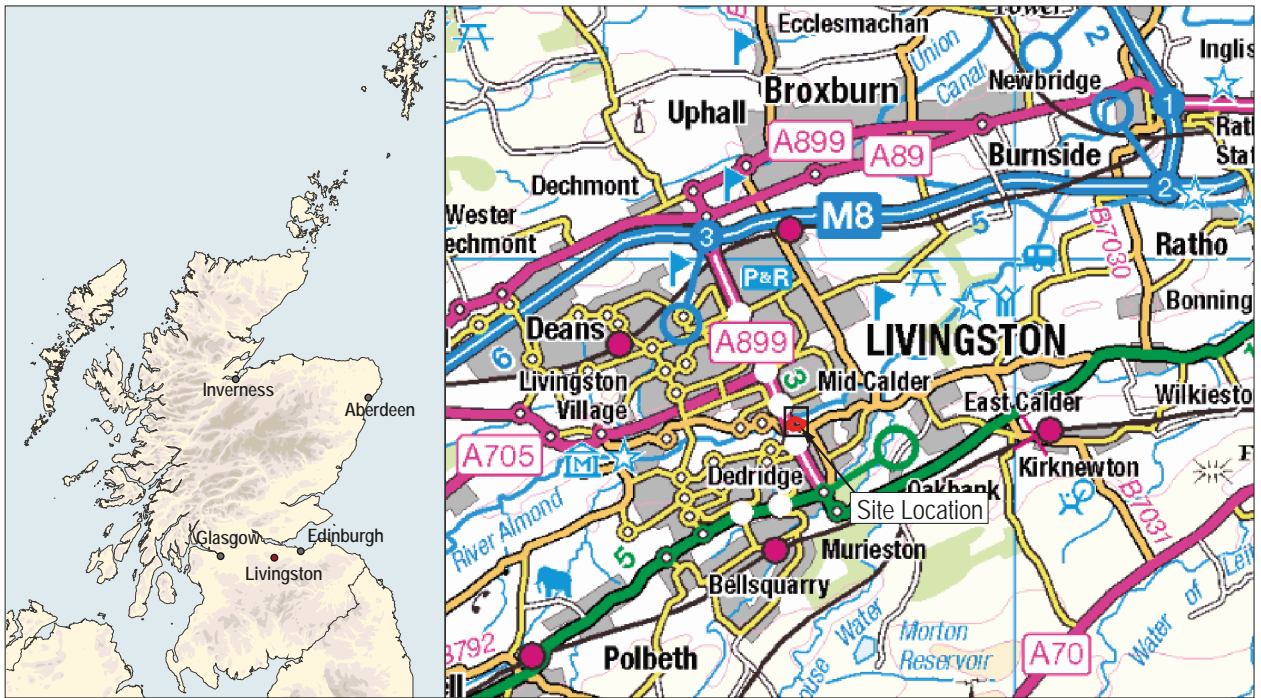
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Executive Summary

- 1.1 An archaeological evaluation and building survey was carried out by GUARD Archaeology Limited, working on behalf of Robertson Homes, on an area proposed for the erection of new dwellings and associated infrastructure at Calder Park Road, Mid Calder, West Lothian (Planning application reference 0811/FUL/14). The proposed trial trench evaluation was to sample 8% of the proposed development area available for trenching (8920 m²). A total of three trenches measuring 50 m in length, six measuring 30 m in length, one measuring 15 m in length and one measuring 10 m in length, all 2 m in width, were excavated across the site. During the evaluation two trenches located to the immediate west and south of the early mill extension identified cobbled surfaces and an area of hard standing. Fireclay drainpipes were visible in three of the evaluation trenches located to the south and west of the mill but no further archaeological features were recorded during the evaluation.

Introduction

- 2.1 This report sets out the results of an archaeological evaluation and building survey undertaken by GUARD Archaeology Ltd on behalf of Robertson Homes on an area proposed for the erection of new dwellings and associated infrastructure at Calder Park Road, Mid Calder, West Lothian (Figure 1). The evaluation took place between the 23rd and 24th May 2016 to determine the archaeological potential of the proposed development area. A further requirement of a building survey took place in advance of demolition works to the existing mill buildings on the 27th June 2016. All works were undertaken as stipulated by West of Scotland Archaeology Service (WoSAS) as archaeological advisor to West Lothian Council.

Site Location, Topography and Geology

- 3.1 The overall development area measured 3.35 hectares and was centred on NGR NT 06378 67280 located to the south-east of the town of Livingston. The development area comprised open rough pasture bounded on its northern side by the River Almond, Calder Park Road to the south, arable fields to the east and the A899 Livingston Road to the west. The presence of a number of over ground and underground services extending across the site, a series of modern mill buildings and car parking areas in the north-east of the development area and standing timber at the north-west part of the site reduced the available area for evaluation to 710 m² (Figure 1).
- 3.2 The underlying solid geology was Hopetoun Member, sedimentary rock cycles of the Strathclyde Group. The Superficial deposits across the area were Devensian and Diamiction tills and deposits. (British Geological Survey Map Viewer http://mapapps.bgs.ac.uk/geology_of_britain/home.html).

Archaeological Background

- 4.1 There was one known cultural heritage asset which lay within the boundary of the development area. New Calder Mill was visible on the 1st Edition Ordnance Survey Map highlighted as a series of buildings within the north-central portion of the site. The New Calder Paper Mill' as depicted on the 1st Edition Ordnance Survey map published in 1853 was extensively redeveloped during the 1950s to form the present layout of the paper mill. The sandstone mill house was still extant and although it had been much modified still represented a good example of a building of its type from this period. The original mill buildings for the most part lay below the location of the current mill buildings on site so it was unclear if any remains relating to these earlier buildings survived. The lack of development across the remainder of the site increased the potential for the survival of hitherto undiscovered subsurface archaeological remains or deposits possibly relating to the presence of the mill or activity surrounding it.



Plate 1a : Six Inch, 1st Edition Ordnance Survey, Published 1853 (Edinburghshire, Sheet 4) depicting the New Calder Mill.

Aims and Objectives

5.1 The aim of the archaeological evaluation was to identify:

- the presence or absence of as yet unknown archaeological features within the proposed development area;
- to ensure that any surviving archaeological remains, encountered during the evaluation, were recorded to an appropriate level.

5.2 The objectives were therefore to:

- Conduct an archaeological evaluation of 8% of the available evaluation area (8920 m²) of the proposed development;
- in addition, excavate two trenches at the southern periphery of the original mill buildings as depicted on the 1st Edition Ordnance Survey Maps to assess if remains survived.
- Conduct a standing building survey to establish the presence or absence of any unknown structural elements relating to any earlier structures present on site;
- undertake a programme of recording of these structural elements prior to and during any demolition work;
- submit a report to data structure level for agreement to WoSAS on behalf of West Lothian Council, on completion of the archaeological fieldwork, which included an outline of the scope of any further excavation works should any significant archaeology be encountered.

5.3 The scope of the archaeological works were to establish:

- that if the archaeological evaluation encounters no significant archaeological remains, no further archaeological fieldwork will be required for this development.

Methodology

6.1 Evaluation Methodology

6.1.1 The proposed development area was photographed and a brief written description made prior to the commencement of any ground breaking works.

6.1.2 A series of 11 evaluation trenches (Figure 1) were excavated, four measuring 50 m in length

by 2 m wide, five measuring 25 m in length by 2 m wide and one measuring 30 m in length by 2 m wide, using a back-acting machine under constant supervision of a GUARD Archaeologist. Standing timber at the north-west corner of the site, numerous underground and overhead services and modern mill buildings reduced the total area for evaluation to 710 m².

- 6.1.3 The topsoil or overburden at each trench location was removed in spits to the first archaeological horizon or, where none was found, to the natural subsoil. A sample of archaeological features encountered were hand cleaned to determine their character and extent. All trenches were accurately surveyed using a sub-metre GPS and located within the National Grid.
- 6.1.4 No archaeological finds were recovered during the course of the works.
- 6.1.5 No bulk soil samples were recovered from site.
- 6.1.6 A representative section was recorded denoting depth of topsoil, any stratigraphy present and the nature of the soil. This information was logged in the day book together with a sketch drawn to scale and a photographic record of deposits.
- 6.1.7 On completion of the recording of the evaluation trenches, the backfilling was undertaken by a back-acting machine. No specialist backfilling was undertaken.

6.2 Building Survey Methodology

- 6.2.1 In the first instance, contextual photographs were taken from all available aspects across the site of both the evaluation and HBR area. All areas of the existing structures suspected to be of nineteenth century date were recorded to Level 1 (Visual record)
- 6.2.2 General photographs of the exterior elevations and the interior of the buildings were taken. Detailed photographs were also taken of significant fixtures/fittings within the buildings where access permitted.
- 6.2.3 The Level 1 survey of the mill buildings on site included only simple descriptive records with accompanying exterior sketches and appropriate general photographs. The results of the HBR are incorporated into the DSR with the evaluation results.
- 6.2.4 Controlled demolition of the central mill buildings, incorporating pre existing sandstone structures were undertaken under the supervision of an archaeologist.
- 6.2.5 Any further areas of pre-existing structures, unknown features, fitting or fixtures revealed during subsequent demolition work, were documented and recorded following the guidelines above.
- 6.2.6 All elements of the fieldwork were undertaken in line with the policies and guidelines of the Chartered Institute for Archaeologists (CifA) (Code of Conduct 2014; Standards and guidance for archaeological excavation 2014) of which GUARD Archaeology Ltd is a *Registered Organisation*.

Results

- 7.1 The summary of the results is outlined below and should be read in conjunction with the fuller context descriptions in Appendix B. The full details of the results can be found in Appendices A-D and are illustrated in Figure 1 and 2 and Plates 1a-30.

7.2 Mill buildings

- 7.2.1 The mill as it presently stood comprised of a detached two-bay, rectangular in plan, sandstone house built with coursed sandstone rubble with dressed stone window and door margins. The slate roof had lead ridges and flashing at the dressed stone chimney stacks, at either gable end, and decorative coping. The mill house was abutted by a series of later 20th century brick built extensions around the west and north sides. A range of five brick buildings and a steel framed

building east of this formed the paper mill. On the west side of the house the remains of a large settling pond were visible. The settling pond was originally constructed as a result of the local coal mines located upstream of the mill discharging effluent from the coal washing plants into the River Almond, from which the paper mills water supply derived.



Plate 1: General view of the mill complex, from the south-east.



Plate 2: South facing, front elevation of the mill house, enlarged window openings on ground floor.



Plate 3: East facing elevation of mill house with later brick extensions abutting the north, rear elevation of the property.



Plate 4: North facing, rear elevation of the mill house with later brick extensions.



Plate 5: West facing elevation of the mill house with later brick extension.

7.2.2 One of the brick built buildings forming part of the present mill complex was found to have subsumed as part of an earlier sandstone building with later extensions and alterations. The earlier building was located to the east of the mill house. The remains of this earlier structure comprised two sandstone rubble walls, with rubble margins around door and window openings, with walls aligned north to south with a gable at the southern end. The stub end of a sandstone wall aligned east to west was visible at the north end of the building, although the north end of this building was not fully determined having been truncated by a large steel framed structure with a deep basement. What remained of the walls of this structure measured 12.25 m long and stood to what appeared to be their original height of 2.8 m, the building measured 6.5 m wide. Abutting the south side of the gable of the building two further sandstone walls were visible, these formed the remains of part of an extension 10.6 m long by 6.5 m wide. Much of the

sandstone built extension had been demolished during the later redevelopment of the site but where it survived it was built from coursed rubble with dressed stone around the door margins. The walls of the mill building and the extension all featured brick blocking in original openings and new openings had been inserted through parts of the walls. Two blocked up fireplaces were visible in the gable wall at the south end of the earlier building, the chimney voids could be seen in the gable wall during down taking. A concrete surface with deep channels was found forming the floor inside the principle building and concrete again formed the floor in the later extension to the south.



Plate 6: Composite photograph of west facing external elevation of earlier sandstone mill building below 20th century brick, the later sandstone built extension abuts the south end of the mill building wall beyond the right hand side of the open doorway. (Image slightly distorted by image manipulating software)



Plate 7: West facing external elevation of south end of earlier sandstone mill building and later sandstone extension showing brick blocking under sandstone arch.



Plate 8: West facing elevation north end of earlier mill building with bricked up openings.



Plate 9: East facing internal elevation of later sandstone extension abutting gable end of earlier mill building right of frame.



Plate 10: East facing elevation of the earlier mill building with blocked opening and later brick work and a fragment of the later sandstone built extension abutting the south side of the gable wall.



Plate 11: General view of original mid 18th Century Mill building after removal of 19th Century extension from the south-west.



Plate 12: North facing internal elevation of gable wall in the earlier mill building with two blocked fireplaces and a small wall press, three roof scars corresponding to the height of the mill building, later sandstone built extension and the subsequent brick enlargement of the building are visible on top of and above the gable wall top right of frame.



Plate 13: Detail of the roof scars associated with different phases of construction.



Plate 14: Blocked wall press in north facing elevation gable wall, wooden lintel visible above whitewashed brick blocking.



Plate 15: Blocked fireplace in north facing elevation gable wall.



Plate 16: Blocked fireplace in north facing elevation gable wall.



Plate 17: West facing internal elevation earlier building with blocked openings and possible later slapped through opening or remodelled original opening, deep concrete floor with channels visible base of frame.



Plate 18: Detail of blocked opening in west facing internal elevation earlier mill building.



Plate 19: Detail of blocked opening and possible later slapped through opening or remodelled original opening left of frame in west facing internal elevation earlier mill building.



Plate 20: East facing internal elevation earlier mill building with blocked opening and later slapped through large doorway. Steel lintel over doorway rests on top of earlier sandstone building wall heads.



Plate 21: Detail of blocked opening in east facing internal elevation earlier mill building.



Plate 22: East facing internal elevation earlier mill building (north of previous shots) blocked opening.



Plate 23: Detail of blocked opening in east facing internal elevation earlier mill building.



Plate 24: South facing internal elevation of stub end of northern partition?/gable? wall with brick consolidation earlier mill building.

7.3 Evaluation Trenches 1 and 2

- 7.3.1** Trench 1 was excavated through concrete forming the present yard surface to the south of the existing mill complex. Beneath the concrete a cobble surface 100 was recorded. This comprised sub-square and sub-rectangular whinstone cobbles forming a surface along the west side of one of the later brick buildings that had subsumed the earlier sandstone mill building. Abutting the south side of the cobbles a natural gravel surface 101 was recorded, this was overlain by a dark grey/black accumulation of trampled material 102.
- 7.3.2** Two service trenches were also visible in Trench 1, the first contained an iron pipe, the second a fireclay pipe. To the south of the services a small brick setting 103 was recorded, this was built with unbonded bricks, laid on edge, a single course in height and three bricks wide. Some of the bricks were stamped ETNA. The ETNA brick company at Armadale operated from 1897 until finally closing its gates for business in December 2011. The structure measured 1.36 m long by 0.4 m wide and stood a single course in height at 0.08 m.
- 7.3.3** Trench 2 was similarly excavated through concrete forming the yard surface to the south of the mill buildings. Here a dry, loose grey silty sand with a basal course of large whinstones overlain

by smaller whinstone fragments and whinstone gravel 200 was found. This measured 2.3 m long and continued below the trench edges to the north and south by 2.64 m with a depth of 0.28 m. This may have represented part of the track leading along the southern edge of the mill building depicted on the Ordnance Survey map of 1853, or alternatively a variation of hard standing around the immediate environs of the earlier sandstone building. To the east of this a brick and whinstone cobbled surface, 201 was found. This was built with a combination of unfrosted red brick and whinstone cobbles laid on edge forming a yard surface to the south of the mill complex. The bricks and cobbles were bedded onto a thin layer of sand, the surface measured 3.6 m long by 2.3 m wide by 0.1 m deep and continued below the trench edges to the north, south and east.



Plate 25: Accumulation of trampled material deposit 102 overlying natural gravel yard surface 101 with cobbles 100 at the north end of the trench, from the south.



Plate 26: Detail of cobbled surface 100 in trench 1, from the west.



Plate 27: Brick setting 103 in trench 1, from the south-west.



Plate 28: Partially cleaned brick and cobbled surface 201 centre of frame with possible track remnant or hard standing 200 below ranging rod, in trench 2, from the east.

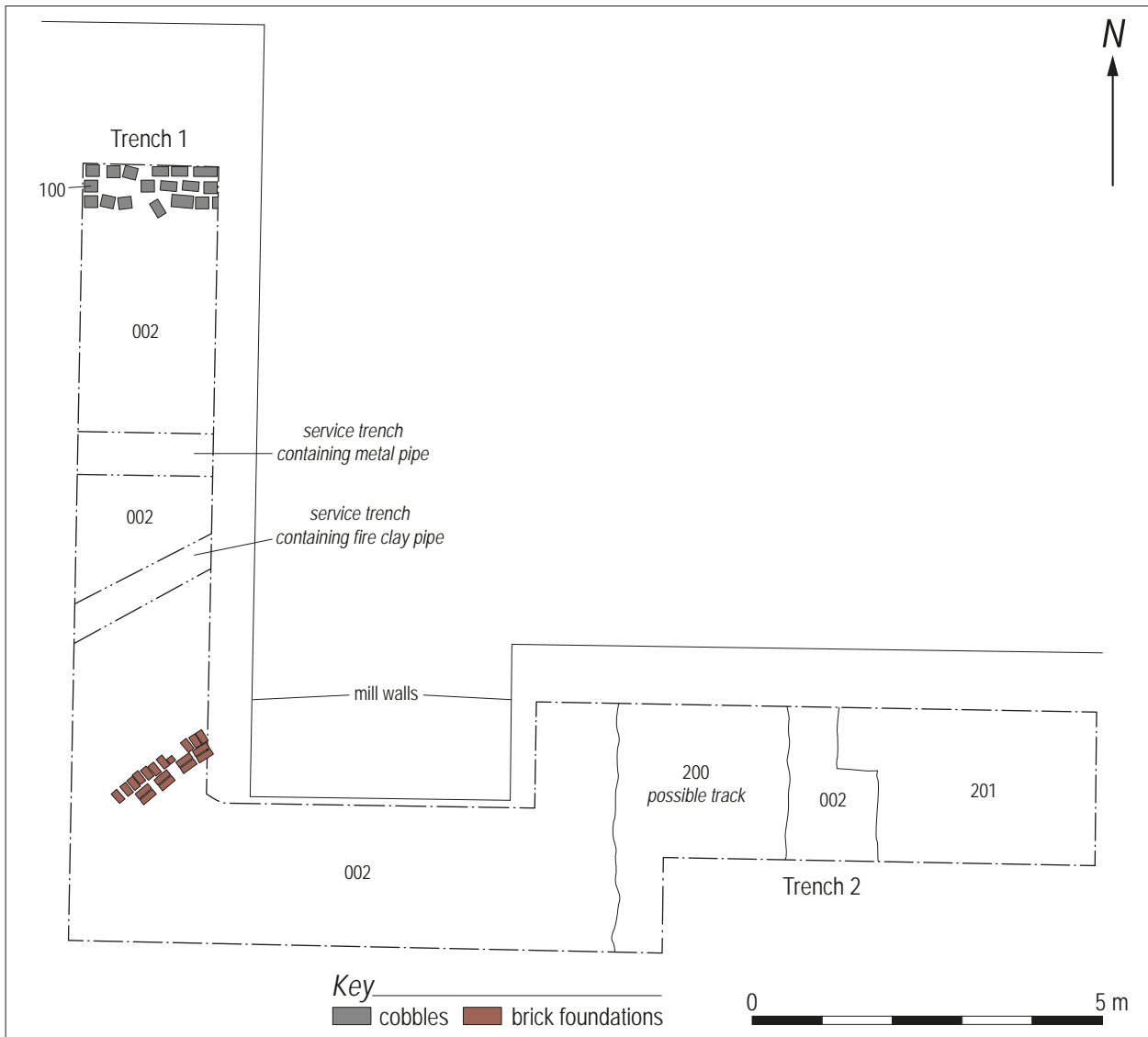


Figure 2: Plan of features in Trenches 1 and 2.

7.4 Evaluation Trenches 3 – 11

- 7.4.1 A fireclay pipe found in Trenches 8 and 9 was orientated north-west/south-east towards the mill, although it was not visible in Trench 10. According to the landowner Mr. Jim Wyllie a well was sunk around 50 years ago on the southern edge of the site and the pipe found here carried water from the well to the mill.
- 7.4.2 An additional fireclay pipe was found in Trench 5, orientated south-west/north-east and a trench containing a copper pipe tied onto an iron pipe, possibly an improvised earth strap was visible in Trenches 3, 4 and 5. A recent site investigation test-pit was visible in Trench 11 and two site investigation test-pits from an earlier phase of site investigation works were visible in Trenches 7 and 10.

Discussion

- 8.1 The archaeological evaluation has determined that the majority of features encountered were associated with the use of the site as a paper mill. Paper mills in Scotland began to flourish from the 1790s into the early 1800s. The sandstone portion of the mill dates from 1764 and although it has been much modified, still represents a good example of a building of its type

from this period. The earlier mill building remnants are likely to also date from this period with the extension to the south probably constructed during the nineteenth century. The associated exterior yard surfaces buried by later development of the site may also date to the nineteenth century. To the north of the earlier building remains and forming part of the existing mill complex, a deep excavation forming an extensive basement to supply gravity fed machinery was located, this will have truncated any earlier building remains located in this area. The majority of the mill lade still survives although now much overgrown and a portion of the lade around the mill has been filled in.



Plate 29: The mill lade to the west of the mill, from the west.



Plate 30: The outfall of the mill lade to the east of the mill, from the west.

- 8.2 There is a remarkable continuity in the use of the paper mill. It was built in 1764 by the Robertson's and was worked by their family for three generations before their daughter married into the Wyllie family which continued to develop the paper mill and carried on manufacturing paper until the mill's demise in the 1980's.
- 8.3 As an aside, the Smithy building depicted on the 1st edition Ordnance Survey map of 1853 located to the immediate south-east of the proposed development was demolished within the last 50 years. The stone was used by the mill employees to build or repair the mill dam located upstream from the mill on the River Almond beyond the modern road bridge. A steel framed shed latterly containing straw bales located to the immediate south of and once forming part of the mill complex was recently destroyed by fire and only part of the steel uprights of the structure remain.

Conclusion and Recommendations

- 9.1 The evaluation work has revealed that no significant archaeologically sensitive features exist within the proposed development area. In consequence, it is recommended that no further archaeological work is required in connection with the evaluated area.
- 9.2 GUARD Archaeology Ltd would stress that these recommendations are intended for guidance only and the final decisions on the nature and extent of any further archaeological work rest with the planning authority.
- 9.3 A summary of the project results will be submitted to *Discovery and Excavation in Scotland*. A copy of this is included in Appendix E. The archive for the project, including a copy of the report, will be submitted to the National Monuments Records for Scotland within six months of the completion of all fieldwork. An OASIS entry has been created for the site (guardarc1-256267).

Acknowledgements

- 10.1 GUARD Archaeology Ltd would like to thank Robertson Homes and Paul Robins of WOSAS for their assistance. Thanks too, to Mr Jim Wyllie for his fascinating discourse on the history of the mill and environs. Plant and driver were supplied by Foster Plant. Technical support was from Aileen Maule. The project was directed by Alan Hunter Blair and managed for GUARD by Kevin Mooney.

**Calder Park Road, Mid Calder
Data Structure Report**

Section 2: Appendices



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Appendices

Appendix A: Trench Details

Tr No	Length (m)	Width (m)	Depth (m)	Topsoil/Overburden	Subsoil	Details
1	10	1.9	0.36	Concrete yard surface	002	100 Cobbled surface, 101 gravel surface, 102 trample layer 103 brick setting
2	15	2.3	0.23	Concrete yard surface	002	200 possible track and 201 brick and cobble surface
3	30	2	up to 0.48	001	002	-
4	30	2	up to 0.54	001	002	-
5	30	2	up to 0.66	001	002	-
6	30	2	up to 0.48	001	002	-
7	30	2	-	001	002	-
8	50	2	up to 0.52	001	002	-
9	50	2	up to 0.52	001	002	-
10	50	2	up to 0.60	001	002	-
11	30	2	up to 0.84	001	002	-

Appendix B: List of Contexts

Context No.	Area	Description	Interpretation
001	Site	Deposit: A moist, loose mid-brown silty sand with occasional small sub-rounded stones 60 mm<. Measured up to 0.82 m deep	Topsoil
002	Site	Deposit: Orange, orange/brown sand and gravel with occasional large erratic stones/boulders. East end of site orange sandy clay with frequent stones.	Natural geology
100	Trench 1	Structure: Cobbled surface comprising sub-square, sub-rectangular whinstone cobbles laid on bed forming a surface along the west side of the mill complex. Cobble size 270 mm x 180 mm x 120 mm<. Measured 1.9 m long by 0.55 m wide x 0.12 m in depth, continued below trench edges to the N, W and E. Abutted by gravel surface 101 to the south	Yard surface associated with earlier phase of paper mill.
101	Trench 1	Deposit: Natural gravel forming a surface to the south of cobbles 100. Overlain by a dark grey/black trampled layer 102. Extended along the length of Trench 1 and continued below the trench edges to the east and west.	Natural gravel forming yard surface associated with earlier phase of the mill.
102	Trench 1	Deposit: A dry firm, dark grey black silty sand with frequent grit. Measured 0.07 m deep	Accumulation of trampled material over yard surface around the south end of mill complex associated with an earlier phase of the mill.
103	Trench 1	Structure: A small truncated brick setting rectangular in plan, built with unbonded bricks laid on edge a single course in height. Some of the bricks were stamped ETNA. The ETNA brick company at Armadale operated from 1897-December 2011. The structure measured 1.36 m long x 0.4 m wide and stood a single course in height 0.08 m. Brick size 230 mm x 85 mm x 80 mm	Small brick setting, function uncertain. Associated with later use of the mill complex.
200	Trench 2	Deposit: A dry, loose grey silty sand with a basal course of large whinstones 420 mm x 410 mm x 280 mm< overlain by smaller whinstone fragments and whinstone gravel. Measured 2.3 m long and continued below the trench edges to the north and south by 2.64 m wide by 0.28 m deep.	Remnant of possible track leading to earlier mill

Context No.	Area	Description	Interpretation
201	Trench 2	Structure: Unfrogged red brick and predominantly whinstone cobbles laid on edge forming a yard surface to the south of the mill complex. Bricks measured 220 mm x 100 mm x 80 mm, cobble measured 270 mm x 100 mm x 80 mm<>. Bricks and cobbles were bedded onto a thin layer of sand. Measured 3.6 m long x 2.3 m wide x 0.1 m deep. Continued below trench edges to the N, S and E	Yard surface around the south end of the mill

Appendix C: List of Drawings

Drawing No.	Area	Sheet No.	Subject	Scale
1	TR 1 and 2	-	Plan of features in trenches 1 and 2	1:50

Appendix D: List of Photographs

Film No.	001		
Frame	Area	Subject	Taken from
1	-	Registration	-
2	-	W facing external elevation earlier mill building	NW
3	-	W facing external elevation earlier mill building	NW
4	-	N facing elevation, partition wall towards S end of earlier mill building	N
5	-	W facing internal elevation earlier mill building	W
6	-	W facing internal elevation earlier mill building	W
7	-	E facing internal elevation earlier mill building	E
8	-	E facing internal elevation earlier mill building	E
9	-	E facing internal elevation earlier mill building	E
10	-	NW end of remains of earlier mill building	S
11	-	S facing elevation of mill house	S
12	-	W facing elevation of the S end of remnant of earlier mill building	W
13	-	E facing external elevation towards the south end of earlier mill	E
14	-	General view of mill house and existing mill complex	SW
15	-	General view of mill house and existing mill complex	SW
16	-	General view of mill lade to the west of the mill	W
17	-	General view of mill lade to the west of the mill	ESE
18	-	General view of the outfall of the mill lade east of mill	W
19	-	General view of the outfall of the mill lade east of mill	W
20	Tr 1	General view of dark trample layer 102 overlying gravel surface 101, cobbles 100 visible at the N end of trench	S
21	Tr 1	Cobbles 100	W
22	Tr 1	General view of trench 1	S
23	Tr 2	General view of trench 2	E
24	Tr 8	General view of trench 8	W
25		General view of paper mill	SE
26	Tr 9	General view of trench 9	W
27	Tr 10	General view of trench 10	E
28	Tr 7	General view of trench 7	E
29	Tr 6	General view of trench 6	E
30	Tr 5	Fireclay pipe in trench 5	S
31	Tr 5	General view of trench 5	N
32	Tr 4	General view of trench 4	S
33	Tr 3	Copper pipe tied onto metal pipe in shallow cut	S
34	Tr 3	General view of trench 3	N
35	Tr 8	Fireclay pipe in trench 8	E
36	Tr 11	General view of trench 11	N
37	-	General view of mill complex showing area where terracing into natural slope down to river has been carried out to form yard on S side of mill.	ESE

Frame	Area	Subject	Taken from
38	Tr 1	Brick setting 103 in trench 1	SW
39	Tr 2	Detail of fabric of brick and stone surface 201 in trench 2	S
40	Tr 2	Possible track or area of hard standing 200 to the west of brick and cobbled surface 201 in trench 2	W
41	Tr 2	Possible track or area of hard standing 200 to the west of brick and cobbled surface 201 in trench 2	E
42	Tr 2	General view of fabric of track or hard standing in trench 2	N

Appendix E: Discovery and Excavation Scotland Entry

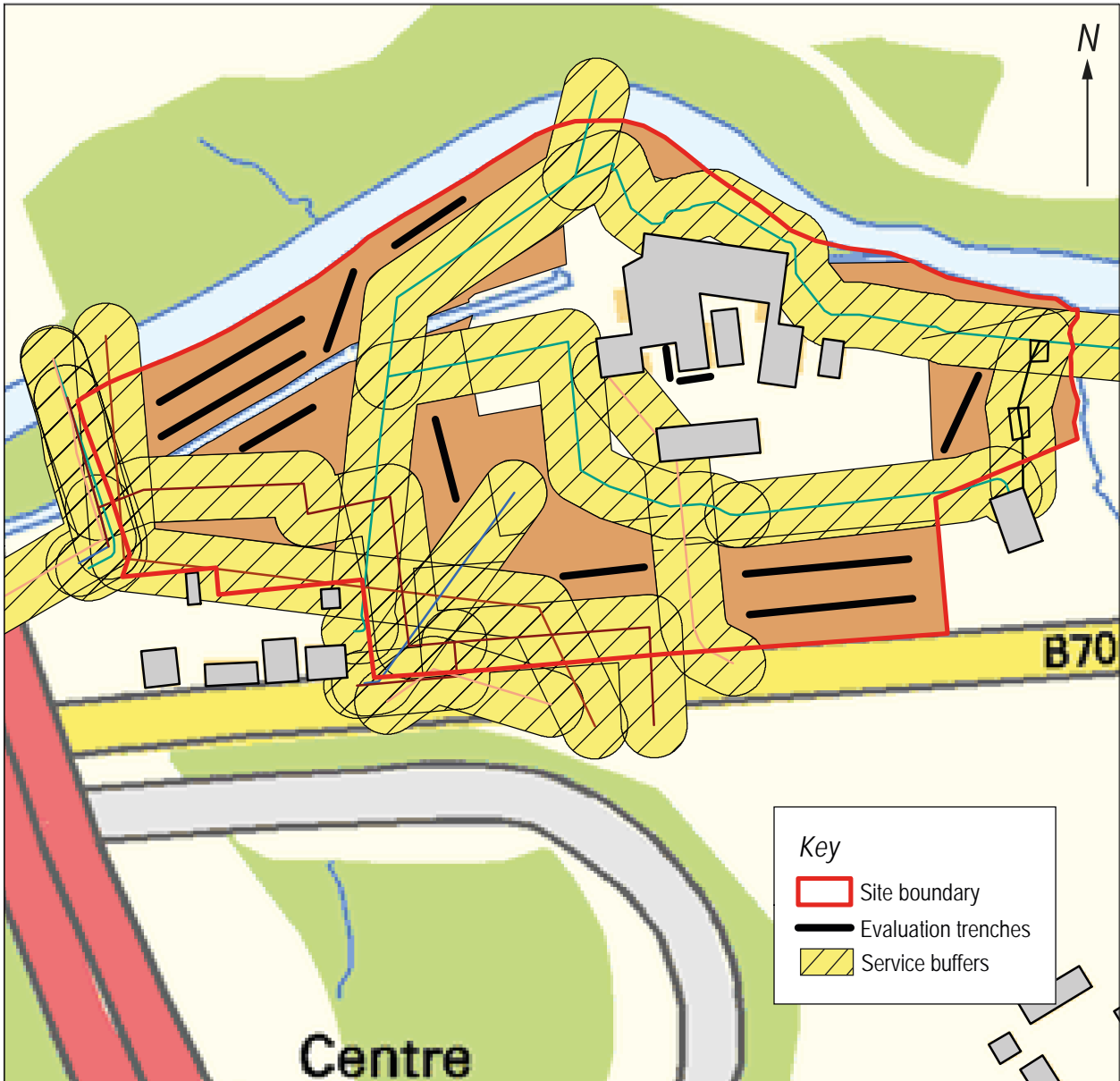
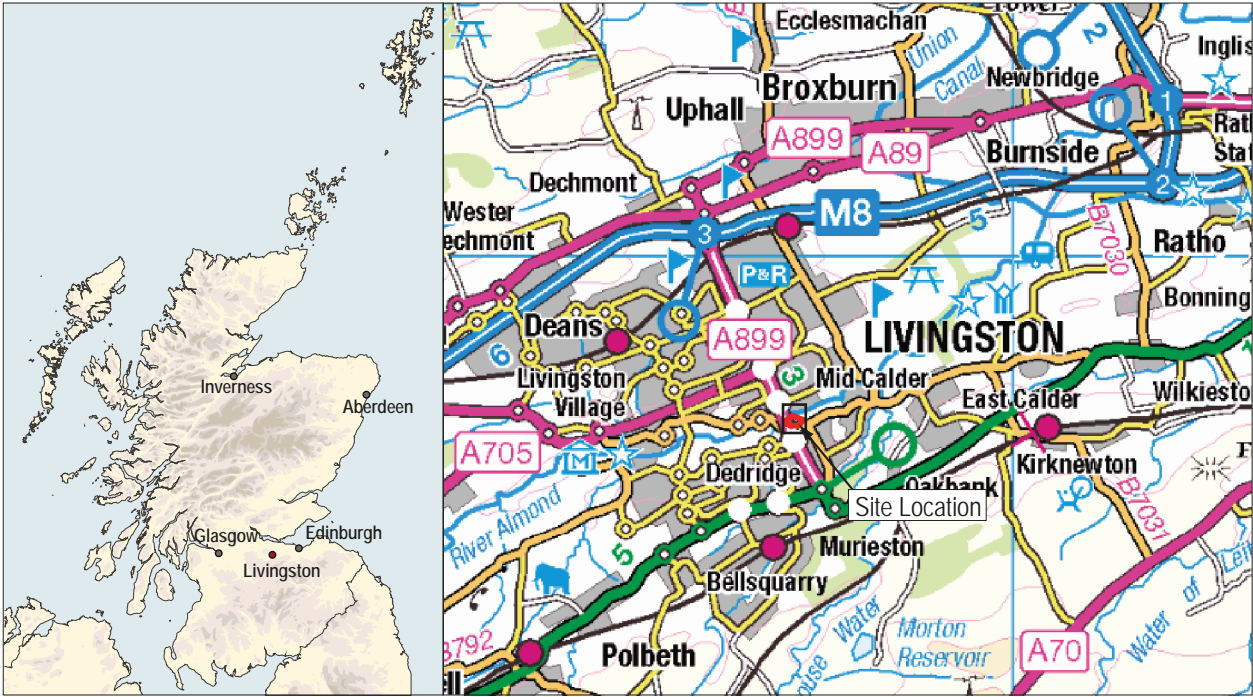
LOCAL AUTHORITY:	West Lothian
PROJECT TITLE/SITE NAME:	Calder Park Road, Mid Calder
PROJECT CODE:	4415
PARISH:	Mid Calder
NAME OF CONTRIBUTOR(S):	Alan Hunter Blair
NAME OF ORGANISATION:	GUARD Archaeology Ltd
TYPE(S) OF PROJECT:	Trial Trench Evaluation and building survey
NMRS NO(S):	NT06NE 39
SITE/MONUMENT TYPE(S):	Paper mill and lade
SIGNIFICANT FINDS:	
NGR (2 letters, 6 figures)	NT 06378 67280
START DATE (this season)	23 rd May 2016
END DATE (this season)	28 th June 2016
PREVIOUS WORK (incl. DES ref.)	N/A
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	<p>An archaeological trial trench evaluation was carried out around the southern edge of a now defunct but extant paper mill complex and on ground to the east, south and west of mill buildings at Calder Park Road, Mid Calder, West Lothian. 'The New Calder Paper Mill' as depicted on the 1st Edition Ordnance Survey map published in 1853 was extensively redeveloped during the 1950's to form the present layout of the paper mill. One of these later brick built mill buildings was found to have incorporated part of the southern end of an earlier mid-eighteenth century sandstone built mill building with a later nineteenth century sandstone built extension appended to the south. Two trenches located to the immediate west and south of the early mill extension identified cobbled surfaces and an area of hard standing. Fireclay drainpipes were visible in three of the evaluation trenches located to the south and west of the mill but no further archaeological features were recorded during the evaluation.</p> <p>As an aside, the Smithy building depicted on the 1st edition Ordnance Survey map of 1853 located to the immediate south-east of the proposed development was demolished within the last 50 years and the stone used by the mill employees to build or repair the mill dam located upstream of the mill on the River Almond beyond the modern road bridge. A steel framed shed latterly containing straw bales located to the immediate south of and once forming part of the mill complex was recently destroyed by fire.</p>
PROPOSED FUTURE WORK:	---
SPONSOR OR FUNDING BODY:	Robertson Homes
CAPTION(S) FOR ILLUSTRS:	---
ADDRESS OF MAIN CONTRIBUTOR:	52 Elderpark Workspace, 100 Elderpark Street, Glasgow G51 3TR
EMAIL ADDRESS:	bob.will@guard-archaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	Archive to be deposited in NMRS.

Appendix F: Written Scheme of Investigation**CALDER PARK ROAD, MID CALDER**

ARCHAEOLOGICAL EVALUATION

WRITTEN SCHEME OF INVESTIGATION

PROJECT 4415



Executive Summary

- 1.1 This Written Scheme of Investigation forms the archaeological method statement for the required 8% Archaeological Evaluation of the development area (Figure 1) at Calder Park Road, Mid Calder. These measures are aimed at addressing conditions related the Planning Application 0811/FUL/14 for a residential development and associated landscaping together with the formation of footpaths and an access road. This Written Scheme of Investigation will require to be submitted and approved by West of Scotland Archaeology Service (WoSAS) prior to the commencement of the evaluation.

Introduction

- 2.1 This WSI outlines the programme of archaeological works that may be needed to mitigate the effects of the proposed development and is prepared in accordance with the archaeological conditions attached to the Planning Application 0811/FUL/14. It details the methodology to be employed in implementing Stage 1 archaeological works. The mitigation methodology to be employed during Stage 2 fieldwork and Stage 3 post-fieldwork analysis and publication, if required, will be specified in further WSI addenda. These WSI addenda, if required, will be submitted for the approval of WoSAS, prior to the commencement of any archaeological work. All phases of work will be funded by the developer.

Site Location

- 3.1 The overall development area measures 3.35 hectares and is centred on NGR NT 06378 67280 located to the south-east of the town of Livingston. The development area comprises open rough pasture bounded on its northern side by the River Almond, Calder Park Road to the south, arable fields to the east and the A899 Livingston Road to the west. The presence of a number of over ground and underground services running across the site and a series of modern mill buildings and car parking areas with the north-east of the development area reduces the available area for evaluation to 8920 m².

Archaeological & Historical Background

- 4.1 There is one known cultural heritage asset which lies within the boundary of the development area. New Calder Mill is visible on the 1st Edition Ordnance Survey Map highlighted as a series of buildings within the north-eastern portion of the site. These buildings for the most part lie below the location of the current mill buildings on site so it is unclear if any remains relating to these earlier buildings survive today. The lack of development across the remainder of the site increases the potential for the survival of hitherto undiscovered subsurface archaeological remains or deposits possibly relating to the presence of the mill or activity surrounding it.



Plate 1: Six Inch, 1st Edition Ordnance Survey, Published 1853 (Edinburghshire, Sheet 4).

Aims and Objectives

- 5.1 The main aim of the archaeological evaluation is to establish the presence or absence of previously unknown archaeological deposits. Therefore the aims and objectives of the archaeological works are as follows:
- conduct an archaeological evaluation of 8% of the available evaluation area (8,920 m²) of the proposed development ;
 - in addition to the 8% evaluation, excavate two trenches at the southern periphery of the original mill buildings as depicted on the 1st Edition Ordnance Survey Maps to assess if remains survive.
 - submit a report to data structure level for agreement to WoSAS on behalf of West Lothian Council.
 - Submit, if excavation or post-excavation works are required, an accompanying project design and costing alongside the data structure report, which will outline arrangements for further excavation or post-excavation works, in accordance with paragraph 2.1 above.

Methodology

Archaeological Evaluation

- 6.1 The available area for evaluation on the site, after deducting the area covered by services and taking into account the standard safety buffer zones for each, equates to 0.892 hectares. The 8% evaluation of this area (710 m²) will necessitate four, 50 m long trenches , five, 25 m long trenches and one 30 m long trench, all measuring 2 m wide. All trenches will be excavated using a back-acting machine with a smooth-edged bucket under constant supervision of a GUARD Archaeologist.
- 6.3 In addition to the 8% evaluation of the site, undertake the excavation of two trenches at the southern periphery of the original site of the mill noted on 1st Edition Ordnance Survey Maps. These trenches will enable us to note if the original mill buildings survive as footings.
- 6.4 The topsoil or overburden at each trench location 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 on-site Archaeologist to determine their character and extent.
- 6.5 Any significant archaeological features encountered will be dealt with by the on-site Archaeologist. Should negative-cut features be encountered, a representative sample will be 25-50% excavated in order to determine their significance, date and function. A full record of excavated features will be made using a single context recording system using pro forma sheets, drawings and photographs. All archaeological features will be photographed and recorded at an appropriate scale. Sections will be drawn at 1:10, and plans at 1:20. All trenches will be accurately surveyed using a sub-metre GPS and located within the National Grid.
- 6.6 All archaeological finds will be dealt with by the on-site Archaeologist. Finds and animal bone will be collected as bulk samples by context. Significant small finds will be three dimensionally located prior to collection. All finds will be processed to MAP2 type standards and subject to appropriate specialist assessment. If necessary, conservation of finds will be appraised to allow for specialist study.
- 6.7 All excavated feature fills and horizons will be sampled as appropriate, using bulk soil samples, for palaeo-environmental evidence.
- 6.8 A representative section will be recorded 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.
- 6.9 Should human remains be revealed by the excavation, the local police, the client and WoSAS will be informed immediately. Any human remains will be accurately recorded, but left *in situ*, pending the agreement of the police, the client and WoSAS on an appropriate mitigation strategy.

- 6.10 Should significant archaeological remains be encountered by the evaluation, requiring more than the 8% evaluation outlined above, the remains will be largely left *in situ* pending the agreement of the client and WoSAS on a WSI addendum for an appropriate scope of excavation (Stage 2) and Post-excavation design including scope of finds analysis, conservation & publication (Stage 3).
- 6.11 WoSAS will be the final judge of significance regarding any findings and may well insist on full excavation for any features to be destroyed by the proposals.
- 6.12 All elements of the fieldwork and any subsequent post-excavation work will be undertaken in line with the policies and guidelines of the Chartered Institute for Archaeologists (CIfA) of which GUARD Archaeology Ltd is a *Registered Organisation*.

Report Preparation and Contents

- 7.1 A report incorporating the results of the evaluation will be submitted to the client within two weeks of completion of all fieldwork and, subject to client approval, then submitted to the WoSAS. The report will include a full descriptive text that will analyse and characterise the results of the evaluation. It will also include lists of all the archaeological records, drawings and photographs and artefacts recovered.
- 7.2 The report will include the following:
- executive summary;
 - a site location plan to at least 1:10,000 scale with at least an 8 figure central grid reference;
 - OASIS reference number; unique site code;
 - contractor's details including date work carried out;
 - nature and extent of the proposed development, including developer/client details;
 - description of the site history, location and geology;
 - a site plan to a suitable scale and tied into the national grid so that features can be correctly orientated;
 - discussion of the results of field work;
 - context & feature descriptions;
 - features, number and class of artefacts, spot dating & scientific dating of significant finds presented in tabular format;
 - plans and section drawings of the features drawn at a suitable scale;
 - initial assessment of relevant finds/samples if appropriate;
 - recommendations regarding the need for, and scope of, any further archaeological work such as excavation (Stage 2) and Post-excavation finds analysis, conservation & publication (Stage 3);
 - bibliography.
- 7.3 At least two copies of the report will be prepared for the client and a further digital PDF copy sent to WoSAS.
- 7.4 WoSAS state that any DSR is to be submitted within 4 weeks of fieldwork completion, any PERD within 3 months of agreement to the DSR and any final publication within a year of agreement to the PERD.
- 7.5 The report will be presented in an ordered state and contained within a protective cover/sleeve or bound in some fashion. The report will be page numbered and supplemented with section numbering for ease of reference.

Copyright

- 8.1 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 GUARD Archaeology Limited.

Publication

- 9.1 A summary of the project results will be submitted to *Discovery and Excavation in Scotland*. In the event of minor archaeological remains being encountered during the work, it is proposed that a comprehensive report submitted to *Discovery and Excavation in Scotland*, will form the final publication of the site. A copy of this will be included in the Data Structure Report.

Archive

- 10.1 The archive for the project, including a copy of the report, will be submitted to the National Monuments Records for Scotland within three months of completion of all relevant work.
- 10.2 The online OASIS form at <http://ads.ahds.ac.uk/project/oasis/> will be completed within 3 months of completion of the work. Once the Data Structure Report has become a public document by submission to or incorporation into the SMR, WoSAS will validate the OASIS form thus placing the information into the public domain on the OASIS website.

Finds Disposal

- 11.1 The arrangement for the final disposal of any finds made in connection with the archaeological work, will be deposited in keeping with Scottish legal requirements as set out in the Treasure Trove Code of Practice published by the Scottish Government in December 2008. 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, 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 which museum should be allocated the finds. All artefacts will be temporarily stored by GUARD Archaeology until a decision has been made by the panel.

Personnel and Liaison

- 12.1 The GUARD Archaeology team will comprise the following qualified and experienced GUARD archaeologists:
- Project Director (on-site Archaeologist): Alan Hunter Blair
 - Archaeologist (Surveyor): Diarmuid O' Connor
 - Technical Support: Aileen Maule
 - Project Manager: Kevin Mooney
- 12.2 The GUARD Archaeology Project Manager, Kevin Mooney, will be the point of contact for the archaeological works. A full CV for individuals concerned can be made available on request.

Monitoring

- 13.1 The proposed start date for the archaeological works is Wednesday 18 May 2016. WoSAS and the client will be informed of the site mobile phone number of the attending Archaeologist prior to the start date so that monitoring visits can be arranged.

Health & Safety and Insurance

- 14.1 GUARD Archaeology Limited adheres to the guidelines and standards prescribed for archaeological fieldwork set down in the Institute for Archaeologists approved Health and Safety in Field Archaeology document. It is standard GUARD Archaeology 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 Archaeology Limited's Fieldwork Safety Policy Statement may be viewed upon request.
- 14.2 GUARD Archaeology Limited also possesses all necessary insurance cover, proofs of which may be supplied upon request.

CALDER PARK ROAD, MID CALDER

ARCHAEOLOGICAL EVALUATION AND HBR

WRITTEN SCHEME OF INVESTIGATION

ADDENDUM

PROJECT 4415

By

Kevin Mooney

Executive Summary

This document sets out an Addendum to the original Written Scheme of Investigation (WSI) for the archaeological evaluation at Calder Park Road, Mid Calder in West Lothian (Planning Reference 0811/FUL/14). The evaluation was required by West Lothian Council, under advice from the West of Scotland Archaeology Service (WoSAS) for the proposed residential development and associated landscaping, footpaths and access road at Calder Park Road, Mid Calder. This WSI Addendum has been prepared on behalf of Robertson Homes in consultation with the West of Scotland Archaeology Service (WoSAS) in advance of demolition work associated with the present upstanding buildings on site.

Introduction

An archaeological evaluation was carried out by GUARD Archaeology Limited between the 23rd and 24th May 2016 on the area proposed for the residential development and associated landscaping, footpaths and access road at Calder Park Road, Mid Calder. The evaluation comprised of 11 trenches covering an area totalling 647.20 m². The presence of a number of over ground and underground services running across the site and a series of modern mill buildings, car parking areas in the north-east of the development and standing timber at the north-west part of the site reduced the available area for evaluation to 8920 m². Two trenches located to the immediate west and south of the central mill building identified cobbled surfaces and an area of hard standing possibly associated with an earlier building. Fireclay pipes were visible in a number of trenches located to the south and west of the mill. One of the existing brick built mill buildings was found to have incorporated part of the southern end of an earlier sandstone built building. No further archaeological features were recorded during the evaluation.

This WSI Addendum sets out the scope and methodology for the Archaeological Monitoring of any demolition associated with the portion of the existing central mill building. This displays evidence of the incorporation of an earlier sandstone built building within its fabric. This follows recommendations from WoSAS, Archaeological Advisors to West Lothian Council.

This document details the methodology to be employed in implementing the Stage 1 archaeological evaluation and mitigation methodology; Stage 2 excavation and Stage 3 post excavation analysis and publication, will be specified in *addenda* to this document. These *addenda*, if required, will be submitted to the West of Scotland Archaeology Service prior to the commencement of any archaeological work. All phases of work will be funded by the developer as required by the Planning Authority.

The demolition work to the existing mill buildings has the potential to damage or destroy unknown archaeological features within the site from the following activities:

- Demolition of existing walls incorporating earlier buildings;
- Ground disturbance from the removal of existing floor surfaces and foundations.

Aims, Objectives and Scope

The main aim of the Archaeological Monitoring is to establish whether important archaeological remains survive within the development area and ensure any upstanding elements of previous buildings on site are preserved by record prior to demolition or removal. Therefore the aims and objectives of the Monitoring exercise are as follows:

- establish the presence or absence of any unknown structural elements relating to any earlier structures present on site;
- undertake a programme of recording of these structural elements prior to and during any demolition work;
- prepare a report on the results of the monitoring along with any mitigation methods that may be necessary for submission to the Planning Authority.

The objectives of subsequent Stage 2 and 3 works would be defined within their *addenda*.

Archaeological Monitoring Methodology

The strategy to be employed during the Monitoring will consist of the following:

- In the first instance contextual photographs will be taken from all available aspects across the site of both the evaluation and HBR area. All areas of the existing structures suspected to be of nineteenth century date will be recorded to Level 1 (Visual record).
- General photographs of the exterior elevations and the interior of the buildings will be taken. Detailed photographs will also be taken of significant fixtures/fittings within the buildings where access permits.
- The Level 1 survey of the mill buildings on site will include only simple descriptive records, with accompanying exterior sketches and appropriate general photographs. The results of the HBR will be incorporated into the DSR with the evaluation results.
- Controlled demolition of the central mill buildings, incorporating pre existing sandstone structures will be undertaken under the supervision of an archaeologist.
- Any further areas of pre existing structures, unknown features, fittings or fixtures revealed during subsequent demolition work, will be documented and recorded following the guidelines above.
- All elements of the fieldwork will be undertaken in line with the policies and guidelines of the Chartered Institute for Archaeologists (CIfA) (Code of Conduct 2014; Standards and guidance for archaeological excavation 2014) of which GUARD Archaeology Ltd is a *Registered Organisation*.

NOTE: All reporting, copyright, publication, archive, finds disposable, personnel and Liaison, Monitoring and H&S and Insurances are as before in the original WSI.

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