

Archaeological Standing Building Survey
Oakbank Mill
Blairgowrie
PERTH & KINROSS

BW10



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**ARCHAEOLOGICAL STANDING
BUILDING SURVEY
OAKBANK MILL
BLAIRGOWRIE**

BW10

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Illustration 4: First Floor and Attic plans

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Illustration 6: North elevation (exterior)

Illustration 7: South elevation (exterior)

Illustration 8: West elevation (exterior)

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ABSTRACT

Alder Archaeology were commissioned to undertake an archaeological standing building survey, according to ALGAO guidelines, of a former jute mill on the west bank of the River Ericht, on the northern outskirts of Blairgowrie. Oakbank Mill (NGR NO 1769 4621) was first constructed in c.1830 and rebuilt in 1872, following a fire; it is believed to have been the first mill in Scotland to spin jute. At the time of the survey, the mill featured its original water wheel and external vertical drive shaft, the only known example in the country. The survey was conducted on 1st February 2016.

1 Background

1.1 Introduction

Mr Brian Evans commissioned Alder Archaeology to undertake an archaeological standing building survey prior to the conversion to a dwelling of Oakbank Mill. The proposed development area is a former jute mill, centred on NGR NO 1769 4621. The work (site code BW10) was undertaken on 1st February 2016 in wet weather conditions. The requirement was to conduct an historic building recording exercise as stipulated in ALGAO guidelines (HBRG). Special attention was to be paid to the extant external drive mechanism and waterwheel of the former mill.

The work was designed to satisfy the archaeological condition on development application reference 15/041226/FLL.

1.2 Aims and Objectives

The main aim of this survey was to record the form, function, location, age and any evident construction phasing of the mill.

1.3 Reporting

The present document has been prepared as the final report on this survey. Copies will be sent to the client, Historic Environment Scotland and Perth & Kinross Historic Environment Record.

1.4 Planning and Curatorial Issues

This historic building record is designed to satisfy the outstanding archaeological condition on the planning consent for this development.

1.5 Acknowledgements

Mr Evans funded this survey and we wish to thank him for his assistance and guidance throughout this project.

2 Details of Work

2.1 The Site (Illus 1)

Oakbank Mill is situated on the west bank of the River Ericht where it runs through a gorge to the north of Blairgowrie, and somewhat to the south of the confluence of the Ericht with the Lornty Burn. This area features at least thirteen former mills dispersed along both banks of the Ericht between Craighall Bridge in the north to just south of Blairgowrie Bridge. The Oakbank Mill site is on a terrace cut into the riverbank, overlooking a modern footbridge and Keathbank Mill on the opposite bank. The mill is a single building aligned northwest-southeast.

2.2 Archaeological Potential

Oakbank Mill (NMRS NO14NE 104) is B-listed, of regional historic importance. It was constructed in c.1830 and rebuilt (allegedly following a fire) in 1872. It was one of four mills owned by the Grimond family, whose first venture was a lint mill on the nearby

Lornly Burn. Oakbank began as a trial site for spinning jute and was possibly the first mill in Scotland to spin this fabric, James Grimond having been persuaded to make the experiment by James Watt. At the time of the survey, the mill was a 5-bay rubble building with 2-bay extension to the north and the remains of a former wheelhouse alongside the river with a former lade feeding from the north. The wheel was still in position, with vertical drive shaft attached to the external face of the mill building. No other original examples of such an extant mechanism are known in Scotland.

2.3 Archaeological Method

Following ALGAO Scotland's Historic Building Recording Guidance (HBRG), a basic Historic Building Record was compiled, including annotated location and architects' plans and elevations, a narrative description and photographs of all elevations and significant details (external and internal) as well as the local setting of the building.

2.4 Results of Investigations

The three-storey (plus basement) mill building was constructed of rubble with stugged, squared quoins, with the bulk of material being local red sandstone, without harling. The walls were re-pointed with fresh lime mortar approximately ten years ago during a previous attempt at conversion (99/00704/PPLB); a new roof of grey slate was also fitted at this time, with all roof timbers replaced. Externally, the mill measured 27.10m x 17.20m, aligned northwest-southeast. Internally, the mill divided into a single-room basement, large ground floor main room with an extension to the north at a somewhat higher level with a raised floor (although this may have been due to spoil or rubble build-up), single-room first floor and single-room attic. The interior elevations were bare, unless otherwise stated.

A difference in wall fabric of the main building was noted in the exterior of the west wall between the ground floor- featuring a large number of small, thin slabs- and the first floor- featuring more large, squared blocks. This difference was less apparent in the east wall of the building, but may represent the re-building of the mill in 1872. It is possible that the northwards extension was also added at this time.

The single basement room (measuring 14.00m x 7.00m) had an uneven earth floor at the time of the survey, with unpainted modern blocks forming the entirety of the wall fabric in the south and west elevations from approximately 0.5m below ceiling height downwards. The north elevations was partially whitewashed, with traces of whitewash also apparent on the east elevation. The latter featured four replacement sash windows beneath replacement steel lintels within original stone embrasures measuring 0.50m deep and 1.70m wide. The base of a shaft built into the wall was noted just below ceiling height, between the two most northerly windows (see ground floor, below) Original circular cast iron pillars supported the replacement wooden ceiling joists, in three rows of three with an additional pillar just inside the doorway in the southeast corner of the room. The eastern row was slightly offset from the other two.

The ground floor main room (18.00m x 11.00m) featured original cast iron ceiling support pillars in two rows of eight, evenly dispersed along the length of the room; these also bore gallow-type crossbars below ceiling height, indicating an original function as loom supports. Severe cracking was noted along the internal south elevation of the room, which unlike the majority of the walls was whitewashed. A floor of grey

slabs was partially visible in the western half of the room, with temporary flooring covering much of the remainder. Prominent in the east elevation was the former machine/drive shaft also noted in the basement (see above), infilled with red brick and with iron bolts and washers in situ beneath a replacement joist. The shaft measured 0.75m wide, running from floor to ceiling. A second shaft or slot 0.86m wide and 0.26m deep, also extending from floor to ceiling, was noted in the north elevation, to the east of the doorway connecting with the extension. This shaft remained open. A small window measuring 0.90m high x 0.80m wide was located to the east of the shaft, with a replacement frame and stone lintel. The west and east elevations both included five embrasured windows, each 1.70m wide within an embrasure 0.50m deep. All the window frames were modern replacements and were boarded internally or externally at the time of the visit.

The northern extension (7.00m x 7.00m) was accessed via a temporary up-ramp and extended only from the western half of the main building. It appeared to feature a rough cobbled floor, although this may have represented rubble in-fill. The internal elevations featured extensive concrete and brick repair, especially apparent in the upper level (equivalent to the first floor in the main building) which appeared to have been almost entirely rebuilt internally. Two replacement windows were present at ground floor level in the east elevation, within embrasures 0.50m deep and 1.50m wide. Both embrasures featured extensive modern repair. At first floor level in the west elevation were a square window with narrow doorway to the south, both measuring 1m across. These faced out onto an external ground level- it should be noted that the extension was cut into a south-facing slope of the river bank, at the top of which was a level plateau above the level of the ground floor of the main building. Two first floor-level windows in the internal north elevation of the extension were of the same dimensions as those at ground floor level. The south elevation was whitewashed and graffiti was noted on the whitewash to the right of the lintel over the entrance at first floor level; this read "JT 1898 AO 1898". The wall fabric within the extension was somewhat more compact rubble, the majority grey stone rather than red, suggesting that the extension did indeed represent a different phase of construction from the main building.

The first floor of the main building featured five windows in the east elevation and four in the west, with a doorway at the south end of the latter instead of a fifth window. This presumably reflected either a former external staircase or a service access for loading or removing raw material or spun jute via a crane or hoist. The window embrasures were as on the ground floor, while the doorway measured 1.54m wide and extended from floor to ceiling. The majority of windows and the doorway featured replacement steel lintels, and concrete brick repairs were apparent below the ceiling beams. The shaft in the north elevation continued from floor to ceiling, but the bricked-up shaft in the east elevation did not extend beyond the ground floor.

The attic room included the exposed replacement beams and A-frames of the modern slate roof. Two windows in the south elevation and one in the north were probably original, but featured replacement frames. To the west of the north window, a floor to ceiling aperture accessed the extension; this probably replaced an original window which had existed prior to the construction of the extension. The extant windows measured 1.80m across, within 0.50m deep embrasures. The shaft extending from ground floor to attic terminated to the east of the north window. This probably

originally contained drive machinery (such as a drive belt) as with the similar shaft in the east wall of the ground floor.

The wheelhouse, attached to the exterior face of the east wall of the building, was composed of grey rubble, with lime mortar mostly still present but occasionally eroded to dry-stone; much of the north end was overgrown with ivy. The wheel, 3.40m wide and of wrought iron, was triple, with three rims supporting wooden-slat paddles. Each rim was eight-spoked, with the two outer rims bearing riveted iron outer facings in bolted sections; the middle rim bore bolted “teeth” for retaining the wooden slats of the drive wheel, some of which were still in place. The vertical drive pin, rising to first floor level with mill teeth gears at the head and base, was bracketed to the exterior wall; traces of an open slot behind it remained at first floor level, with this having been blocked with rubble wall in-fill and having formerly allowed the connection of a drive band. This blocked shaft corresponded with the feature noted in the interior east elevation of the ground floor room and near ceiling height in the basement.

A gable roofline was visible in the exterior fabric of the main building above the wheel, indicating a formerly fully or partially enclosing roof over the wheelhouse. An arched lintel crossed the aperture connecting with the race, while a doorway opened onto the river in the east wall, measuring 1.00m wide and 1.20m high, the base being blocked with tree roots and fallen branches. The head race ran in from the north, from a junction with a main lade following a northwest-southeast course from the Lornly Burn; the race feeding the Oakbank wheel measured approximately 2.00m for much of its length, widening to 4.00m where it connected with the wheelhouse. An overflow sluice connected with the river immediately north of the wheelhouse.

3 Interpretation

The form and fabric of the building were entirely consistent with its known use and history as a water-powered mill. Few original fittings remained, but notable features included original iron columns and loom supports and most of the external drive mechanism and water wheel, which is of particular significance as few examples of such mechanisms now exist. The current owner plans to preserve the wheelhouse and drive machinery and this is to be welcomed. Evidence of a change of fabric and construction style in the west elevation (exterior) between ground and first floors may represent the rebuild thought to have taken place in 1872 following a fire. The northwards extension did appear to be a secondary phase of construction, on similar grounds.

4 Conclusions and Recommendations

4.1 Recommendations for Further Work

Alder Archaeology considers the terms of the survey to have been met and does not recommend further work. However, the final decision ultimately rests with Perth & Kinross Heritage Trust.

Photographic Register

<i>Image No</i>	<i>Description</i>	<i>View</i>
001-2	Location shot, mill from south (oblique)	N
003	Location shot, mill from southeast	NW
004-5	Location shot, mill from east/footbridge (oblique)	W
006	Location shot, wheelhouse and drive shaft	W
007-8	Location shot, wheelhouse	NW
009-10	Location shot, mill from west-northwest	SSE
011	Location shot, mill from northwest	SE
012	Location shot, path to west of mill	S
013	Location shot, south end of mill	NE
014-15	Location shot, south end of mill	N
016	Location shot, south end of mill	E
017-18	Location shot, south end of mill	ESE
019	Location shot, south end of mill	NE
020	Southeast elevation (external), oblique	N
021-22	Southeast elevation (external)	NW
023	Southeast elevation (external), roof	NW
024	Southeast elevation (external), base	NW
025	Southeast elevation (external), detail of doorway into basement	NW
026-27	Southeast elevation (external), detail of exterior steps up from basement to path	W
028	Southeast elevation (external), detail of doorway into ground floor	NW
029	Southwest elevation, south end	NE
030	Southwest elevation, south end (base)	NE
031-33	Southwest elevation, south end (roof)	NE
034	Southwest elevation, mid-section (base)	NE
035	Southwest elevation, mid-section	NE

036	Southwest elevation, mid-section (base)	NE
037	Southwest elevation, mid-section	NE
038	Southwest elevation, mid-section (base)	NE
039	Southwest elevation, mid-section	NE
040	Detail, drainpipe at southwest corner, southwest elevation	NE
041	Southwest elevation, north end (base)	NE
042	Southwest elevation, north end	NE
043-44	Detail, drainage channel along base of southwest elevation	NW
045	Southwest elevation, extension	NE
046	Southwest elevation, oblique	E
047-50	Northwest elevation	SE
051	Location shot, northwest elevation and river/footbridge	SE
052	Location shot, ruined workers' cottages? to northwest of mill	NW
053-54	Detail, information board on footbridge	N
055	Location shot, northeast elevation from footbridge	W
056-64	Northeast elevation	SW
065	Location shot, northeast elevation (oblique)	N
066	Location shot, River Ericht (upstream)	N
067	Location shot, River Ericht (downstream, with Keathbank Mill)	S
068	Location shot, River Ericht (upstream)	N
069	Location shot, northeast elevation from footbridge	W
070	Northwest elevation, basement (interior)	NW
071-72	Northeast elevation, basement (interior), north end	NE
073	Northeast elevation, basement (interior), oblique	SE
074	Northeast elevation, basement (interior), south end	NE
075	Southeast elevation, basement (interior)	SW
076	Ground floor, main room (interior), oblique	N
077	Ground floor, main room (interior), oblique	E

078	Detail, millstone against northwest elevation, ground floor main room	NW
079-81	Northwest elevation, ground floor main room (interior), west end	NW
082-86	Northwest elevation, ground floor main room (interior), east end	NW
087	Northeast elevation, ground floor main room (interior), north end	NE
088	Northeast elevation, ground floor main room (interior), oblique	E
089	Detail, bricked-up shaft in northeast elevation, ground floor main room (interior), oblique	NE
090-91	Northeast elevation, ground floor, main room (interior), south end	NE
092	Northeast elevation, ground floor, main room (interior), mid-section	NE
093-94	Northeast elevation, ground floor, main room (interior), south end	NE
095-97	Southwest elevation, ground floor, main room (interior), south end	SW
098-102	Southwest elevation, ground floor, main room (interior), mid-section	SW
103	Southwest elevation, ground floor, main room (interior), north end	SW
104-5	Paved floor, ground floor, main room (interior)	SW
106	Ground floor, extension (interior), oblique	N
107	Northeast elevation, ground floor, extension (interior), south end	NE
108	Northeast elevation, ground floor, extension (interior), north end	NE
109	Northwest elevation, ground floor, extension (interior)	NW
110-111	Northwest elevation, ground floor, extension, upper storey (interior)	NW
112	Southwest elevation, ground floor, extension (interior)	SW
113	Southwest elevation, ground floor, extension (interior), upper storey	SW
114	Southeast elevation, ground floor, extension (interior)	SE
115	Southeast elevation, ground floor, extension (interior), upper storey	SE
116	Southeast elevation, ground floor, extension (interior)	SE
117-119	Northwest elevation, first floor, main room (interior)	NW
120-121	Northeast elevation, first floor, main room (interior), north end	NE
122-123	Northeast elevation, first floor, main room (interior), mid-section	NE
124-126	Northeast elevation, first floor, main room (interior), south end	NE
127-131	Southeast elevation, first floor, main room (interior)	SE

132-133	Southwest elevation, first floor, main room (interior), south end	SW
134	Southwest elevation, first floor, main room (interior), mid-section	SW
135-136	Southwest elevation, first floor, main room (interior), north end	SW
137	Northwest elevation, first floor, main room (interior)	NW
138	Attic room (interior), oblique	N
139-140	Northwest elevation, attic room (interior)	NW
141	Northwest elevation, attic room (interior), west end	NW
142	Northwest elevation, attic room (interior), east end	NW
143-144	Southeast elevation, attic room (interior), west end	SE
145-146	Southeast elevation, attic room (interior), east end	SE
147	Southeast elevation, attic room (interior), west end	SE
148	Attic room (interior), oblique	N
149	Location shot, river/roofline from attic room	N
150	Graffiti, southeast elevation, extension	SE
151	Steps down to river and wheelhouse (exterior)	NW
152	Wheelhouse (exterior), oblique	W
153	Wheel through east doorway into wheelhouse	SW
154	East wall of wheelhouse (exterior) and steps down from bridge, oblique	S
155	East wall of wheelhouse (exterior) north of east entrance, oblique	W
156	Wheel through east doorway into wheelhouse	SW
157	South end of lade, with remains of sluice gate grille	W
158	South end of lade, from wheelhouse	NW
159	North end of lade	N
160-162	Wheelhouse, from lade	SE
163	Wheel and drive shaft through north arch of wheelhouse	WSW
164	Wheel, through north arch of wheelhouse	SE
165-166	Drive shaft on northeast elevation of mill (external)	W
167	Detail, drive gears on top of wheel	W

168	Wheel, through north arch of wheelhouse	S
169	Detail, displaced pipe in lade	W

Appendix 1 Discovery & Excavation in Scotland Entry

LOCAL AUTHORITY:	Perth & Kinross
PROJECT TITLE/SITE NAME:	Oakbank Mill, Blairgowrie
PROJECT CODE:	BW10
PARISH:	Blairgowrie
NAME OF CONTRIBUTOR:	C Fyles
NAME OF ORGANISATION:	Alder Archaeology Ltd
TYPE(S) OF PROJECT:	Historic Building Record
NMRS NO(S):	NO14NE 104
SITE/MONUMENT TYPE(S):	Jute mill (disused), B-listed
SIGNIFICANT FINDS:	None
NGR (2 letters, 8 or 10 figures)	NO 1769 4621
START DATE (this season)	01/02/2016
END DATE (this season)	01/02/2016
PREVIOUS WORK (incl. DES ref.)	None
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	Alder Archaeology were commissioned to undertake a historic building recording survey, according to ALGAO guidelines, of a former jute mill on the west bank of the River Ericht, on the northern outskirts of Blairgowrie, in advance of conversion to a dwelling. Oakbank Mill (NGR NO 1769 4621) was first constructed in c.1830 and rebuilt in 1872, following a fire; it is believed to have been the first mill in Scotland to spin jute. At the time of the survey, the mill featured its original water wheel and external vertical drive shaft, the only known example in the country. This feature is to be preserved, along with original iron ceiling columns/loom supports. Most other fittings had been removed. Graffiti dating from 1898 was noted on an internal elevation.
PROPOSED FUTURE WORK:	None
CAPTION(S) FOR ILLUSTRS:	-
SPONSOR OR FUNDING BODY:	Mr Brian Evans
ADDRESS OF MAIN CONTRIBUTOR:	Alder Archaeology Ltd, 55, South Methven Street, Perth PH1 5NX
EMAIL ADDRESS:	cfyles@alderarchaeology.co.uk
ARCHIVE LOCATION (intended/deposited)	HES

Illus 1

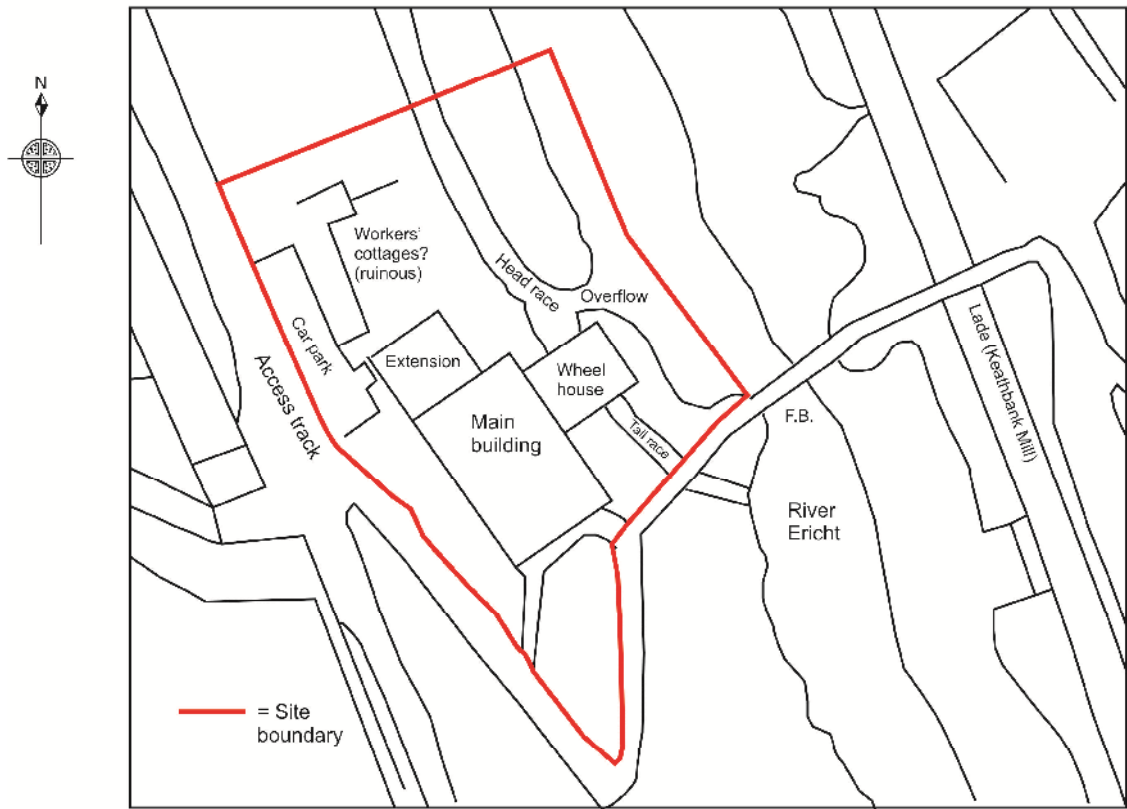


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Illus 2

Oakbank Mill, site plan



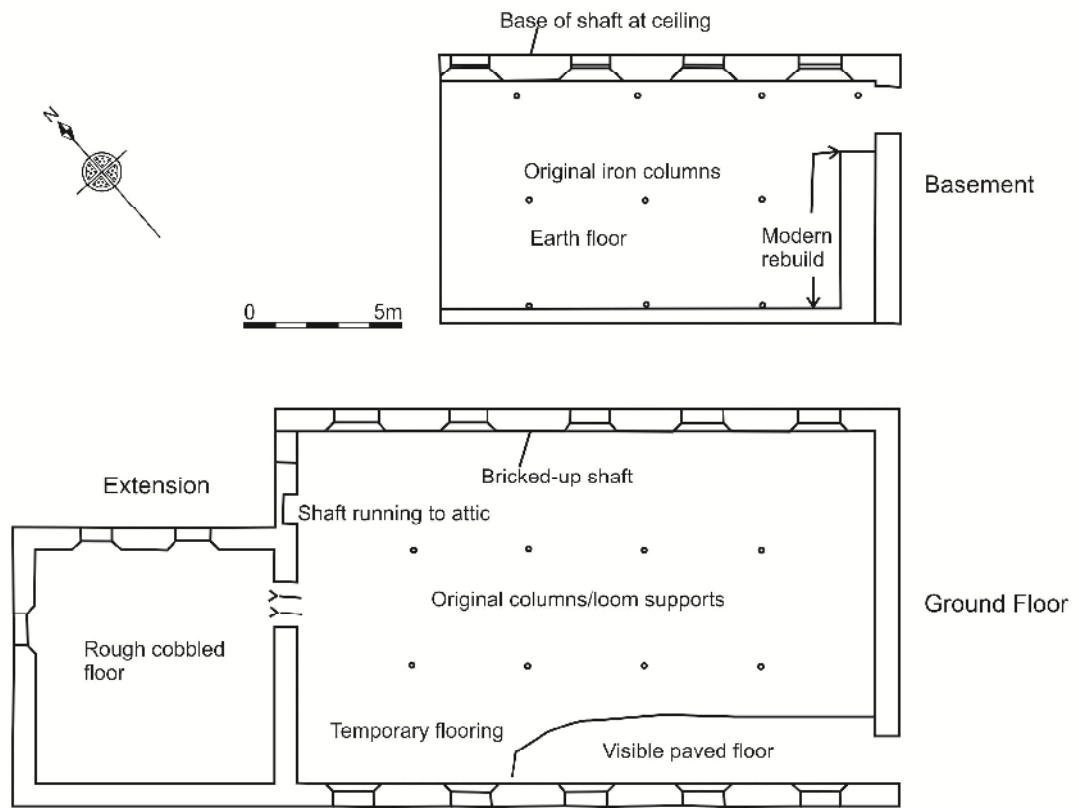
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Base plan by Woodside Parker Kirk Architects Ltd

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Illus 3

Basement and Ground Floor plans



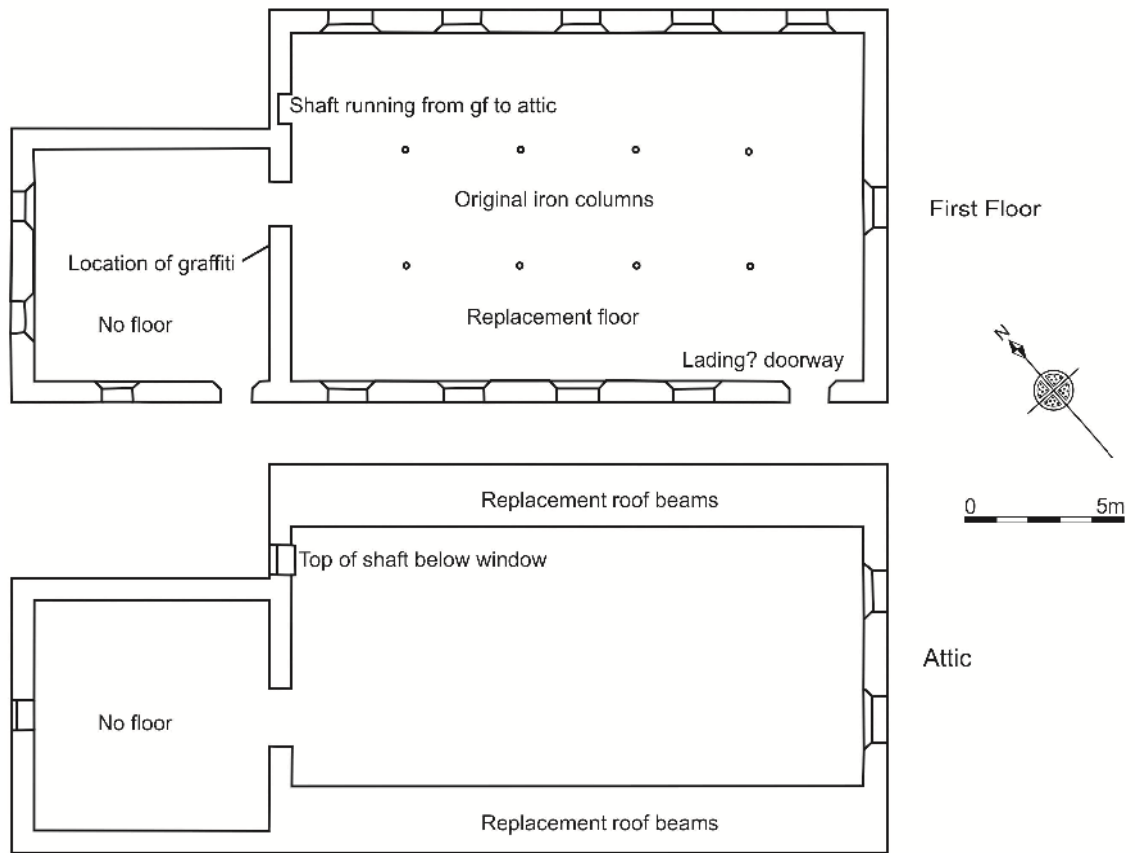
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Base plan by Woodside Parker Kirk Architects Ltd

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Illus 4

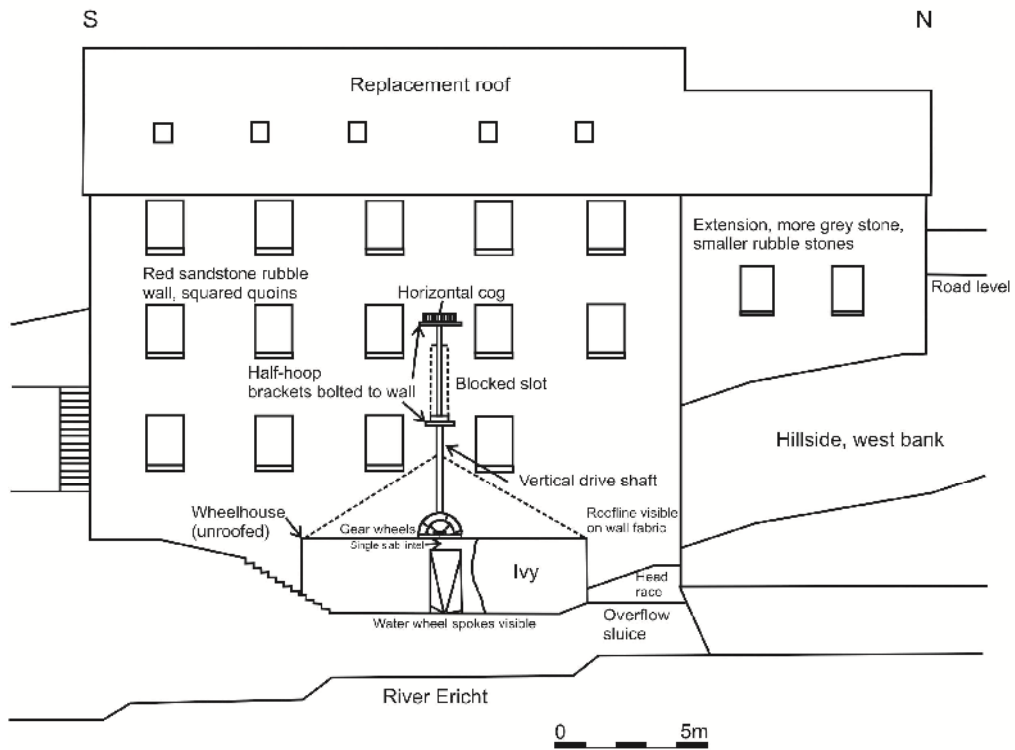
First Floor and Attic plans



Base plan by Woodside Parker Kirk Architects Ltd

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Illus 5 East elevation (exterior)

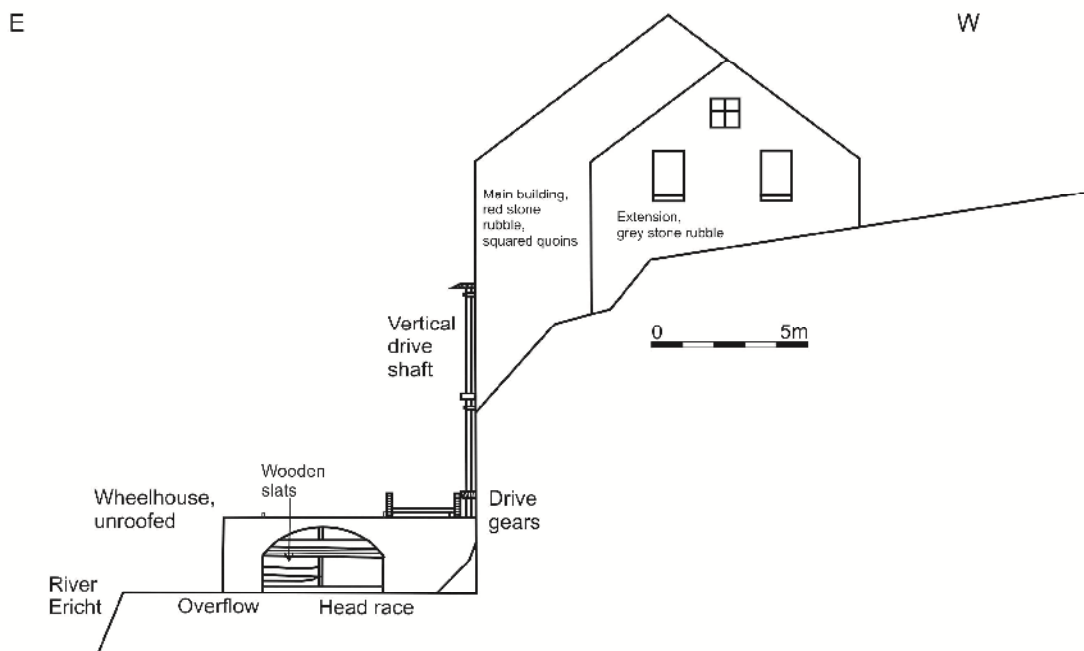


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Illus 6

Base plan by Woodside Parker Kirk Architects Ltd
 North elevation (exterior)

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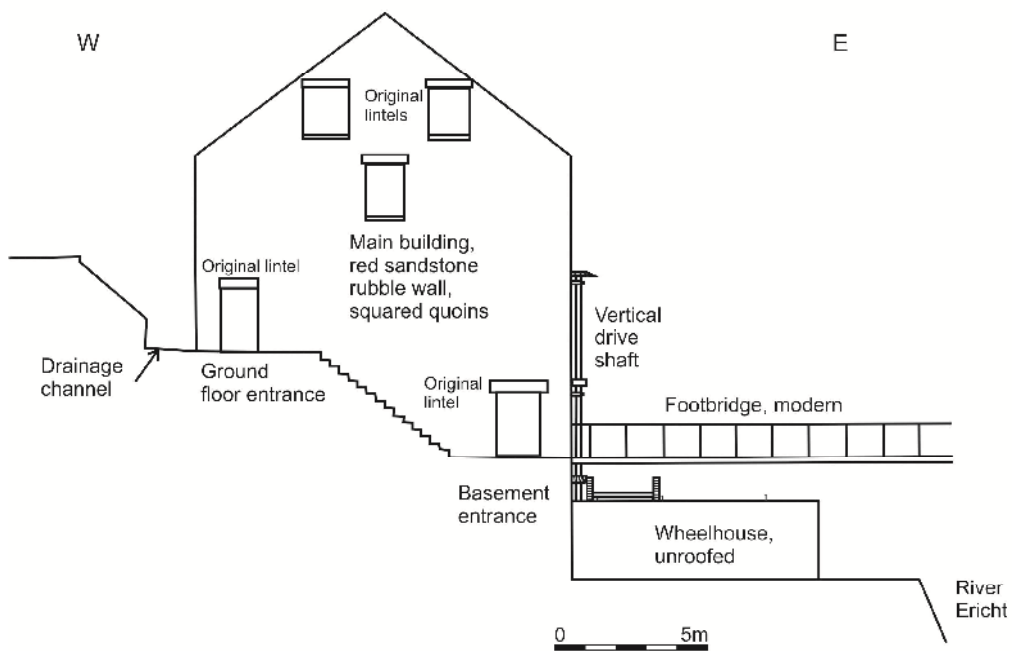
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Base drawing by Woodside Parker Kirk Architects Ltd

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Illus 7

South elevation (exterior)

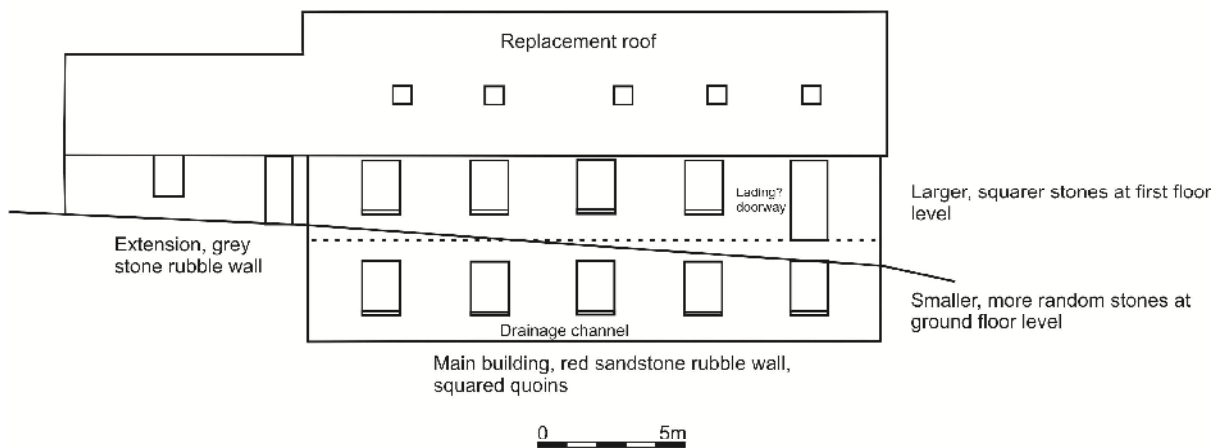


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Illus 8

Base drawing by Woodside Parker Kirk Architects Ltd
West elevation (exterior)

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