

STANDING BUILDING SURVEY,
MILL OF BONNYTON, OLD RAYNE,
INSCH, ABERDEENSHIRE, AB52 6TD



CAMERON
ARCHAEOLOGY
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SUMMARY

A Level 1 standing building survey was carried out on 9 February 2011 at Mill of Bonnyton. Some of the site was difficult to access due to the poor condition of the buildings and surrounding rubble, but all buildings were photographed. Plans and elevations produced by Annie Kenyon Architect have been used for this report. The mill building and part of the steading (not included in this report) are the oldest in the complex and the other buildings were added before 1900.

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1 INTRODUCTION

This report relates to Aberdeenshire Planning application APP/2009/1125 (condition 7) which states that a Level 1 Standing Building Survey must be carried out prior to the alteration and conversion of the former corn mill and ancillary buildings to form residential accommodation and hydro equipment and reinstatement of mill pond and waterways. The work was commissioned by Mr and Mrs D Rook, Mill of Bonnyton. The site (NJ 68301 29327) lies on the east side of Lawrence Road running north from Old Rayne, in the Parish of Rayne and lies at 105-110m OD.

The mill (NJ62NE 65) is Grade B Listed. It was possible to access most of the interior and exterior but several of the buildings are poorly preserved with piled rubble and roofs in poor condition. Much of the surrounding area is overgrown.

The standing building survey took place on 9 February 2011 and was carried out in the context of Scottish Planning Policy (SPP) Planning Advice Note 42 (PAN 42) and Scottish Historic Environment Policy (SHEP), which state that archaeological remains should be regarded as part of the environment to be protected and managed.



Ill 1 Location plan (Contains Ordnance Survey data © Crown copyright and database right 2010)

2 ARCHAEOLOGICAL BACKGROUND

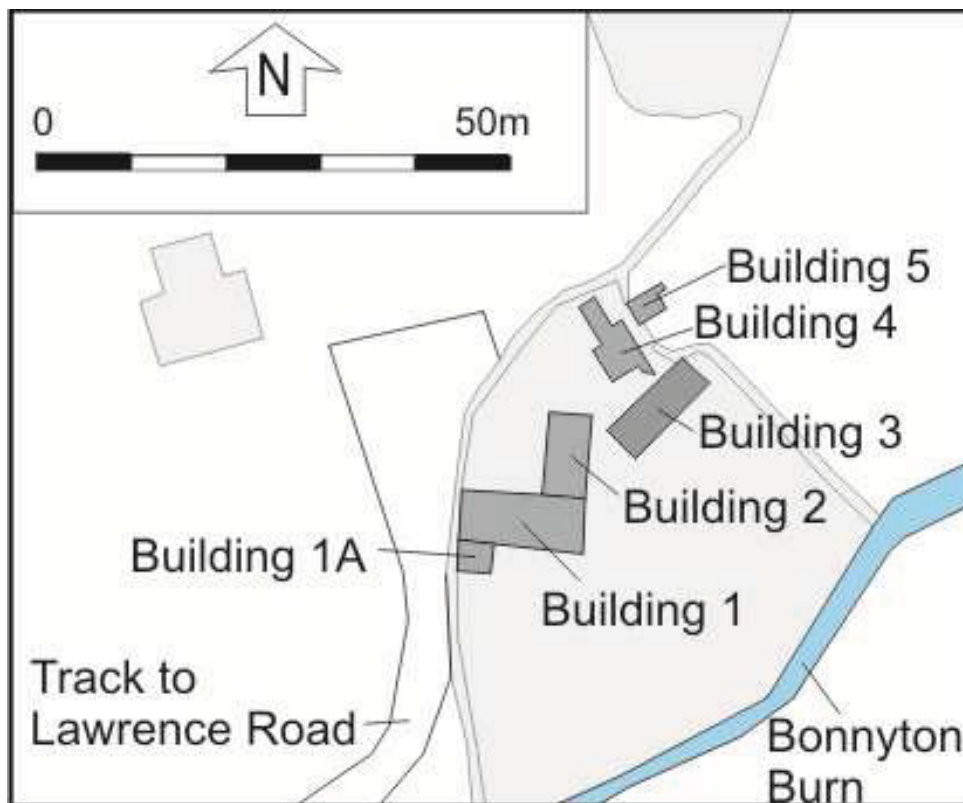
The Mill of Bonnyton is depicted on the First Edition Ordnance Survey map of 1867 as a corn mill, consisting of an L-shaped building, an F-shaped building to its south and three small single buildings around an enclosure to the east. A mill pond lies to the north with lade leading from it to the mill. By the Second Edition Ordnance Survey (surveyed 1900) the three small buildings had gone and an L-shaped structure now lies in this area which is depicted as a saw mill. The current layout is seen in the Second Edition 1900 map. Two fires in the late 19th century and the 1920's damaged machinery which had been repaired or rebuilt. The mill ceased working in the 1940's. Part of the mill lades still exist but the dam appears to be overgrown now (Aberdeenshire Sites and Monuments Record online).



Ill 2 Building 1 and 1A, the south (front) façade of the mill showing the kiln and chimney (right)

3 THE STANDING BUILDING SURVEY

Five buildings were surveyed during this work. Buildings 1 and 1A were in fairly good condition with a little roof collapse, Buildings 2 and 3 were shells and Buildings 4 and 5 were overgrown and filled with rubble making them difficult to access.



III 3 Plan of buildings recorded

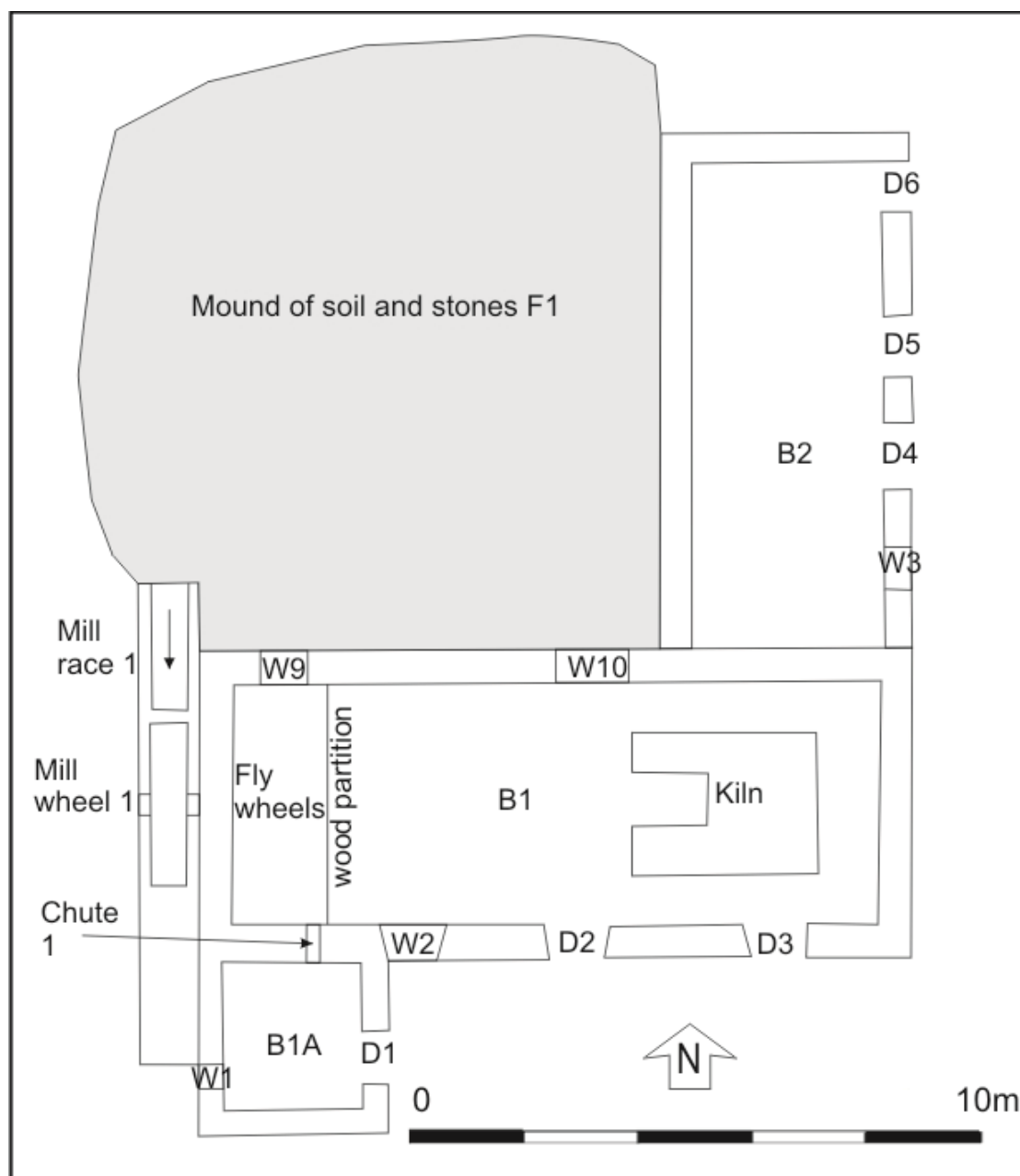
BUILDING 1

Building 1 is the main mill building. It is 12.5m x 5.5m in size and orientated in a W-E direction. It is constructed of coursed granite rubble with cherry cocking. Its front façade faces south where there are two doors. An extension (Building 1A) has been added on to the west end of the south façade. Building 1 is partitioned into two rooms. The west room is 7 x 4.3m internally and houses the flywheels for the main mill wheel at the west end. This room also houses several wooden hoppers to transfer grain between floors. The east room housed the kilns. Unfortunately the roof has collapsed at this end of the building and external observation only was possible; damage to kilns is common due to intensity of heat causing fires and damage to the structure of the building. Two fires are known to have damaged the building and machinery and this mill, once in the late 19th century and again in the 1920's (Aberdeenshire Sites and Monuments Record).

To the north of Building 1 is a mound of soil and stones, F1 (Ill 3). Mill race 1 has been built into the side of this mound and the lade runs through the mound. Latterly upper dormer window W9 (Ills 5 and 29) would have been used to access the mill, probably allowing delivery of the cereals into the 2nd floor area.



Ill 4 Building 1 west gable showing wheel (centre) and Building B1A (right) and mound of soil and stones F1 (left)



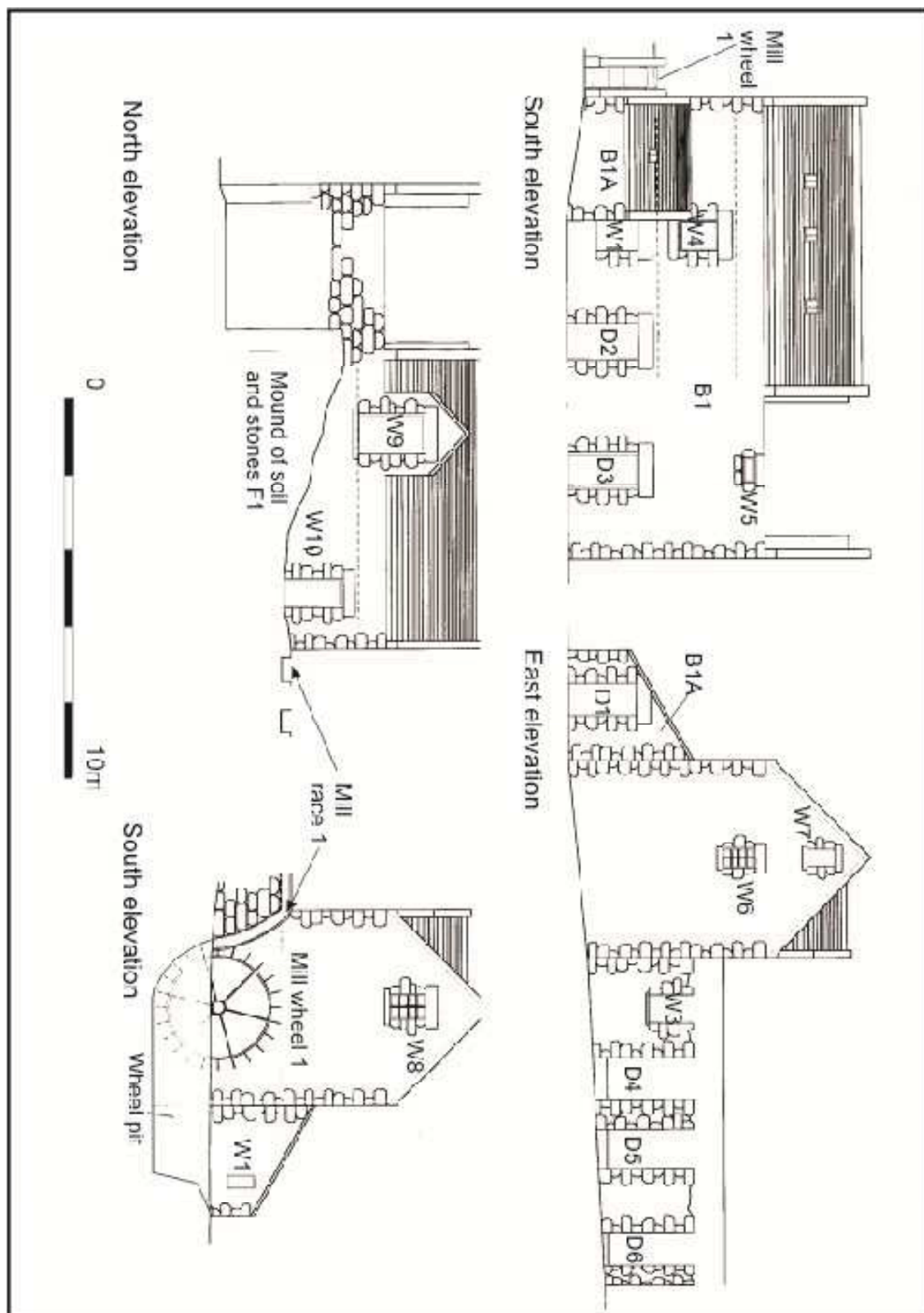
III 5 Plan of Buildings 1, 1A and 2



III 6 Building 1 south front façade of mill showing B1A (left) and damage and repair to kiln area (right)



III 7 Building 1 mill race adjacent to wheel



III 8 Elevations of Building 1



III 9 Building 1 millwheel 1 on west wall



III 10 Building 1 mill wheel 1 detail



III 11 Building 1 'Grandholm Foundry 1835' on wheel spoke



III 12 Building 1 detail of paddles on mill wheel



Ill 13 Building 1 detail of interior flywheels

The mill wheel (Ill 9) is 2.6m diameter and the paddles are constructed of one or two joined wooden planks 0.59 x 0.29m in size and 0.015m thick. The wheel is of cast iron and the paddles joined to the wheel with iron plates and bolts. The race and channel (Ill 7) leading to the wheel pit is 1.05m wide and the water channel 0.6m wide. The wheel is stamped 'Grandholm Foundry 1835' (Ill 11).

A series of flywheels survive in a wood panelled room at the west of Building 1 (Ills 13, 14). On this partition is a wooden chute (Ill 14) which carried grain from the 2nd and 1st floors to the milling floor and kiln on the ground floor. There are two other chutes between the first and ground floors (Ill 15).

There was no direct access between Buildings 1 and 1A or 2.



Ill 14 Building 1 detail of wood partitioned room housing interior flywheels showing hopper (centre)



Ill 15 Building 1 east end kiln area showing hoppers (left and centre)



Ill 16 Building 1 First floor details of trapdoor

Trapdoors (Ill 16) in the centre of the floor on the first and second storeys allowed grain to be easily hoisted between floors on rope and pulleys.



Ill 17 Building 1 first floor, two pairs of millstones for corn and pearl barley milling, west end of room

Building 1 still retains 2 pairs of meal stones on the first floor for milling corn and pearl barley (Ill 17), an oat bruiser (Ill 18) and the drying kiln (Ills 15, 19).



Ill 18 Building 1 first floor oat bruiser in centre of west room



Ill 19 Building 1 first floor metal door separating milling floor from kiln



Ill 20 Building 1 north façade showing bank of soil and stones F1 (foreground) and dormer window W9 (left)

BUILDING 1A

Building 1A is added on to the south side of Building 1. It is 3.3 x 3.2m in size and constructed of semi-coursed large granite rubble. There is no evidence that there was a door between the mill and this extension, but there is a wooden chute (III 22; III 5 Chute 1) between the first floor of Building 1 and Building 1A and it is suggested that one of the functions of Building 1A was as a sacking room where milled grain travelled down Chute 1 and was put into sacks for transport from the mill. The vicinity of Building 1A to the track to the main road supports this theory.



III 21 Building 1A south wall



Ill 22 Building 1A wooden chute through wall from first floor Building 1

BUILDING 2

Building 2 is 9.5 x 4.5m in size and is attached at the SW gable onto the east end of the north wall of Building 1. There is no access between Building 1 and 2 but the wall between them is charred and damaged due to the proximity of the kiln on the opposite side of the partition wall. This would limit the uses of this building but it would have been a warm space.



Ill 23 Building 2 SE façade showing junction with Building 1 (left)

BUILDING 3

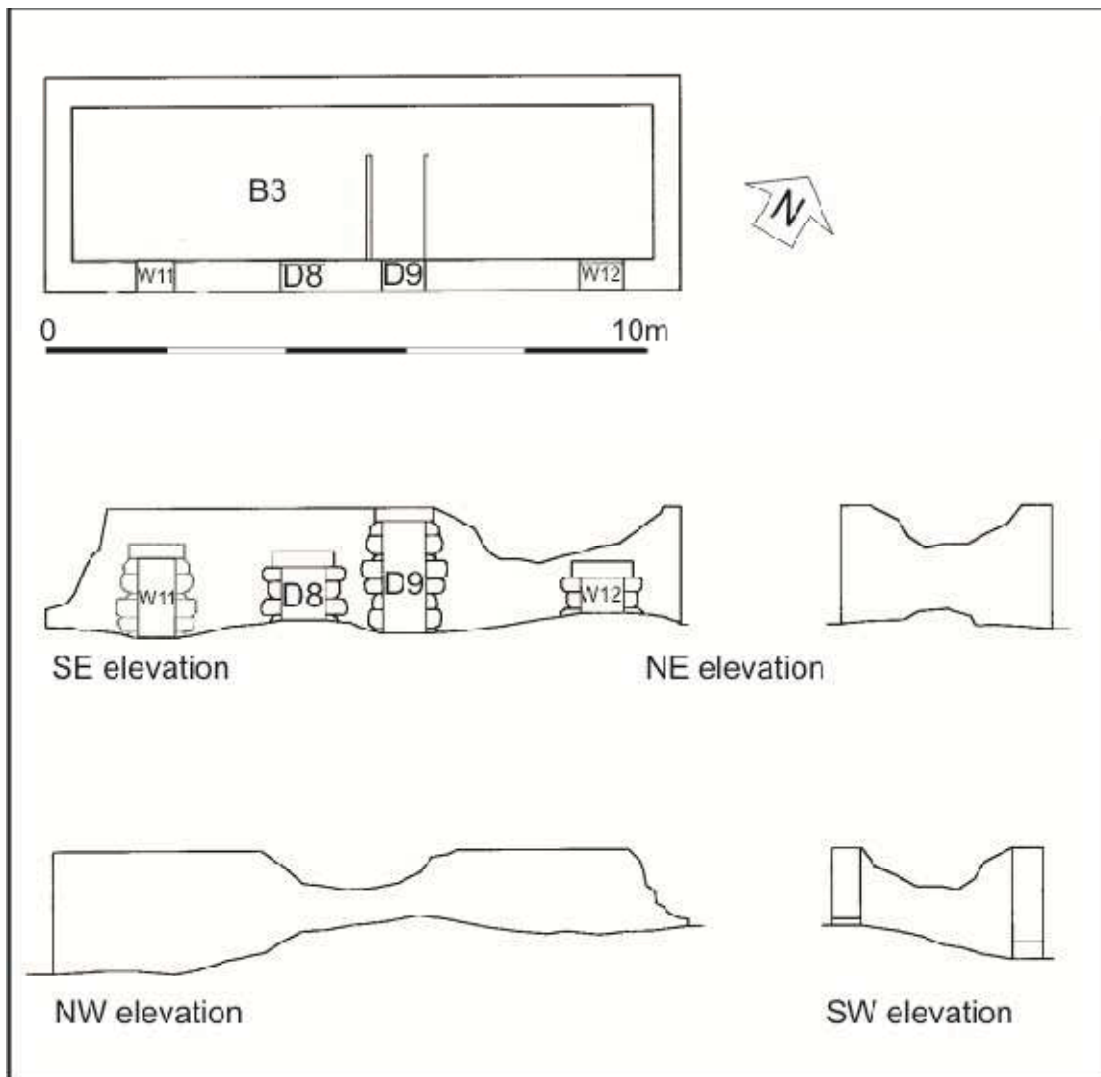
Building 3 is 10.7 x 3.7m in size and is on a NE-SW orientation. It is constructed of granite rubble and the front façade is to the SE. This façade now has four apertures including one (D8) with a large pink granite lintel. This was built as an agricultural building and the ground level was probably lower to the SE of this buildings. Central door D9 (Ill 26) is very narrow and is probably a later addition after the ground level was raised by up to one metre. D8 is probably the original door and a possible original plan and elevation is suggested in Ill 27.



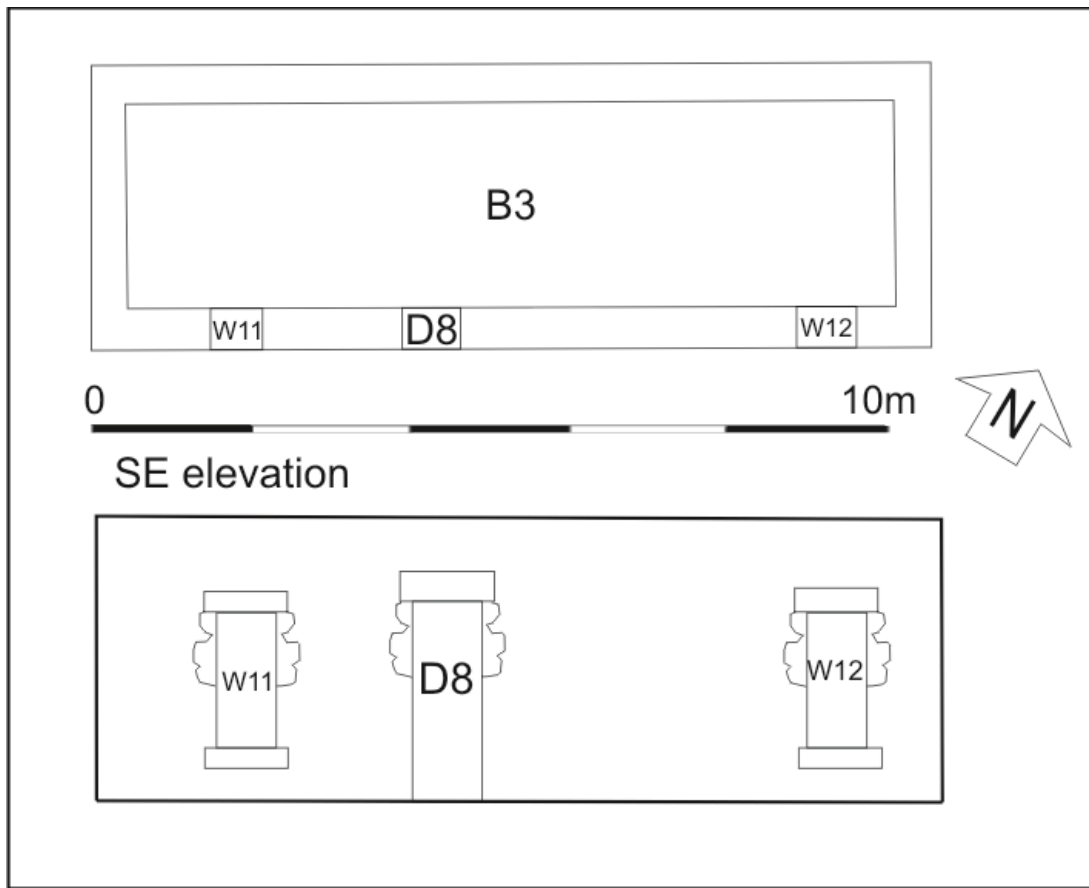
Ill 24 Building 3 SE façade showing later door (D9 centre).



Ill 25 Building 3 NE wall



III 26 Building 3 plan and elevations



III 27 Building 3 proposed original plan and elevation; it is suggested that the ground level has been raised in this area and that D8 as the original door and W11 and W12 windows. Door D9 and the internal partitions associated with this door were probably later additions.

BUILDING 4

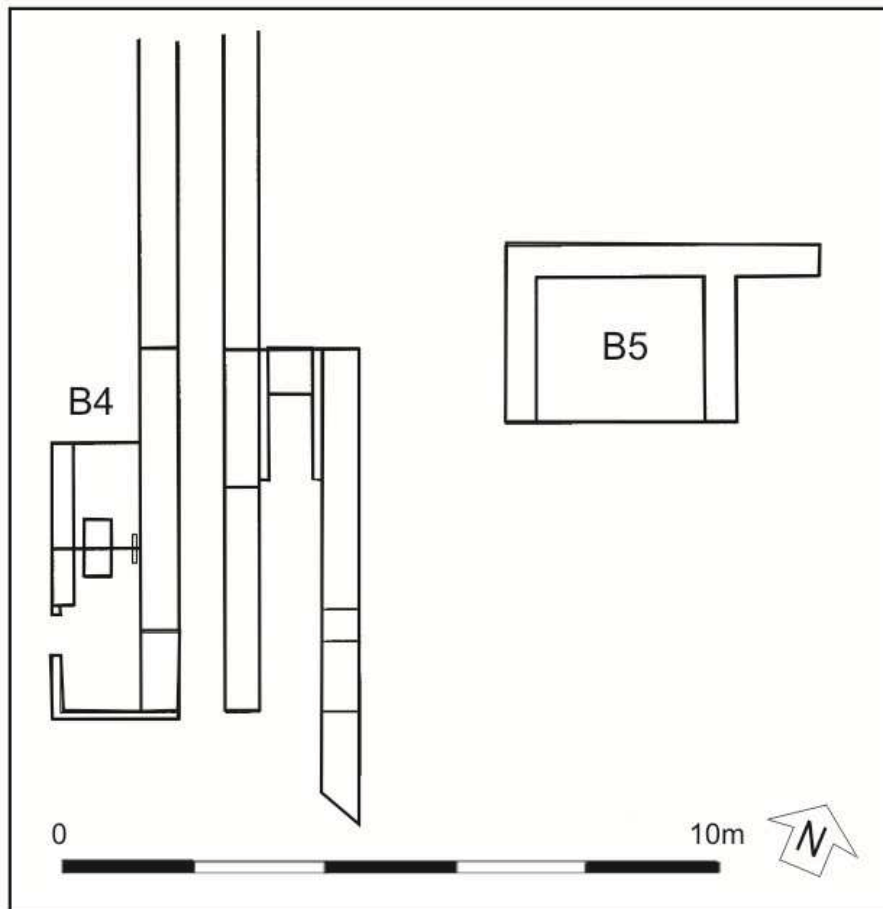
Buildings 4 and 5 were difficult to access. Building 4 is 13m long and 4.8m wide. It is constructed as a series of parallel walls with a housing for a small waterwheel. It was not possible to access the interior of this building.



III 28 Building 4 south end



III 29 Building 4 west end



III 30 Plan of Buildings 4 (left) and Building 5 (right)

BUILDING 5

Buildings 4 and 5 were difficult to access. Building 5 is incomplete and survives to 5 x 2.8m in size. It is completely overgrown. Buildings 4 and 5 are labelled 'Saw Mill' on the 1900 Second Edition Ordnance Survey map.



Ill 31 Building 4

MILL LADES AND MILL POND

A mill pond and a series of overgrown mill lades survive (Ill 32-36) which are to be reopened during the current redevelopment. A mill lade has been constructed from the Bonnyton Burn at the extreme north of the site (Ill 32, 33). The lade took water to the site, splitting immediately north of Building 4 into a lade running west to the Mill wheel 1 and the main mill and the other running west to Building 4. Both then return into Bonnyton Burn. The lade to the main mill wheel is now partially underground whereas the line of the other is still visible (Ill 34).



Ill 32 Bonnyton Burn (left) and mill lade covered with stone (right foreground)



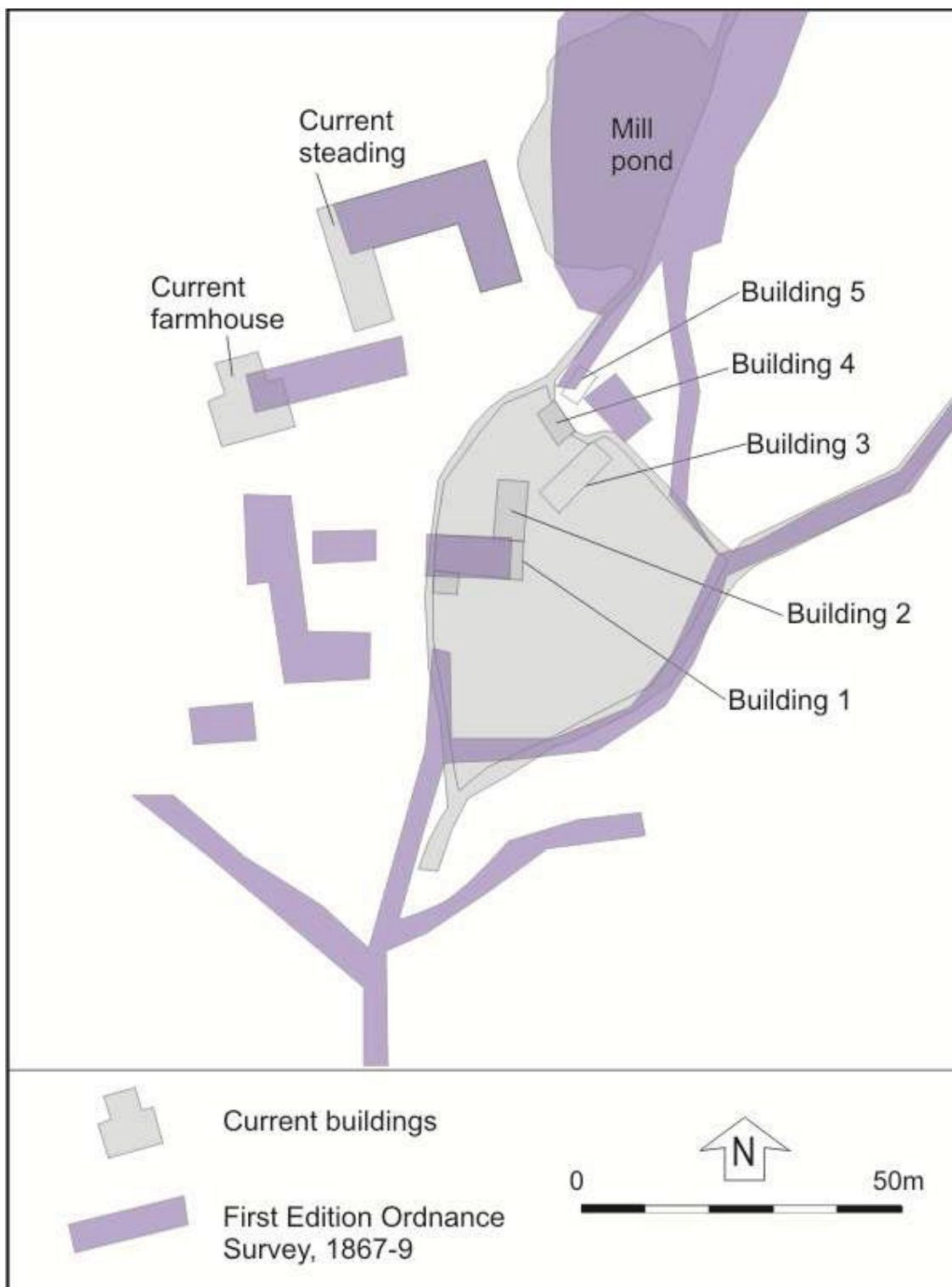
Ill 33 Stone race immediately north of Buildings 4 and 5



III 34 mill lade west of Building 3 leading to Bonnyton Burn



III 35 Overgrown mill pond facing north



Ill 36 Plan of current buildings, lades and mill pond showing structures present on 1867 First Edition Ordnance Survey (in purple)

4 CONCLUSIONS

The mill Building 1 is probably the earliest in this complex dating to the early 19th century when it was operating as a corn mill. Machinery present suggest that at its height it was processing corn, pearl barley and oats. By the first Edition Ordnance Survey (1867-9) part of the U-shaped steading (not included in this survey) adjacent to the mill pond has been constructed along with several other buildings which are no longer extant. By 1900 the buildings now at the site (including the farmhouse and steadings) were established and Buildings 4 and 5 were working as a saw mill. During the establishment of this complex a large amount of landscaping has taken place to channel the Bonnyton Burn into two lades to feed the two millwheels. The area to the east of Building 3 has also probably been raised, possible to stop flooding in this low lying area.

The reopening of the mill pond and lades back to working condition will increase knowledge of the history and workings of this mill complex.

5 ACKNOWLEDGEMENTS

Thanks to Mr and Mrs D Rook, Mill of Bonnyton; Moira Greig, Aberdeenshire Archaeology Service.

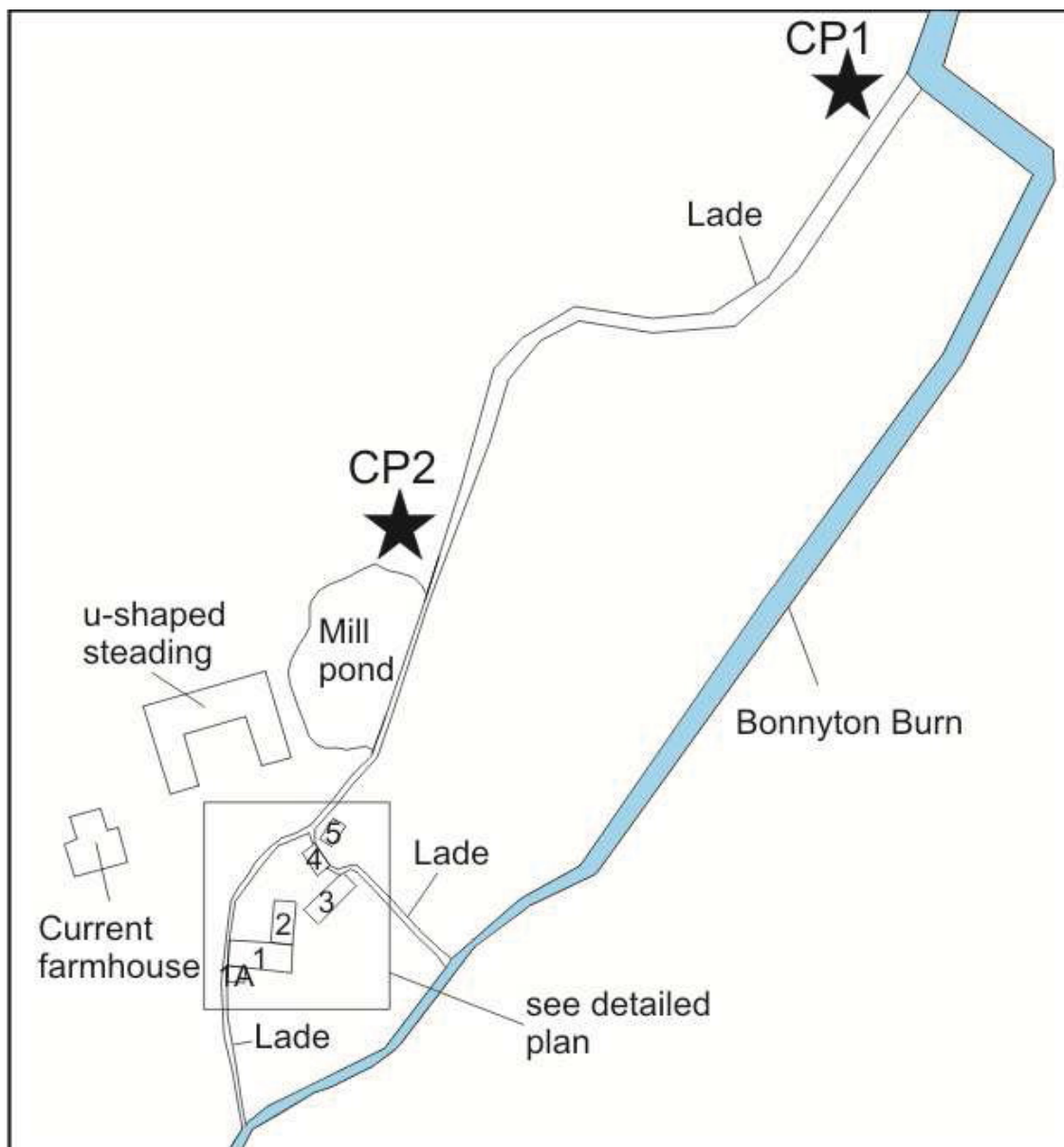
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Page(s): 115 Held at RCAHMS J.4.11.HUM
- Shepherd, I A G** (2006) Aberdeenshire, Donside and Strathbogie: an illustrated architectural guide, in Charles McKean [Edinburgh]
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Page(s): 106 Held at RCAHMS D.5.GOR

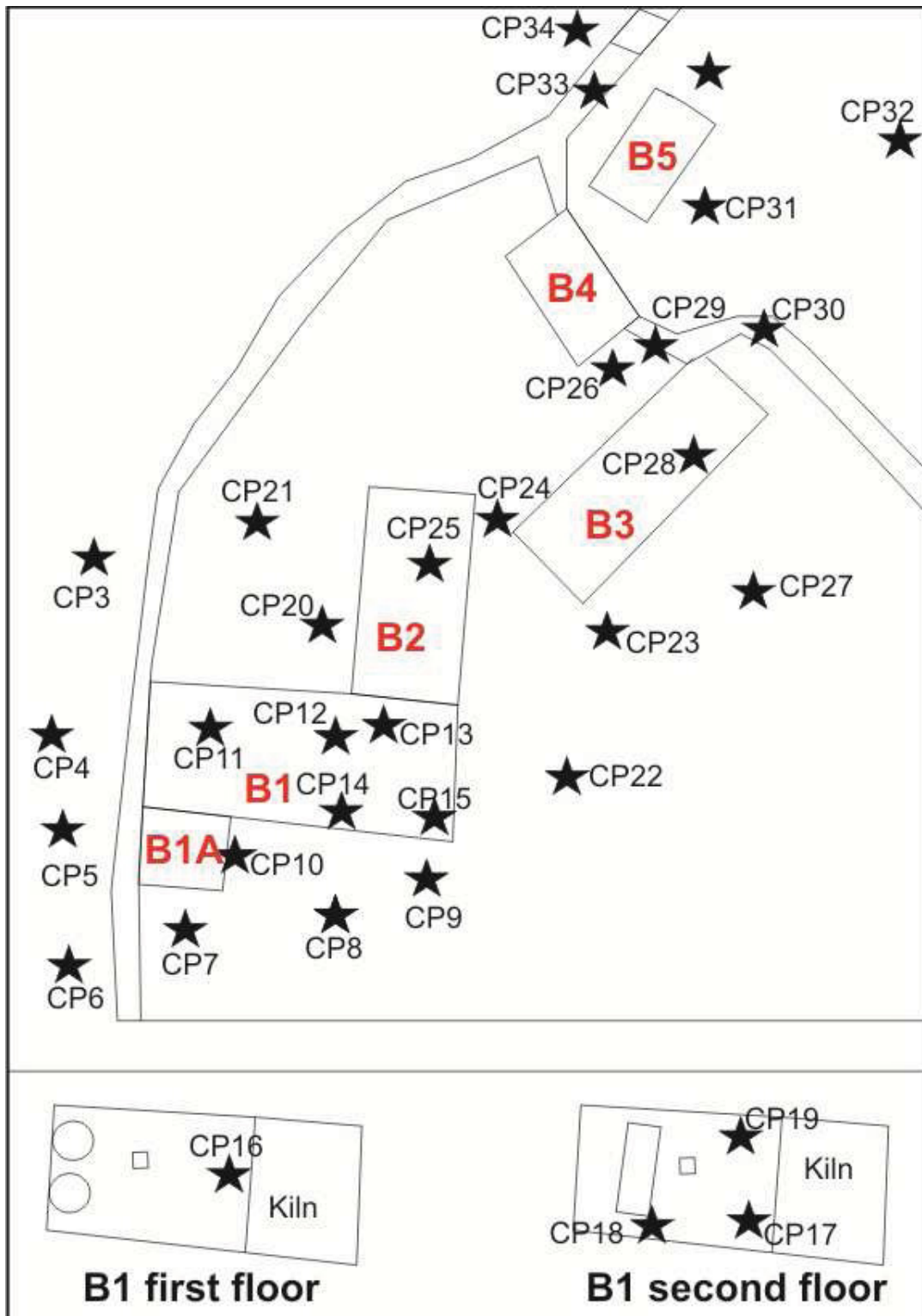
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APPENDIX 1 PHOTOGRAPHS

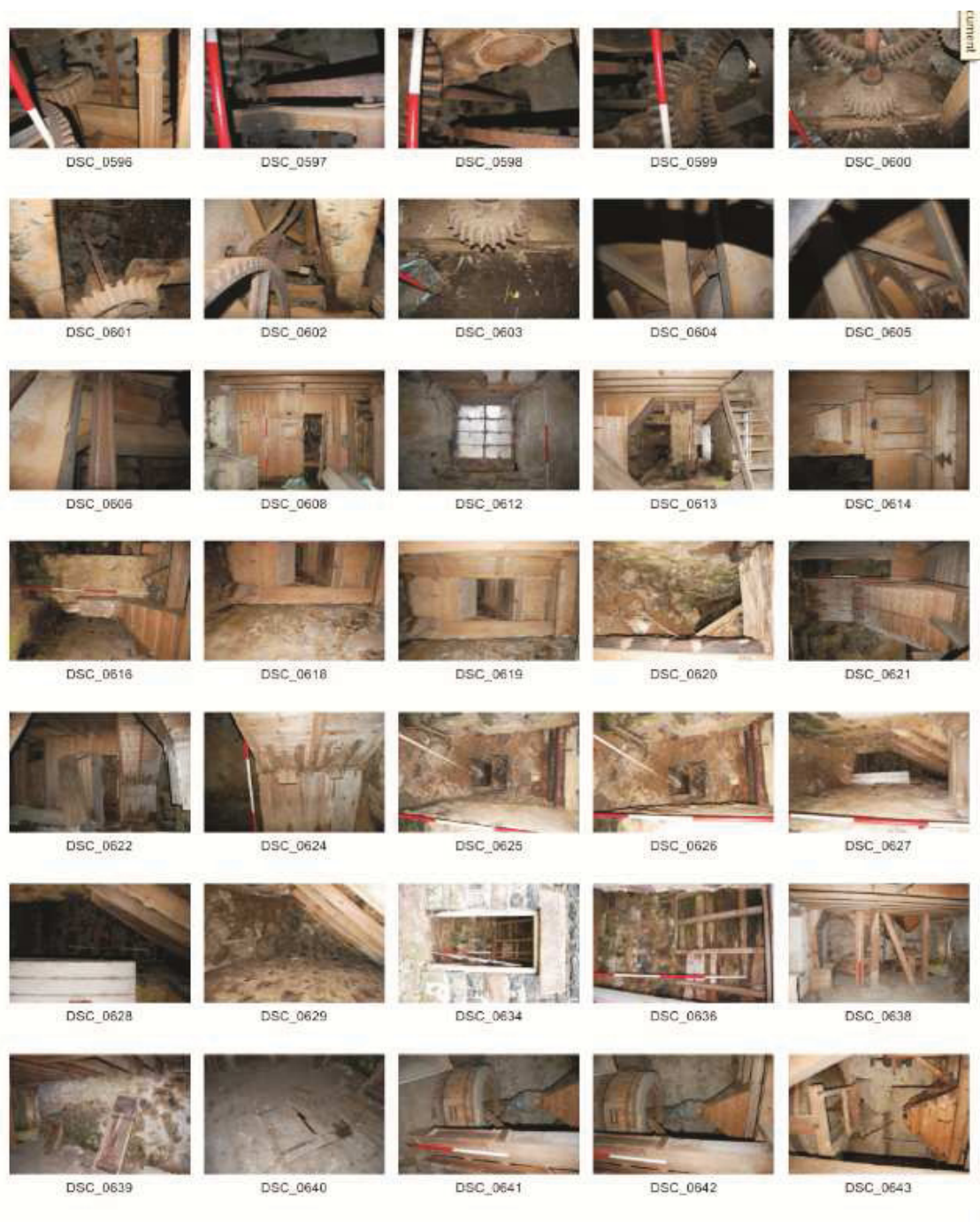


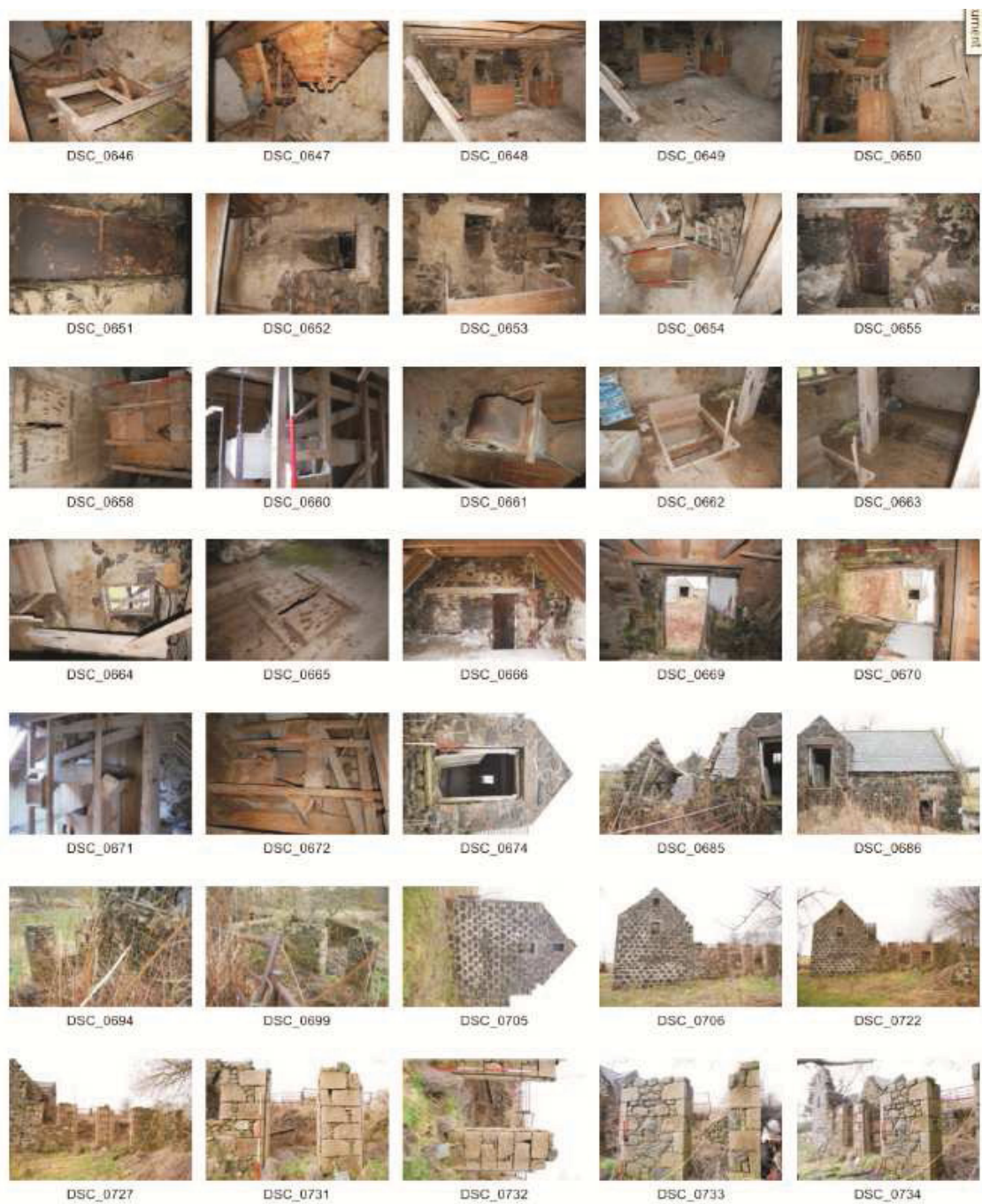
III 37 Plan of camera points - whole site



III 38 Plan of camera points - buildings









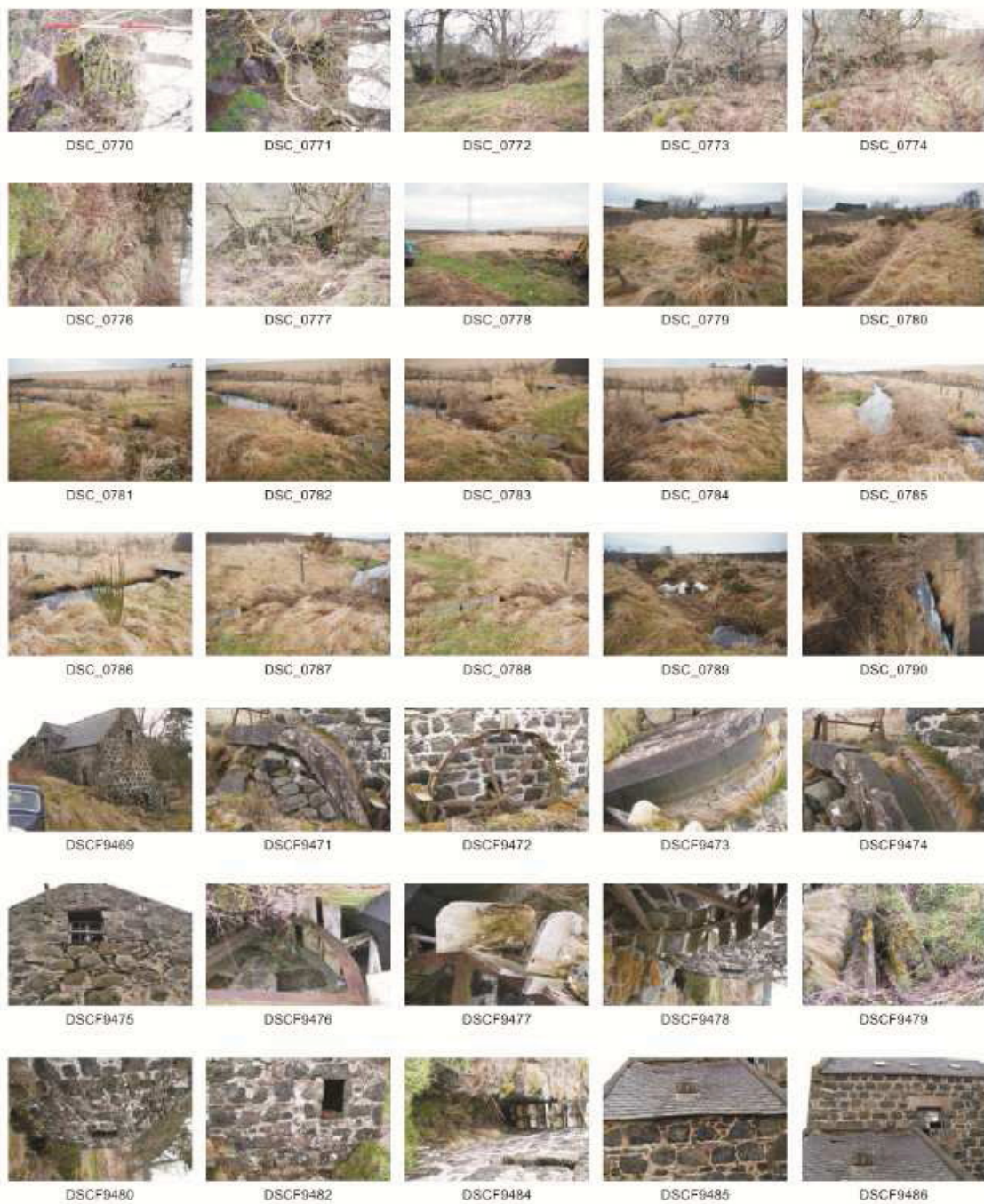




PHOTO NO	DESCRIPTION	FACING	Camera point
DSC 0424	Building 1 Mill Building 1 showing mound of soil and stones F1 (left foreground)	SE	CP3
DSC 0429	Building 1 Mill Building 1 showing mill wheel 1 (centre), Building 1A (right) and mill race (left)	E	CP4
DSC 0435	Building 1 Mill Building 1 (left) and Building 1A (right)	E	CP4
DSC 0444	Building 1 Mill wheel 1 showing wheel pit and Building 1A (right)	N	CP5
DSC 0447	Building 1 Wheel race with mill wheel 1 (right)	E	CP4
DSC 0452	Building 1 Wheel race with mill wheel 1 (right)	E	CP4
DSC 0458	Building 1 west facing gable	E	CP4
DSC 0463	Building 1 Mill wheel 1	E	CP4
DSC 0468	Building 1 Mill wheel 1 detail	E	CP4
DSC 0473	Building 1 Wheel race	SE	CP4
DSC 0479	Building 1 mill wheel 1 paddle detail	SE	CP4
DSC 0484	Building 1 mill wheel 1 (left) and wheel pit (centre)	S	CP4
DSC 0489	Building 1 mill wheel 1 (left) and wheel pit (centre)	S	CP4
DSC 0494	Building 1 Mill wheel 1 detail	E	CP4
DSC 0500	Building 1A (foreground), Building 1	NE	CP6
DSC 0505	Lade leading to Bonnyton Burn	S	CP6
DSC 0506	Building 1A	N	CP7
DSC 0514	Building 1A	N	CP7
DSC 0520	Building 1A (left) Building 1 (right)	NW	CP8
DSC 0525	Building 1A (left) Building 1 (right)	NW	CP8
DSC 0531	Building 1A (left) Building 1 (right)	NNW	CP8
DSC 0536	Building 1 Door 3	N	CP9
DSC 0544	Building 1 Door 2	N	CP9
DSC 0548	Building 1 Door 2 (left) Door 1 (right)	N	CP9
DSC 0558	Building 1A Door 1	W	CP8
DSC 0559	Building 1A interior	W	CP10
DSC 0563	Building 1A interior	NW	CP10
DSC 0567	Building 1A interior	NW	CP10
DSC 0577	Building 1 Door 2	N	CP8
DSC 0584	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0587	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0591	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0593	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0594	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0595	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0596	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0597	Building 1 Flywheels at west end ground floor	W	CP11

DSC 0598	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0599	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0600	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0601	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0602	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0603	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0604	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0605	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0606	Building 1 Flywheels at west end ground floor	W	CP11
DSC 0608	Building 1 ground floor	W	CP12
DSC 0612	Building 1 window 9	N	CP11
DSC 0613	Building 1 kiln	E	CP12
DSC 0614	Building 1 wooden hopper on west wall	W	CP11
DSC 0616	Building 1 kiln	E	CP12
DSC 0620	Building 1 collapse in kiln area	E	CP13
DSC 0621	Building 1 hopper adjacent to kiln	N	CP12
DSC 0622	Building 1 north wall with kiln (right)	N	CP12
DSC 0624	Building 1 north wall with kiln (right)	N	CP12
DSC 0625	Building 1 kiln	E	CP12
DSC 0626	Building 1 kiln	E	CP12
DSC 0627	Building 1 area south of kiln	E	CP14
DSC 0628	Building 1 area south of kiln	E	CP14
DSC 0629	Building 1 area east of kiln	N	CP15
DSC 0634	Building 1 Door 3 showing kiln structure	N	CP9
DSC 0636	Building 1 Door 3 showing kiln structure (detail)	N	CP9
DSC 0638	Building 1 First floor showing millstones (west end)	W	CP16
DSC 0640	Building 1 First floor trap door	NW	CP16
DSC 0641	Building 1 First floor millstones with hoppers from second floor	W	CP16
DSC 0642	Building 1 First floor millstones with hoppers from second floor	w	CP16
DSC 0643	Building 1 First floor millstones with hoppers from second floor	w	CP16
DSC 0646	Building 1 First floor millstones with hoppers from second floor	NW	CP16
DSC 0647	Building 1 First floor millstones with hoppers from second floor	NW	CP16
DSC 0648	Building 1 First floor east end showing windows for accessing kiln (W13, W14, D10, W15)	E	CP16
DSC 0649	Building 1 First floor east end showing windows for accessing kiln (W13, W14, D10, W15)	E	CP16
DSC 0650	Building 1 First floor east end showing windows for accessing kiln (W13, W14, D10, W15)	E	CP16
DSC 0651	Building 1 first floor kiln door D10	E	CP16
DSC 0652	Building 1 First floor W14	E	CP16
DSC 0653	Building 1 First floor W13 (left) W14	E	CP16
DSC 0654	Building 1 First floor W15 (left) and stairs to 2nd floor	SE	CP16

DSC 0655	Building 1 first floor kiln door D10	E	CP17
DSC 0658	Building 1 2nd floor oat bruiser	W	CP17
DSC 0660	Building 1 2nd floor hopper above oat bruiser	SW	CP17
DSC 0661	Building 1 2nd floor oat bruiser	SW	CP17
DSC 0663	Building 1 2nd floor SW corner	SW	CP18
DSC 0664	Building 1 2nd floor SW corner	SW	CP18
DSC 0665	Building 1 2nd floor trap door	SW	CP18
DSC 0666	Building 1 2nd floor east wall showing top of kiln door D10	E	CP17
DSC 0669	Building 1 2nd floor W10 showing u-shaped steading (not in survey area)	N	CP17
DSC 0670	Building 1 2nd floor W10 showing u-shaped steading (not in survey area)	N	CP17
DSC 0671	Building 1 2nd floor oat bruiser	SW	CP19
DSC 0672	Building 1 2nd floor oat bruiser	SW	CP19
DSC 0674	Building 1 2nd floor W10 from mound of stones and soil F1	S	CP20
DSC 0685	Building 1 showing kiln roof collapsed	SE	CP20
DSC 0686	Building 1 north facade W10 (left)	S	CP20
DSC 0694	Building 2 from top of mound of stones and soil F1	SE	CP20
DSC 0699	Building 2 from top of mound of stones and soil F1	NE	CP20
DSC 0705	Building 1 east gable showing damage to wall from heat of kiln	W	CP22
DSC 0706	Building 1 east gable (left) and Building 2 (right)	W	CP23
DSC 0722	Building 2	W	CP23
DSC 0727	Building 2	W	CP23
DSC 0731	Building 2 W3 (left) and D4	W	CP23
DSC 0732	Building 2 D4	W	CP23
DSC 0733	Building 2 D5 (left) D6	W	CP23
DSC 0734	Building 2 facade	SW	CP24
DSC 0735	Building 2 interior	SSW	CP25
DSC 0736	Building 2 interior	NW	CP25
DSC 0737	Building 2 interior	W	CP25
DSC 0738	Building 4	NW	CP26
DSC 0739	Building 3 facade	NW	CP27
DSC 0740	Building 3 facade	NW	CP27
DSC 0741	Building 3 facade D8 (left) D9 (centre)	NW	CP27
DSC 0742	Building 3 NW wall	NW	CP28
DSC 0743	Building 3	NE	CP28
DSC 0744	Building 3 exterior NE wall	SW	CP28
DSC 0745	Building 2 (background) Building 3 (left foreground)	SW	CP27
DSC 0746	Building 3 exterior NE wall	SSW	CP28
DSC 0747	Building 3 NW wall	S	CP29
DSC 0748	Building 3 N corner	S	CP29
DSC 0749	Building 1 and 2	S	CP29

DSC 0750	Building 3 NE gable with mill lade (centre)	SE	CP30
DSC 0751	Mill lade	SE	CP30
DSC 0752	Building 4	NW	CP26
DSC 0753	Building 4	NW	CP26
DSC 0754	Building 4	NW	CP26
DSC 0755	Building 4	NW	CP26
DSC 0756	Building 4	NW	CP26
DSC 0757	Building 4	NW	CP26
DSC 0758	Building 4	NW	CP26
DSC 0759	Building 4	NW	CP26
DSC 0760	Building 5	NE	CP31
DSC 0761	Building 5	NW	CP31
DSC 0762	Building 4	SW	CP31
DSC 0763	Building 4 (right) Building 3 (left) with Buildings 1 and 2 (Background)	SW	CP31
DSC 0764	Building 4 (right)	WSW	CP31
DSC 0765	Building 4 (right)	WSW	CP31
DSC 0766	Mill lade	S	CP32
DSC 0767	Mill lade	E	CP32
DSC 0768	Mill lade	NE	CP32
DSC 0769	Mill race north of Building 5	NW	CP32
DSC 0770	Mill race north of Building 5	NE	CP33
DSC 0771	Mill race north of Building 5	NE	CP33
DSC 0778	Mill pond	NE	CP34
DSC 0779	Mill pond	SW	CP2
DSC 0780	Mill lade	SW	CP2
DSC 0781	Bonnyton Burn (left) and mill lade (right foreground)	NE	CP1
DSC 0782	Bonnyton Burn (left) and mill lade (right foreground)	NE	CP1
DSC 0783	Bonnyton Burn (left) and mill lade (right foreground)	NE	CP1