

Discovery and Excavation in Scotland

Updated on 15/06/2007

LOCAL AUTHORITY:	Dumfries and Galloway
PROJECT TITLE/SITE NAME:	New Abbey Corn Mill
PROJECT CODE:	HSCO-90323-2015-01
PARISH:	New Abbey
NAME OF CONTRIBUTOR:	Paul Fox
NAME OF ORGANISATION:	Kirkdale Archaeology
TYPE(S) OF PROJECT:	Standing building recording
NMRS NO(S):	NX96NE 47
SITE/MONUMENT TYPE(S):	Watermill
SIGNIFICANT FINDS:	
NGR (2 letters, 8 or 10 figures)	NX 9622 6624
START DATE (this season)	12 January 2015
END DATE (this season)	12 January 2015
PREVIOUS WORK (incl. <i>DES</i> ref.)	
MAIN (NARRATIVE) DESCRIPTION: (May include information from other fields)	A programme of standing building recording was carried out at New Abbey Corn Mill. The existing ventilation system was due to be upgraded and this provided an opportunity to make a record of those features previously hidden. In addition, the existing local extract ventilation (LEV) unit occupying the water wheel pit was to be removed and the deposits of the floor levelled-off in order to accommodate a new unit in the same position. The work had a negligible impact on the floor deposits, and was carried out under an archaeological watching brief.
PROPOSED FUTURE WORK:	
CAPTION(S) FOR ILLUSTRS:	
SPONSOR OR FUNDING BODY:	Historic Environment Scotland
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ARCHIVE LOCATION (intended/deposited)	Archive to be deposited with Historic Environment Scotland

**HISTORIC SCOTLAND PROPERTIES IN CARE
MINOR ARCHAEOLOGICAL WORKS 2014/2015**

New Abbey Corn Mill • Standing Building Recording • January 2015

HS PIC Index Number: 90323

SITE: New Abbey Corn Mill, Dumfries and Galloway.

N.G.R.: NX 9622 6624

DESCRIPTION: A program of standing building recording prior to an upgrade of the mill's ventilation system.

PROJECT CODE: HSCO-90323-2015-01

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JANUARY 2015

INTRODUCTION

Under the terms of its PIC call-off contract with Historic Scotland, Kirkdale Archaeology was asked to undertake a programme of standing building recording at New Abbey Corn Mill, Dumfries and Galloway (Fig.1). The existing ventilation system was due to be upgraded in order to make it more effective at extracting dust during the milling process and, as part of this process, the wooden tool cupboard in the south-west angle of the ground floor was to have the planks of its base removed, and the floor boards in front of the cupboard were to be lifted in order to expose the existing ventilation pipe. This would provide an opportunity to make a record of those features previously hidden prior to any further works proceeding.

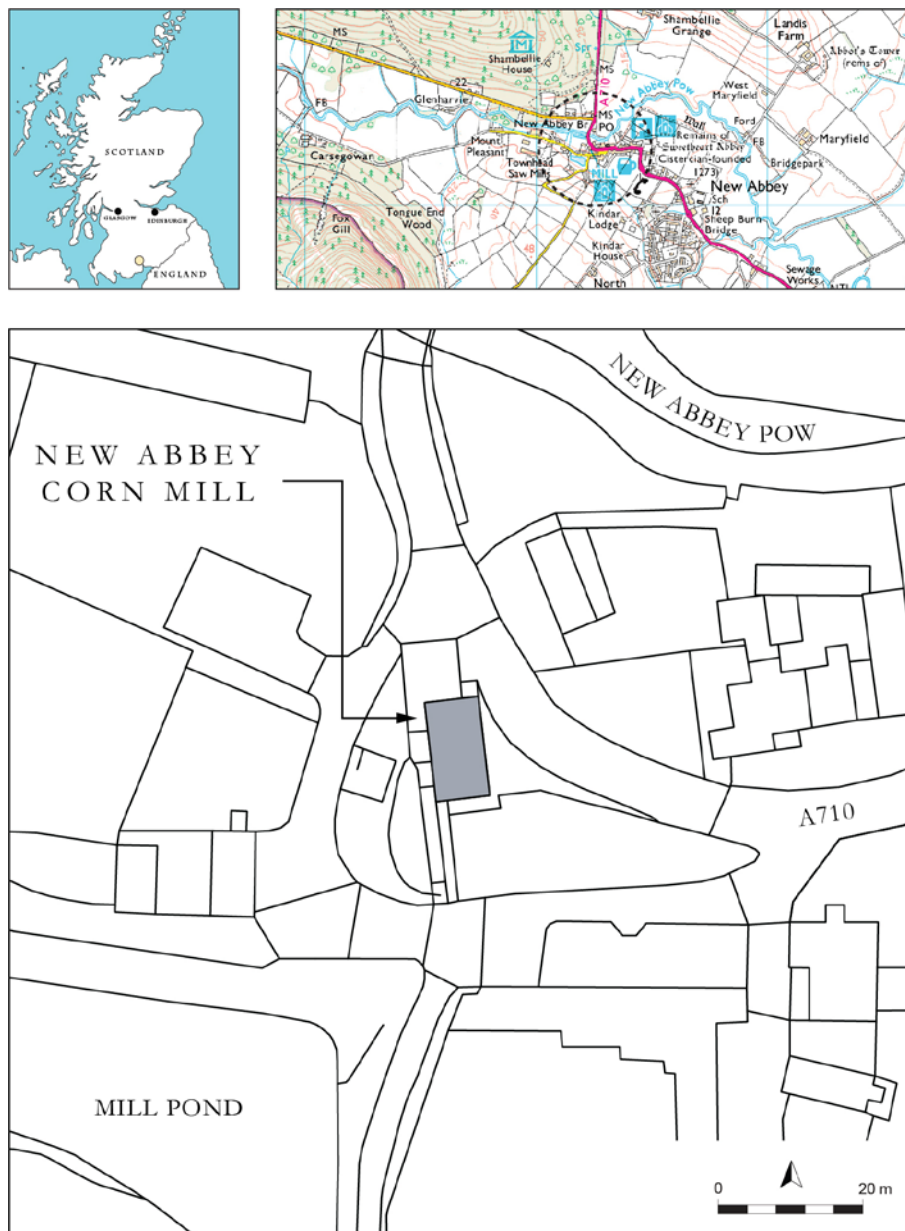


Figure 1: Plan showing the location of New Abbey Corn Mill.

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In addition, the existing local extract ventilation (LEV) unit occupying the water wheel pit was to be removed and the deposits of the floor levelled-off in order to accommodate a new unit in the same position. The work had a negligible impact on the floor deposits, and was carried out under an archaeological watching brief.

The present mill dates to the 1790s, replacing an earlier mill which may have stood in the same location or in the general vicinity. The present configuration has i) a three storey mill range to the south (converted from a late-18th century two-storey structure to three-storeys in the mid-1800s), ii) the miller's house to the north, iii) the kiln (with eastern porch) in between these two structures and, iv) a lean-to structure against the west wall of the kiln and miller's house. It was noted while on site that the northern portion of the miller's house is a later addition, indicated by a risband joint running up the east and west walls (Plate 1). The chimney indicates the position of the original gable wall. It is thus possible that the kiln is a secondary feature and that its addition necessitated the extension of the miller's house to the north to compensate for the space lost as a result.

The mill was heavily altered in the mid-19th century when the mill building was raised to three floors. The mill equipment has also been subject to change and replacement on several occasions. Rather than being a working example of a late-18th century mill, the New Abbey Corn Mill represents an example of how an 18th century mill evolved and adapted over time in order to embrace new technologies and working practices. In this sense, the current phase of work is part of this progressive approach to adaptation as a means of improvement.

The single trench was excavated manually by Historic Scotland staff under archaeological supervision and this, together with the standing building recording, was carried out between the 12th – 13th January, 2015.

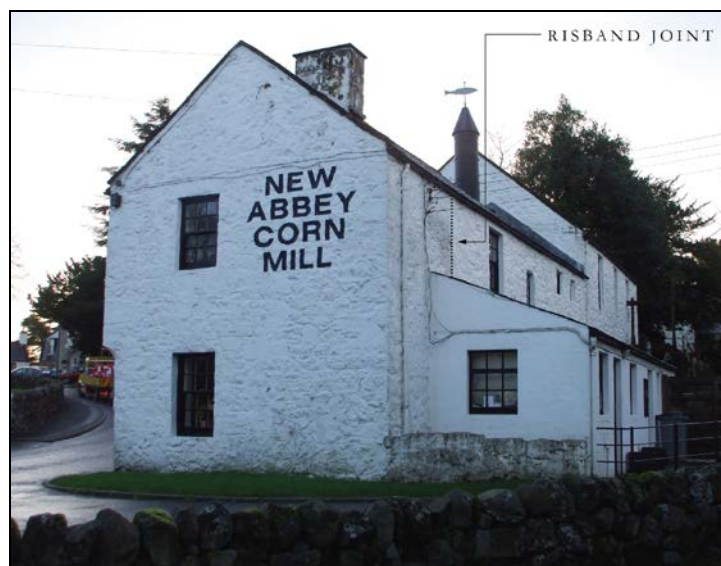


Plate 1: The risband joint in the west wall.

DESCRIPTION

The floor boards in front of the tool cupboard were taken up, numbered and set aside. The planks forming the base of the cupboard were then lifted, leaving planks **001** and **002** to the south and north (respectively) as these were bedded under pieces of the cupboard's wooden superstructure. Having exposed the covered section of the ventilation pipe, a formal survey of the cupboard was undertaken. Context numbers were applied to the various elements comprising the structure of the tool cupboard as well as the elements exposed (and previously not recorded) as a precaution against any subsequent alteration (as part of the planned works).

It was clear upon the removal of the cupboard base planks (and floor boards to the east of the cupboard) that extensive remodelling and re-building had previously taken place. The timber components were a mixture of modern replacements and timbers which clearly had some age to them. It appeared that the selection of an older piece of timber to be part of the panelling/framing of the cupboard may not have been based on the fact that it originally derived from that position, but rather that its condition allowed it to be re-used. The historic timber may therefore have derived from elsewhere in the mill. In addition it was clear that several of the beam timbers for framing-up the cupboard were themselves re-used, as attested by the presence of mortises which had no function in their present configuration (likely to be re-used ceiling timbers¹).

The cupboard base had a superstructure of six modern pine joists, numbered **003 – 008**. Joists **006 – 008** were carried to the south on a modern timber **042** running E/W and tied to uprights **029** and **030**; to the north **006 – 008** were attached to a modern E/W timber **066**. Timber **066** was bedded over the rear face of the south wall **055** of the water wheel pit **062**. The wall **055** was composed of large irregularly-shaped, mainly sub-rounded granite boulders bonded in lime mortar. The thickness of the wall N/S could not be determined (it was at least 55cm thick) as it was obscured to the south by a layer of loose large sub-rounded granite boulders **059**. The wall **055** had previously been breached by an irregular cut **056**, 30 – 60cm wide N/S, for the insertion of a ventilation pipe **057**. The ventilation pipe then returned to the east and north where it was bedded below timber floor joists **010 – 012**, and the timber bracer **021** (attached to joist **010**).

¹ Rather than attempting to write a detailed report on the full extent of the cupboard (which by association would require discussion of those shared neighbouring elements), the elements described will be limited to those which were exposed for the first time through the current works.

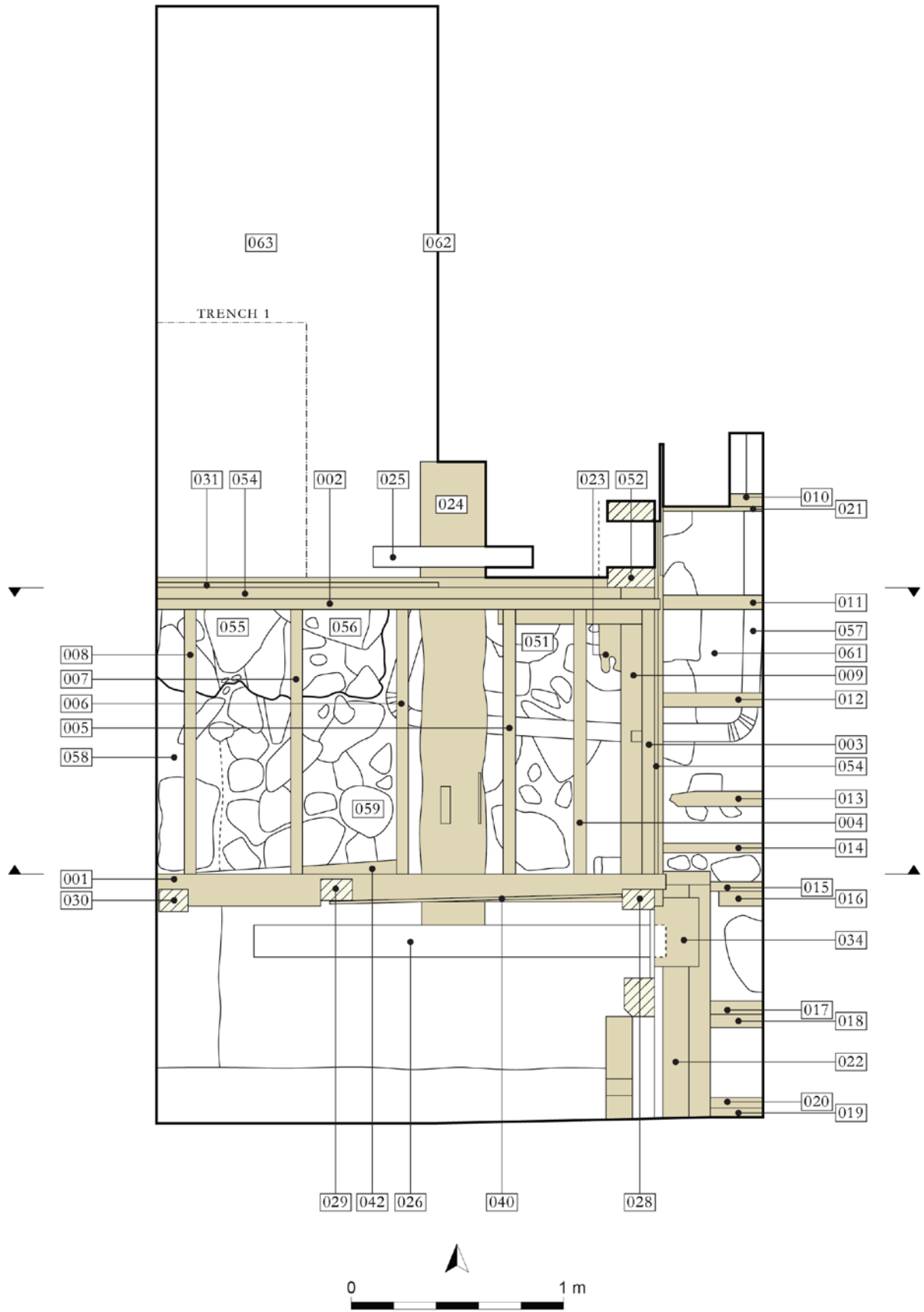


Figure 2: Cupboard and features below.

To the east, joists **003 – 005** were carried on a modern E/W timber **049** which was bedded (to the east) on a N/S modern timber **009**, itself supported by a large hand-cut timber **023**, possibly a re-used ceiling timber. To the west, timber **049** (carrying joists **003 – 005**) was bedded on a modern wooden pad **050**, which was supported by a crude column **051** of granite rubble bonded in lime mortar. The shaft **024** of the large toothed wheel **026** driving the oat bruiser was also revealed during the works. This had been fashioned (by hand) from a tree trunk, but had clearly once been part of a roof as it carried mortises which indicated its original function. The shaft measured *c.*30cm in diameter.

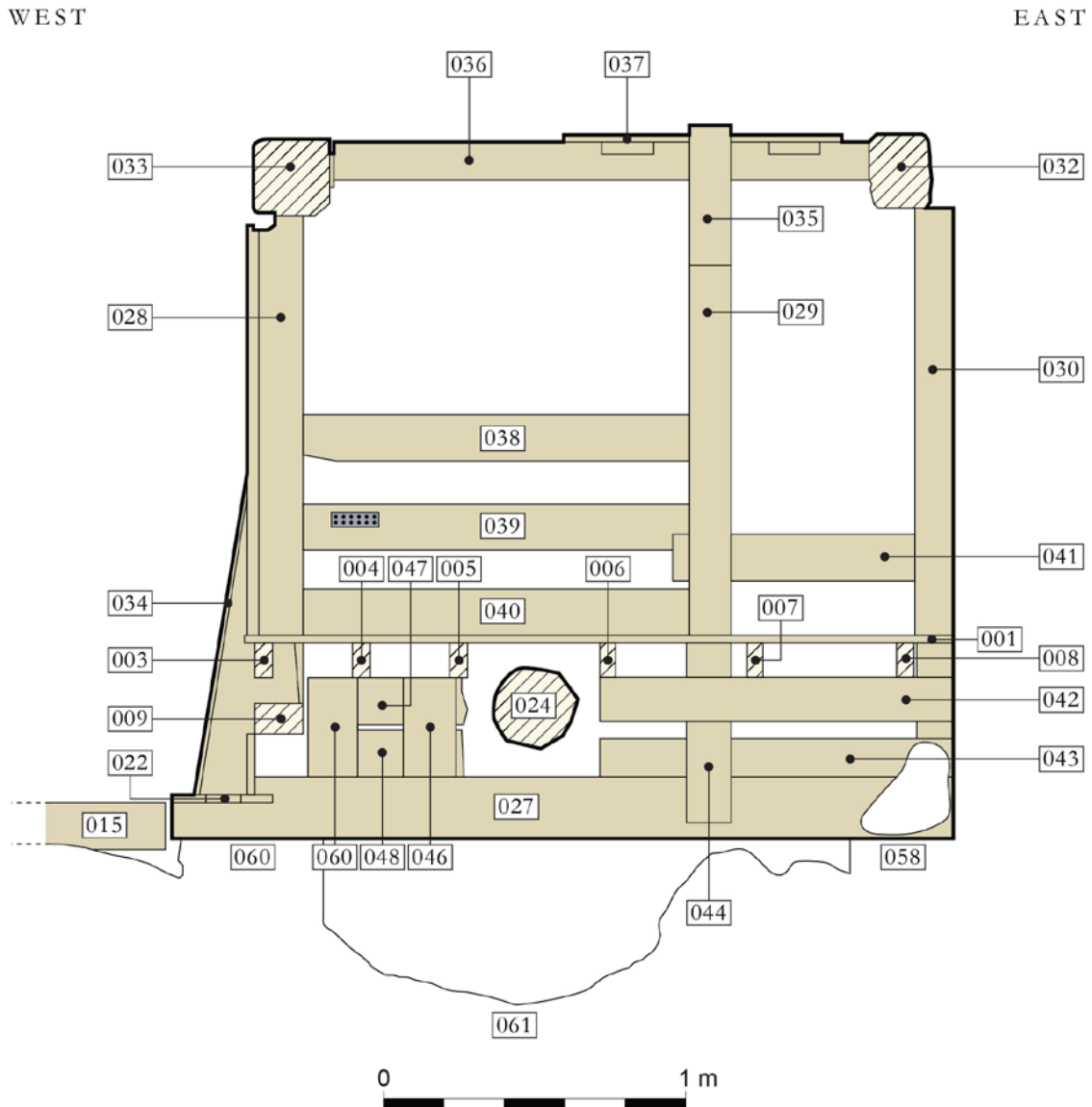


Figure 3: North-facing view through the cupboard.

On the south side of the cupboard, joists **003 – 005** were carried on an arrangement of two modern beams **048** and **049**, which had been secured together with two modern planks **045** and **046**. The cupboard was supported to the south by a large re-used hand-cut beam **027** with a modern timber **043**

and plank **044** above. Beam **027** rested to the west on a projecting stone shelf 35cm wide, an original feature contrived to carry beams and joists. To the east, beam **027** rested on a modern brick plinth **060**. The loose rubble **059** covering the area under the cupboard was interspersed with a thick deposit of grain dust and casings **061**.

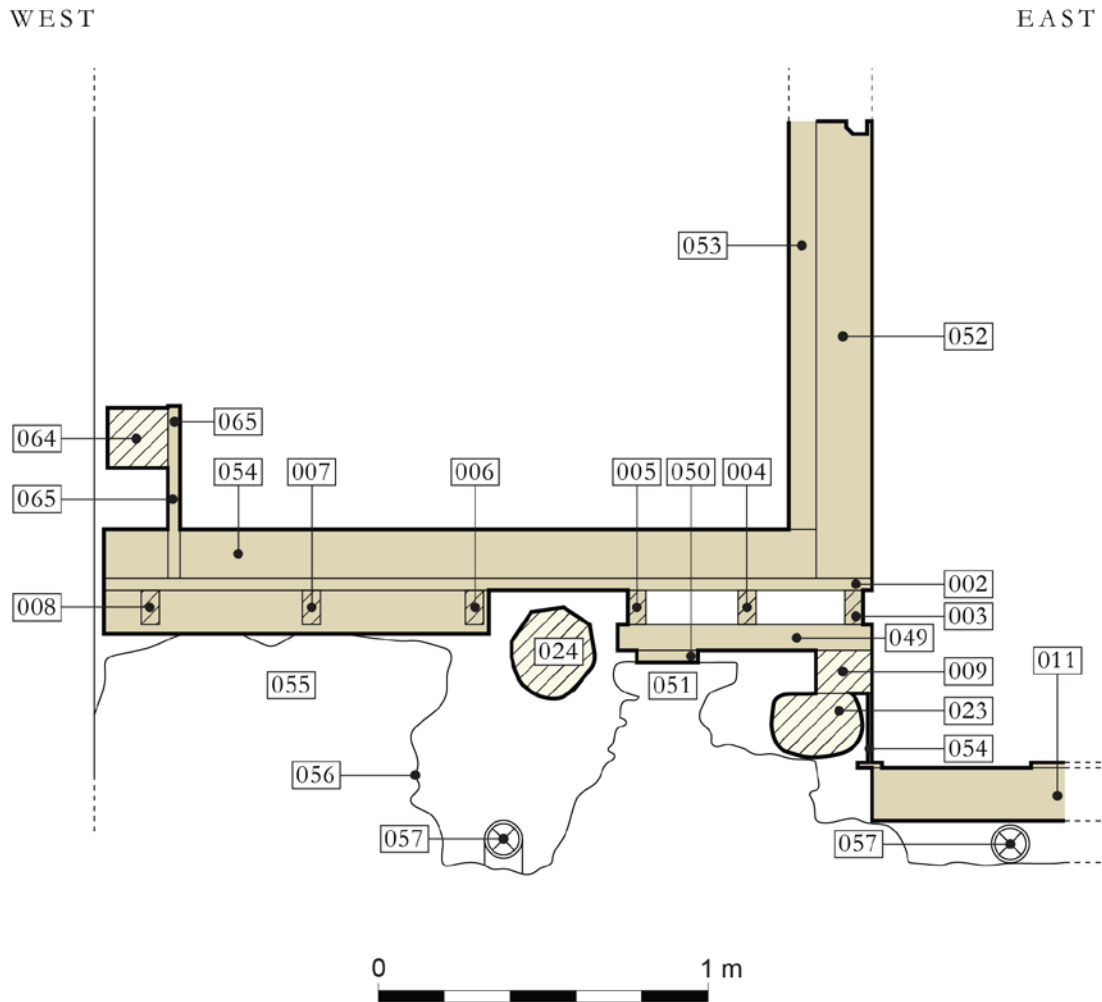


Figure 4: South-facing view through the cupboard.

Trench 1

Having removed the existing LEV from the floor of the water wheel pit **062**, a small area 1.20m N/S x 0.7m E/W was levelled-off to carry the concrete plinth for the replacement LEV unit. The floor deposit was a hardened mixture of dust, silt and lime **063** which was reduced by \approx 5cm to the south. Nothing of archaeological interest was noted during the excavation.

CONCLUSIONS

It was apparent that much of the timber used in the creation/re-creation of the tool store was modern, while that timber which was clearly older may not be *in-situ*. The standing building recording aspect of the work allowed the observation and recording of hitherto un-quantified elements, which has resulted in a better understanding of how the current configuration came about.

The excavation had such a minimal impact that nothing of archaeological interest was noted. However, further ground-breaking works may reveal significant features, and it is recommended that they be similarly accompanied by an archaeological watching brief.



Plate 2: Ventilation pipe 057, wall 055 and cut 056.

LIST OF CONTEXTS

Context	Description
001	Modern floor board on cupboard base.
002	Modern floor board on cupboard base.
003	Modern wooden joist for cupboard floor.
004	Modern wooden joist for cupboard floor.
005	Modern wooden joist for cupboard floor.
006	Modern wooden joist for cupboard floor.
007	Modern wooden joist for cupboard floor.
008	Modern wooden joist for cupboard floor.
009	N/S beam for supporting cupboard frame.
010	Floor joist.
011	Floor joist.
012	Floor joist.
013	Floor joist.
014	Floor joist.
015	Floor joist.
016	Floor joist.
017	Floor joist.
018	Floor joist.
019	Floor joist.
020	Floor joist.
021	Wooden bracing against floor joist 010.
022	Modern floor boards.
023	Hand-cut timber supporting beam 009.
024	Hand-cut wheel shaft (re-used ceiling timber with mortises).
025	Toothed wheel to the north of 024.
026	Large wheel at the southern end of 024, for operating the oat bruiser.
027	Main E/W beam supporting the south side of the cupboard.
028	Upright wooden post on the south side of the cupboard.
029	Upright wooden post on the south side of the cupboard.
030	Upright wooden post on the south side of the cupboard.
031	Modern wooden plank bracing the side plank 054.
032	N/S beam framing the top of the cupboard.
033	N/S beam framing the top of the cupboard.
034	Sloped wooden box fronting wheel 026.
035	Wooden plank attached to upright 029.
036	Re-used E/W timber between 032 and 033.
037	Wooden plank used to cover the mortise gaps in 036.
038	Wooden side plank attached to uprights 028 and 029.
039	Wooden side plank attached to uprights 028 and 029.
040	Wooden side plank attached to uprights 028 and 029.
041	Wooden side plank attached to uprights 029 and 030.
042	Wooden planking on the south side of the cupboard.
043	Wooden planking on the south side of the cupboard.
044	Wooden planking on the south side of the cupboard.
045	Wooden planking on the south side of the cupboard over 047 and 048.
046	Wooden planking on the south side of the cupboard over 047 and 048.
047	Wooden beam on the south side of the cupboard.
048	Wooden beam on the south side of the cupboard.
049	Modern E/W beam carrying joists 003–005.
050	Wooden pad below 049.
051	Granite rubble column bonded in lime mortar carrying 049 and 050.
052	Wooden upright on the north side of the cupboard.
053	Wooden upright on the north side of the cupboard.
054	Wooden planks forming the lower east face of the cupboard.
055	Rear south wall of the water wheel pit composed of granite rubble bonded in lime mortar.
056	Cut through wall 055 to insert ventilation pipe 057.

Context	Description
057	Ventilation pipe.
058	Projecting stone shelf for carrying beams on the west side of the cupboard.
059	Granite rubble below cupboard.
060	Brick plinth supporting east side of beam 027.
061	Generic number for dusty floor deposit below rubble 059.
062	Water wheel pit.
063	Dust, silt and lime deposit on floor of water wheel pit.
064	N/S beam to rear of cupboard.
065	Thin wooden upright attached to 064.
066	Wooden beam attached to joists 006–008.

LIST OF DRAWINGS

No.	Type	Description	Scale
1	Plan	Cupboard and features below.	1:20
2	Section	North-facing through cupboard.	1:20
3	Section	South-facing through cupboard.	1:20

LIST OF DIGITAL PHOTOGRAPHS

No.	Description	From	Date
1	The Corn Mill.	NW	12/01/2015
2	West elevation showing external water wheel.	SW	12/01/2015
3	Pre-intervention shot of cupboard.	E	12/01/2015
4	Pre-intervention shot of cupboard.	E	12/01/2015
5	Pre-intervention shot of cupboard and floor.	E	12/01/2015
6	Pre-intervention shot of cupboard.	NE	12/01/2015
7	Pre-intervention shot of cupboard and floor.	NE	12/01/2015
8	Pre-intervention shot of cupboard.	E	12/01/2015
9	Pre-intervention shot of cupboard.	SE	12/01/2015
10	Pre-intervention shot of cupboard.	E	12/01/2015
11	Pre-intervention shot of cupboard and floor.	NE	12/01/2015
12	Gear wheels and provender shoot.	E	12/01/2015
13	Cupboard base and floor opened up.	E	12/01/2015
14	Exposed cupboard base and vent.	E	12/01/2015
15	Exposed vent 057 and floor deposit 061.	E	12/01/2015
16	Exposed joists in cupboard base.	NE	12/01/2015
17	Exposed joists in cupboard base.	E	12/01/2015
18	Oat bruiser wheel 026 and exposed shaft 024.	S	12/01/2015
19	Wheel shaft 024 with mortises.	E	12/01/2015
20	Wheel shaft 024 with mortises.	E	12/01/2015
21	Wheel shaft 024 with mortises.	E	12/01/2015
22	Cupboard and mill gear.	NE	13/01/2015
23	Cupboard and oat bruiser.	NE	13/01/2015
24	Deposits levelled in water wheel pit.	N	13/01/2015
25	Deposits levelled in water wheel pit.	N	13/01/2015
26	Deposits levelled in water wheel pit.	N	13/01/2015
27	Corbels on west wall of cupboard.	E	13/01/2015
28	Floor joists and ventilation pipe.	N	13/01/2015
29	Floor joists and ventilation pipe.	S	13/01/2015
30	Ventilation pipe 057 and rubble 059.	E	13/01/2015
31	Ventilation pipe 057, wall 055 and cut 056.	W	13/01/2015
32	Ventilation pipe 057, wall 055 and cut 056.	W	13/01/2015
33	Shelf 058, rubble 059 and wall 055.	E	13/01/2015
34	Oat bruiser wheel 026.	NE	13/01/2015