HEDDON MILL, GEORGEHAM, DEVON

HISTORIC BUILDING EVALUATION

February 2014

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Project HMG239

HEDDON MILL, GEORGEHAM, BRAUNTON, DEVON

HISTORIC BUILDING EVALUATION

Generally

This evaluation has been compiled at the request of the building owner, to assess the historic character of a former water-powered corn mill at Heddon Mill Farm, Heddon Mill, Braunton, Devon, EX33 1HZ, in support of a planning application for the conversion of the building from a builder's store into two holiday accommodation units. The work is being undertaken in accordance with paragraph 128 of the *National Planning Policy Framework* (2012), in support of a planning application for alterations to and demolition of all or part of the fabric of the building (56603), as outlined in a Method Statement submitted to Devon County Council's Historic Environment Team.

None of the buildings forming part of the group which includes the former mill are listed.

The Devon Historic Environment Record Monument Report MDV 19689 refers to this site (Appendix A).

A site visit for the purpose of this evaluation was made by Martin Watts on 14 January 2014. Background and other information has been compiled from a range of sources, which are acknowledged and referenced.

A digital copy of this evaluation will be uploaded onto the OASIS (Online AccesS to the Index of archaeological investigationS) database under the identification number martinwa1-169880.

Location

Heddon Mill is located at the east end of the parish of Georgeham, to the west of the A361 Barnstaple to Ilfracombe main road, NGR SS 4950 4000. The mill forms part of a small complex of buildings which include a Victorian 'villa' adjoining its south end, and more recent and modernised buildings to the north and east. The buildings are situated on the western edge of the flood plain of an apparently unnamed stream which flows from the north-west and is joined by the river Caen to the east of the site. The site stands at about 51m above Ordnance Datum.

Historical background

The place-name Heddon is not recorded under Georgeham in *The Place-Names of Devon,* but a Heddon in Filleigh parish is given as meaning 'heath hill' (Gover *et al* 1932, 43-4; 42). No early references to a mill at Heddon have been found, although the arrangement of the boundaries of the parishes of West Down, Braunton and Georgeham, which meet around and to the east of the site, suggest that they were deliberately laid out to include the mill within Georgeham parish. The site is therefore likely to be of medieval establishment, although it was not the manorial mill for Georgeham (see below). Neither Heddon nor the mill are shown on Benjamin Donn's map of 1765 (Ravenhill 1965). 'Mill' and a small complex of buildings are marked on the 1804 Ordnance Survey surveyor's sheet (OSD 31, Barnstaple sheet, 2 inches to 1 mile, www.bl.uk/onlinegallery/onlineex/ordsurvdraw/ accessed 01.14).

In 1812 Heddon Mills were advertised to let, then described as 'A SET OF MILLS, called HEDDON MILLS, with about 7 acres of meadow land adjoining... The mills immediately to be put in good condition, with one pair of French stones and one pair of Welch.' [1] (*Sherborne Mercury*, 21 September 1812). It would appear that the mills were in a run-down state time and that they were rebuilt soon after, certainly before 1821 when they were again advertised to let:

'FLOUR and Grist Mills, called HEDDON MILLS, built entirely new, with two pairs of stones, French and others of the best quality, an excellent Bunt, large Grindstone, turned by the stream and a very convenient Mill House, and about an Acre and a half of Ground.

They are situated in the parish of George Ham... For letting the above a survey will be held at the Fuller's Inn, Barnstaple... Enquire of the Steward, George Northcote at George Ham...' (*Sherborne Mercury*, 9 April 1821)

In 1840 the owner was Mary Abrahams and the occupier Joseph Pearse (Georgeham tithe map and apportionment, DHC). The property, which is the first to be listed in the tithe apportionment, then comprised just over 2.5 acres (1 ha) (see Figure 2). In the introduction to the apportionment the following testimony of George Louis, which is dated April 1839, refers specifically to three mills in the parish:

'And Whereas I find that the Manor Mill in the said Parish is covered from under of Tithes in kind by a prescriptive or customary payment of the Annual Sum of Three Shillings and four pence and two other Mills in the said Parish called Heddon Mill and Hole Mill are also covered from un[...] of Tithes in kind by a prescriptive or customary payment of the Annual sum of two Shillings for each of the said last mentioned Mills in lieu of all manner of Tithes to the Rector of the said Parish - '.

The mill is shown as a stand-alone building on the tithe map (Figure 2) and coloured red, which suggests that the miller's accommodation and the working parts were contained within the same building. The first edition 1:2500 Ordnance Survey map of the 1880s (Figure 3) shows a building adjoining the south end of the mill, presumably the miller's dwelling, the forerunner of the late Victorian or early Edwardian villa which is shown on the second edition map of 1904-6 (Figure 4). The mill complex expanded considerably in this period, with further buildings being added on the east side of the mill and at the north end of the site.

In a survey of North Devon watermills carried out in the 1970s and published in 1989, the following entry summarised the later history of the mill:

33) HEDDON MILL, GEORGEHAM SS 490400

The overshot wheel and machinery do not survive. There are two millstones in a near-by field. The mill consists of ground floor and two storeys above. It is built of stone with slate roof supported by queen post trusses, all in fairly good structural condition. The mill and the house are in a continuous block. The leat is supplied by water from the Caen. The building is owned by Mrs. M.H.C. Slade, who has lived in the mill house since 1925. Before then it was owned by J. Stanbury, who had a mill at Woolacombe. The mill was last working in 1960, after which it was dismantled to make room for a grain drying plant. T.E.S. 1974.

The buildings are in the same condition. R.A. 1989.

(Thorpe 1989, 42)

[1] 'French' millstones are imported stones, used for making fine flour; 'Welch' are Welsh millstones of sandstone conglomerate, for general milling

In a subsequent survey of North Devon mills undertaken in the early 1990s it was recorded that the buildings 'still have the character of a mill' and that the mill house was unoccupied. It was further noted that 'The whole place is rather derelict, with rough patching on the mill buildings.' (U3A 1995, 54-5).

The leat which supplied the mill with water was taken from the stream to the north of the site. Its course is not clearly indicated on the tithe map, but on the 1:2500 OS maps a small mill pond is shown at the confluence of two streams some 200m to the north, the leat running to the west and above the course of the stream that flows around the east of the mill site. The course of the leat, which ran along the top of the bank west of the mill, is shown turning at right angles to enter the mill in the position of the intake pit. The course of the leat, which has been backfilled at its southern end, was not examined as part of this evaluation. There is some standing water in the bottom of the former wheelpit, but this was not examined, nor the course or condition of the tailrace.

The mill cottage adjoining the north end on the east side of the mill was rebuilt after this record was made (now Copper Beech Cottage). The grain drying plant referred to in 1989 has been removed, although the intake pit remains, and the lower floors of the mill are currently used as a builder's store. The windows on the principal east elevation have been renewed and a new corrugated sheet metal roof put on within the last 20 years.

Description of the building
The mill is a rectangular building, about 16.5m by 7.5m externally, orientated about north-south. It originally contained three full floors and a loft gallery (see Figure 6).

External:
The walls are of random rubble stone, with a gable roof now clad with corrugated metal sheeting. The principal front elevation (east) is cement rendered and colour-washed cream with a black painted base. The rear (west) elevation, which is built alongside, rather than directly into, the bank which carried the leat, is rubble stone. Only the upper parts of the gable ends are visible above the adjoining buildings; the north gable is rendered with a concrete capped verge and the south gable has some exposed rubble stone and is rendered above the level of the villa roof.

The window and door openings have arched heads and all of the windows frames on the east elevation have been replaced in timber and have cills made of roofing slates. At ground floor level there is a timber boarded door towards the south end of the east elevation and a wider opening with a pair of sliding timber doors, which appears to be an enlargement of an earlier door opening, towards the centre of the elevation. Above this opening is a first floor loading door, now closed with a plain panel. The window openings on the west side are now without frames and the windows in the gable ends, which lit the loft gallery, are blocked.

Projecting from the west side is a concrete block-walled extension, rendered externally on its south side only, with a lean-to roof clad with corrugated sheet. This encloses a concrete hopper-shaped intake pit, which was built to take grain tipped into it from the leat bank level. This structure partly occupies the position of the former launder which fed the internal waterwheel.

Internal:
The ground floor is concrete, with a large pit at the south end which is at least 1.8m deep below the floor level. This is the former waterwheel pit, which is now largely covered with timber planks. Its cross section appears to have been modified, with sloping sides and a narrower central channel with debris and some standing water in it. There is a stone (or slate) slab set in the ground floor under the bottom of the hoist chain. The north end of the ground floor is divided off by an inserted timber screen made of re-used sleepers (perhaps salvaged from the nearby railway line?) set vertically.

The first floor is open at the south end, over the pit, and at also at the north end. The central section has a suspended timber floor, with three principal cross beams to the north of the pit area which retain clear evidence in the form of mortises and fixings where the stone beams - the timber beams that supported the lower millstones - were located. There appear to have been three pairs of millstones conventionally arranged around a central vertical shaft (see Figure 8 and discussion). Some lubricant throw on the north face of the southernmost beam indicates the position of this shaft. There are also housings and some bolts through the beams, where vertical bridge posts were fixed. The central of the three beams has an inclined slot cut out at its west end, close to the wall. This was for a belt to pass from the wide pulley on the layshaft at first floor level down to the ground floor. The remaining first floor structure is not in bays, the floorboards being laid on deep softwood joists, of 280 x 80mm section at 0.44m centres., which span the width of the building. Some herringbone strutting remains between the joists in places and some of the timbers, which are of imported softwood, have quality or shipping marks visible on them.

The first floor is reached by a set of steps which rise from the solid floor at the downstream end of the pit. This is not considered to be their original position. On the west side at the head of the steps is a short layshaft, running east-west, which carries four belt wheels and a chain drive wheel, from the west as follows:

No	Diam	Face	Type/Arms	Function
1	600	115	Cast iron. 6 bar	
2	300		Cast iron	Chain drive up to hoist over
3	190	135	Cast iron	
4	250	100	Solid timber	
5	950	560	2 x 6 CI arms, timber face	Belt drive down to ground floor

The circular shaft runs in two bearings, one just inside the west wall and the inner on a cast-iron hanger bolted to a timber which is hung from the underside of second floor joists. There are sack traps set in the floor, the trimmed joists around the opening below showing signs of abrasion from the hoist chain.

The loft is reached by a set of steps up from the first floor; these are now upside down and not permanently fixed. The loft floor structure is similar to that of the first floor below, with 250 x 80mm softwood joists at 0.44m centres and 260mm wide softwood boards. The loft is fully floored but decayed in places and the north and south ends were not closely investigated. The sack hoist is still in place, close above the head of the steps in the third bay from the south. This comprises a chain drive wheel of about 0.95m diameter, solidly planked in timber in two halves which are joined across the diameter. This wheel is mounted on an iron spindle which carries a 1.1m long x 170mm diameter timber chain drum, the spindle extending some 0.42m long to a bearing at its east end. The drum is set horizontally, its centre 1.7m above the floor. The sack hoist mechanism is supported on four vertical timbers, two on each side, which are bolted to the tie beams on both sides of

the bay. The hoist chain, with guide sheaves below the ridge, and the control lever which raised the chain drive wheel and drum to engage the hoist, are still in place. The sack hoist well is boarded up to tie beam level on three sides, being open on the south side. There are the remains of a central walkway or gallery set on top of the tie beams between the queen posts, from which bins (no longer surviving) on both sides of the loft would have been fed from sacks of grain raised to the upper level by the hoist. High level windows in both gable ends formerly lit the walkway; these are now blocked.

The gable roof is of eight bays, defined by seven queen post trusses. The tie beams are built into the wall heads on both sides, and are 230 x 100mm section imported softwood timbers. The principal rafters are 230 x 80mm section and the queen posts 130 x 80mm, set 2.8m apart. There are several rows of purlins randomly spaced across the backs of the principals on both slopes, and a pair of ridge purlins. Some of these timbers appear to have been renewed, presumably when the corrugated sheet cladding was put on. Three of the tie beams, on the south sides of bays 4, 5 and 6, have a cut-out arched relief close inside the east wall, either to provide working headroom or for some equipment or machinery to be located there.

Dating and discussion

From the evidence of the newspaper advertisements cited above, Heddon Mill appears to have been substantially rebuilt between 1812 and 1821. It is referred to as Heddon Mills (plural) in the early 19th century, and it is feasible that there were originally two waterwheels each driving a pair of millstones, a layout once found widely in Devon. There is no clear evidence of an earlier configuration of waterwheels and machinery, however, although the possibility of there once having been two overshot wheels in line on the rear (west) elevation cannot be discounted, as the leat embankment is some distance away from the wall of the building. The tithe map shows a single rectangular plan building which, being coloured red and described as 'Mill House & Waste' in the apportionment, suggests the miller's accommodation and the machinery were housed in one building, but is uninformative regarding the position of the waterwheel or wheels (Figure 2).

The roof and floor structures are all of imported softwood timbers and appear to be of a single construction phase, consistent with an early to mid 19th century date. The 1821 advert refers to two pairs of millstones, although there is surviving evidence for a third pair. It is possible that the floor structure was modified for the third pair (presumed to be the central pair, being the usual practice found elsewhere) to be added, the northern beam of the three main cross beams being of slightly different character to the other two. An alternative is that provision was made during rebuilding for a third pair of stones but that these were not set up until later (if at all). There are mortises, housings and bolts which indicate where the horizontal stone beams and vertical bridge posts were positioned (see Figure 5), but no other clear evidence of the mechanical layout survives. It is likely that, as found in watermills elsewhere in the county, there was an intermediate mechanical phase between the early 19th century rebuilding and the end of that century, as waterwheels and machinery have a working life of perhaps 40-50 years before major repairs or renewal are necessary, although no documentary or physical evidence has been found with regard to Heddon Mill.

The wheelpit appears to have been altered, both in cross section and length, presumably as part of the work carried out when the grain drying equipment was installed. The 1989 report (Thorpe 1989, 42) notes that the waterwheel was overshot and, from the space available, it could have been in the region of 4 to 5m diameter by 2m wide, powerful

enough to drive two pairs of stones and ancillary machinery. Mrs Ann Morris, a daughter of Mr and Mrs Slade and the present owner, recalls seeing the waterwheel in place over 50 years ago, but cannot recall any other machinery or millstones in place. The displaced millstones mentioned in the 1989 report no longer appear to be on site (A. Morris, pers comm).

The layshaft at first floor level, although in the right position to have been driven by the water-powered machinery to work the sack hoist and ancillary equipment at first floor level, appears to have been modified, as there is no provision for a gear drive as would be found with a conventional spurwheel drive layout implied by the positions of the millstones (see Figure 8). In the 1821 advertisement, a 'bunt' (a sifting machine for making fine flour) and a large grindstone (used for sharpening the tools for dressing the millstones, for example) are referred to and these would have been located at first floor level, driven by belt from a layshaft. The cut out in the end of one of the main beams, to allow a drive belt to pass down through the first floor, may be a later alteration so that the layshaft could be driven from an engine or motor located on the ground floor.

Conclusion

Heddon Mill is a former water-powered corn mill, which was substantially rebuilt in the second decade of the 19th century. A possible mechanical refitting phase later in the 19th century may have taken place, although little evidence of the form of the working parts survive. The mill was almost completely gutted of its waterwheel and machinery after it stopped work in the early/mid-20th century, and further localised alteration of the fabric occurred when grain drying equipment was installed. This equipment was subsequently removed, although the intake pit and associated blockwork walling remains. Apart from the structure of the building, the only surviving remains of the original working parts are the three cross beams supporting part of the first floor, the layshaft and pulleys hung below the loft floor, the sack traps in the first and second floors and sack hoist mechanism in the loft.

It is considered that no further recording of the building is required.

Martin Watts
February 2014

Acknowledgements

I am grateful to the owner for arranging access and providing useful background information about the mill and site; to Martin Bodman, for newspaper references; and to Sue Watts, for her help with background research and in the preparation of this evaluation. The plans are based on survey drawings prepared by Simon Dovell, Chartered Surveyor, in July 2013.

References and sources

Bodman, M. 2003: *Watermills and other water-powered sites in Devon*. Unpublished typescript

DHC: Devon Heritage Centre, Exeter (tithe map and apportionment)

Gover, J.E.B., Mawer, A., Stenton, F.M. 1932: *The Place-Names of Devon*

Ravenhill, W. 1965: *Benjamin Donn. A Map of the County of Devon 1765*. Facsimile reprint

Thorpe, Josephine (editor). 1989: *North Devon Watermills.* NDAS, Barnstaple

U3A. University of the Third Age. 1994: *Watermills in North Devon 1994*

Appendix A

Devon Historic Environment Record
Monument Full Report
09/01/2014

HER Monument ID	Site Name	Record Type
MDV19689	Heddon Mills	Monument

Flour and grist mills, built early 19th century. Last used in 1960, then dismantled to use as grain drying plant.

Monument Types and Dates

WATERMILL ((Between) Modern to XXI - 1751 AD to 2009 AD)
Evidence DOCUMENTARY EVIDENCE

Description and Sources

Description

Cartographic. Ordnance Survey, 1905, 8NE
'Heddon Mill' shown.

Un-published. Society for the Protection of Ancient Buildings, 1982, Mills Index
Visited July 1982, mill empty.

Monograph. North Devon Archaeological Society, 1989, North Devon Watermills
Visited 1974. The overshot wheel and machinery do not survive. There are two millstones in a nearby field. The mill consists of ground floor and two storeys above. It is built of stone with slate roof supported by queen post trusses, all in fairly good structural condition.The mill and the house are in a continuous block. The leat is supplied by water from the Caen. The building has had the same owner since 1925. The mill was last working in 1960, after which it was dismantled to make room for a grain drying plant. The buildings were in the same condition when visited in 1989.

Monograph. University of the Third Age, 1995, Watermills in North Devon 1994
Visited 1994. The buildings still have the character of a mill, although the overshot wheel and machinery do not survive. The mill house is unoccupied.The whole place is rather derelict, with rough patching on the mill building.

Report - non-specific. Bodman, M., 1998, Water-Powered Sites in Devon
Other details: Site 5.

Report - Interim. Bodman, M., 2003, Watermills and Other Water-Powered Sites in Devon
Viewed from the road in 1995. Three storey mill located behind Victorian Villa, which probably replaced the original cottage adjoining it. The mill is built of random stone and maybe undergoing refurbishment, it has a new corrugated iron roof. The villa is of random stone with off-white brick facings. The cottage is random-stone built with a slate roof, of 4 bays. Interior not seen. Documentary references for newly built flour and grist mills to let in early 19th century.

Sources

Monograph: University of the Third Age. 1995. Watermills in North Devon 1994. Watermills in North Devon 1994. 54

Cartographic: Ordnance Survey. 1905. 8NE. Second Edition Ordnance Survey 6 inch Map.

Monograph: North Devon Archaeological Society. 1989. North Devon Watermills. North Devon Watermills. 42

Report - Interim: Bodman, M.. 2003. Watermills and Other Water-Powered Sites in Devon. 247-8

Report - non-specific: Bodman, M.. 1998. Water-Powered Sites in Devon. 33

Un-published: Society for the Protection of Ancient Buildings. 1982. Mills Index. Mills Index.

Location

National Grid Reference
Centred SS 4950 4001 (17m by 21m) SS44SE Area

Administrative Areas

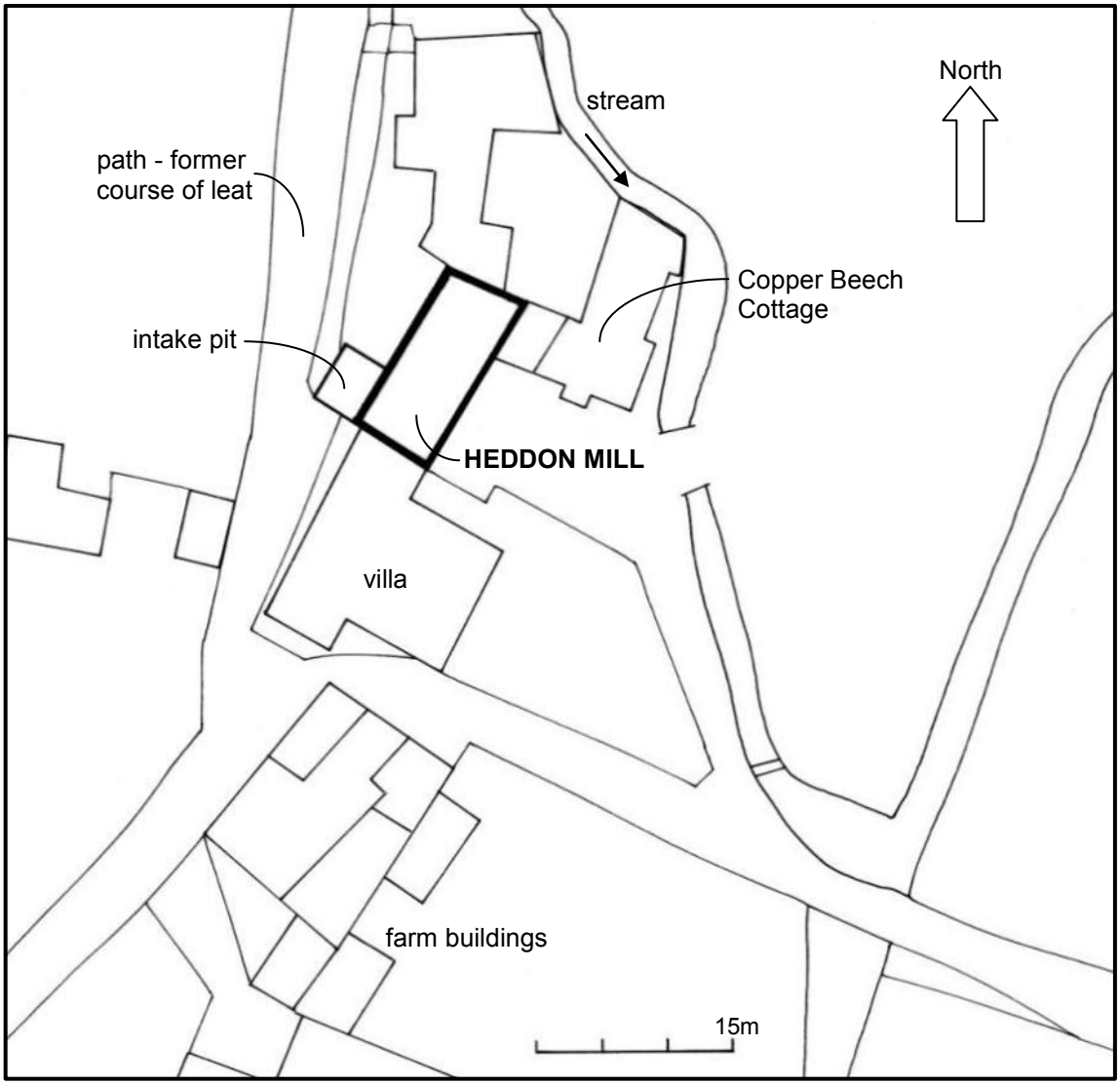

Figure 1: Heddon Mill, Georgeham. Site plan

Figure 2: Heddon Mill, from Georgeham and West Down tithe maps

from the tithe apportionment of 1840

Owner Mary Abrahams
Occupier Joseph Pearse

			a	r	p
531	Mill House & Waste	Waste			13
532	House & Garden	Garden			12
533	Mill Dock	Pasture	1	1	14
534	Heddon Mill Pool	Waste		1	31
536	Coppice	Coppice			23
537	Coppice	Coppice			24
538	Coppice	Coppice			21
539	Plot	Arable			28
		acreage	2	2	14

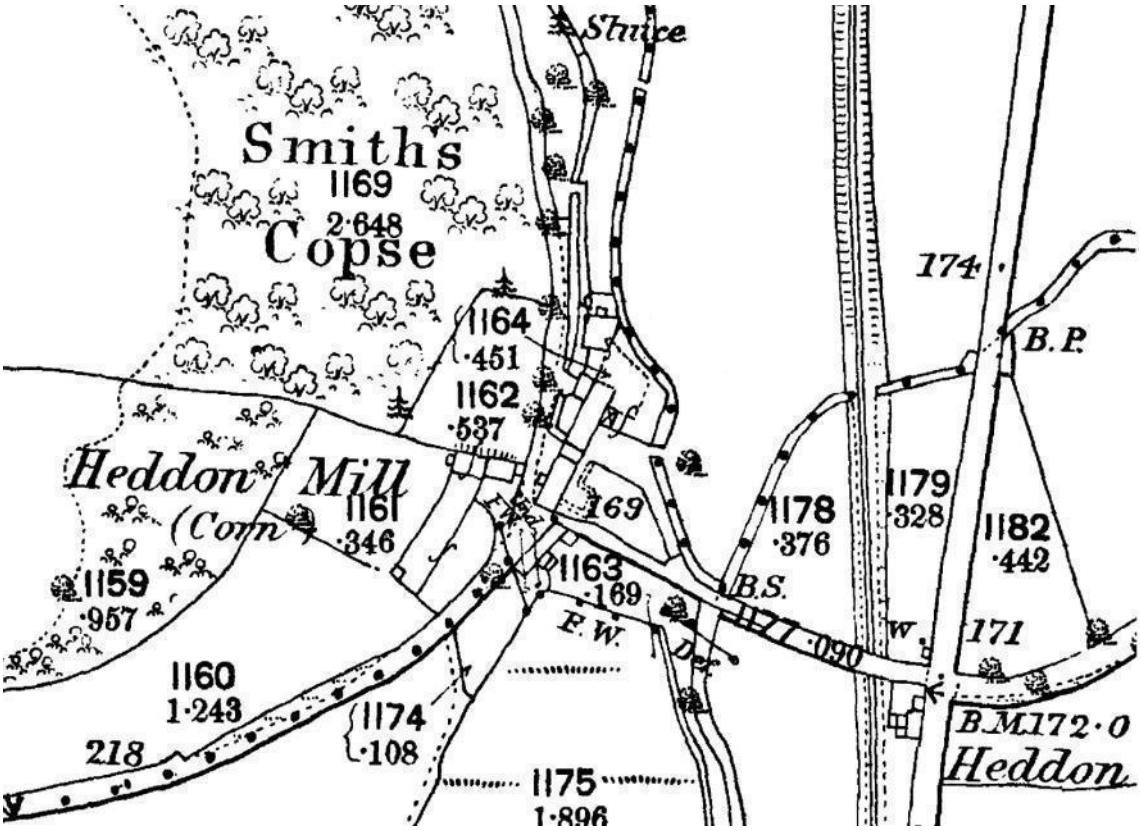

Figure 3: Ordnance Survey 1:2500, 1st edition 1880-90

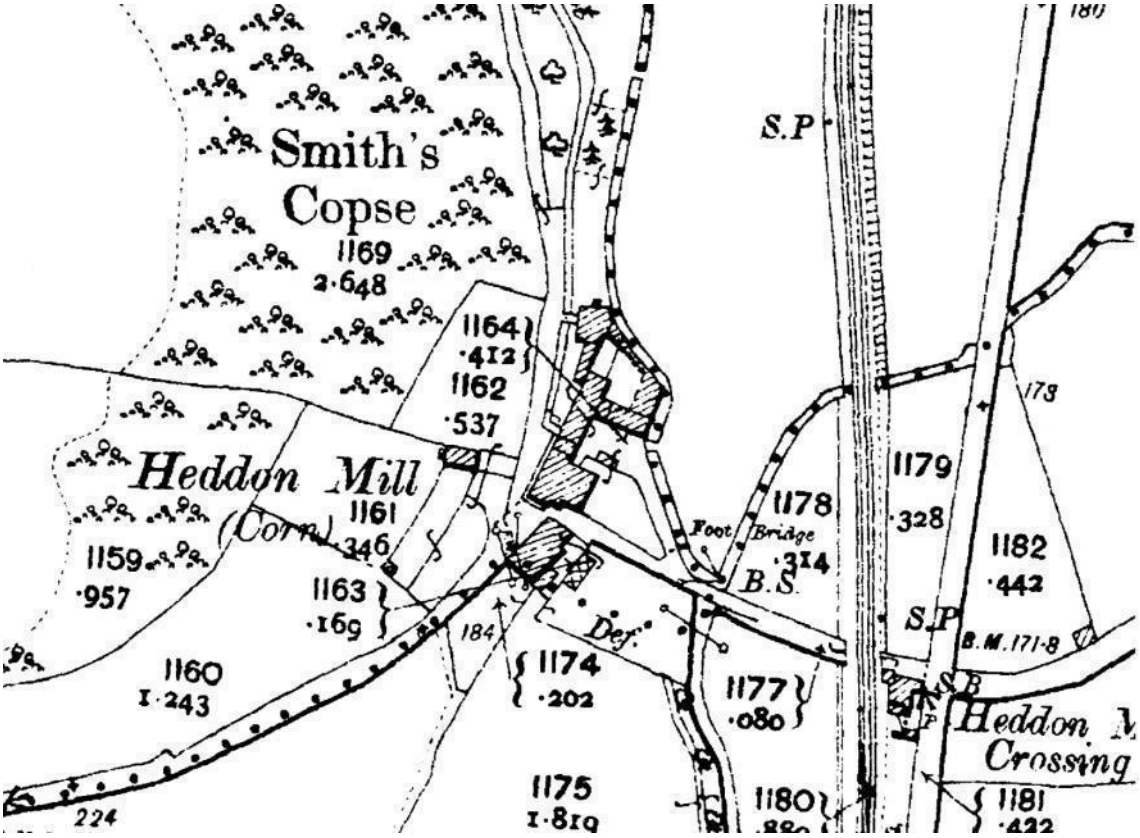

Figure 4: Ordnance Survey 1:2500, 2nd edition 1904-6

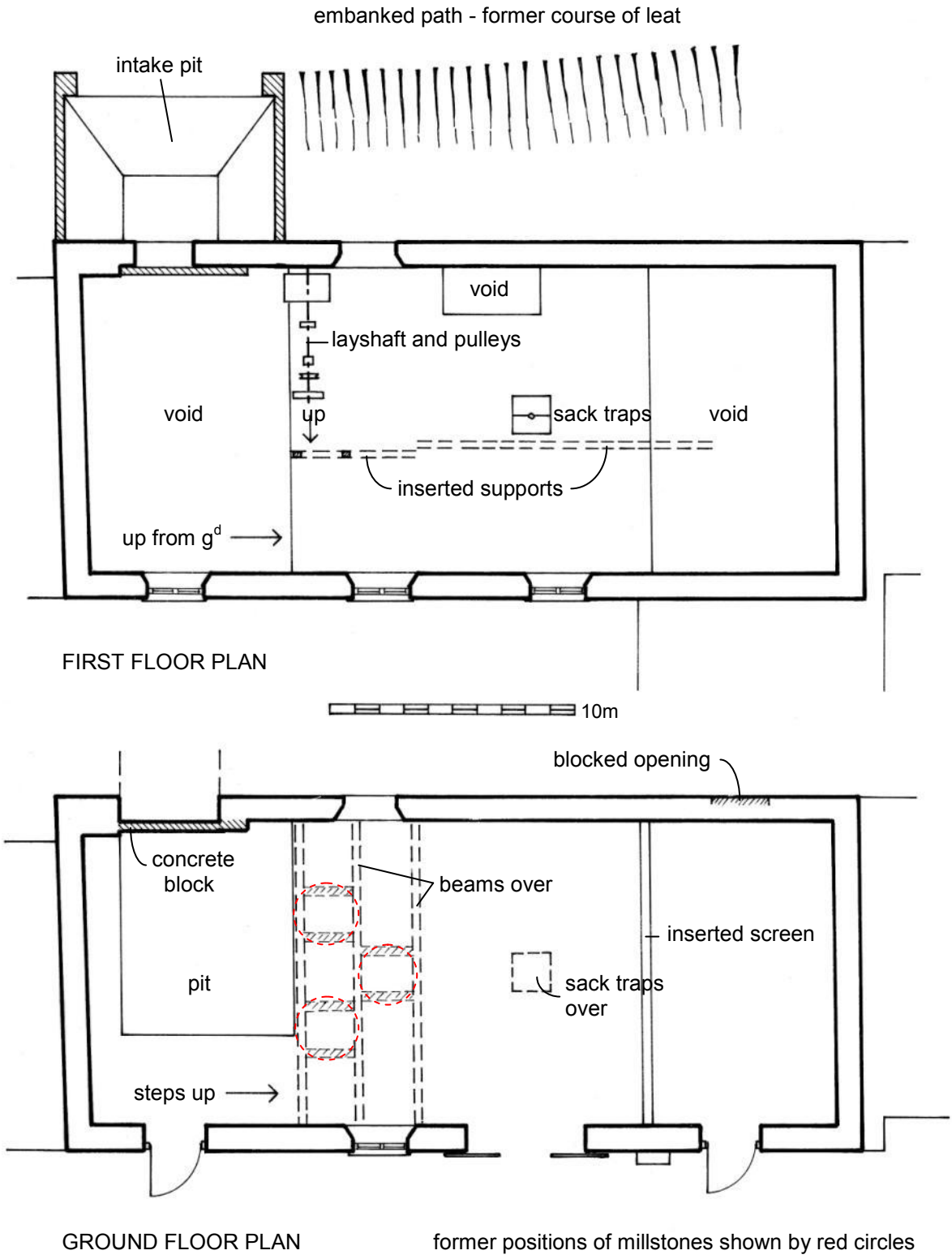

Figure 5: Heddon Mill. Ground and first floor plans

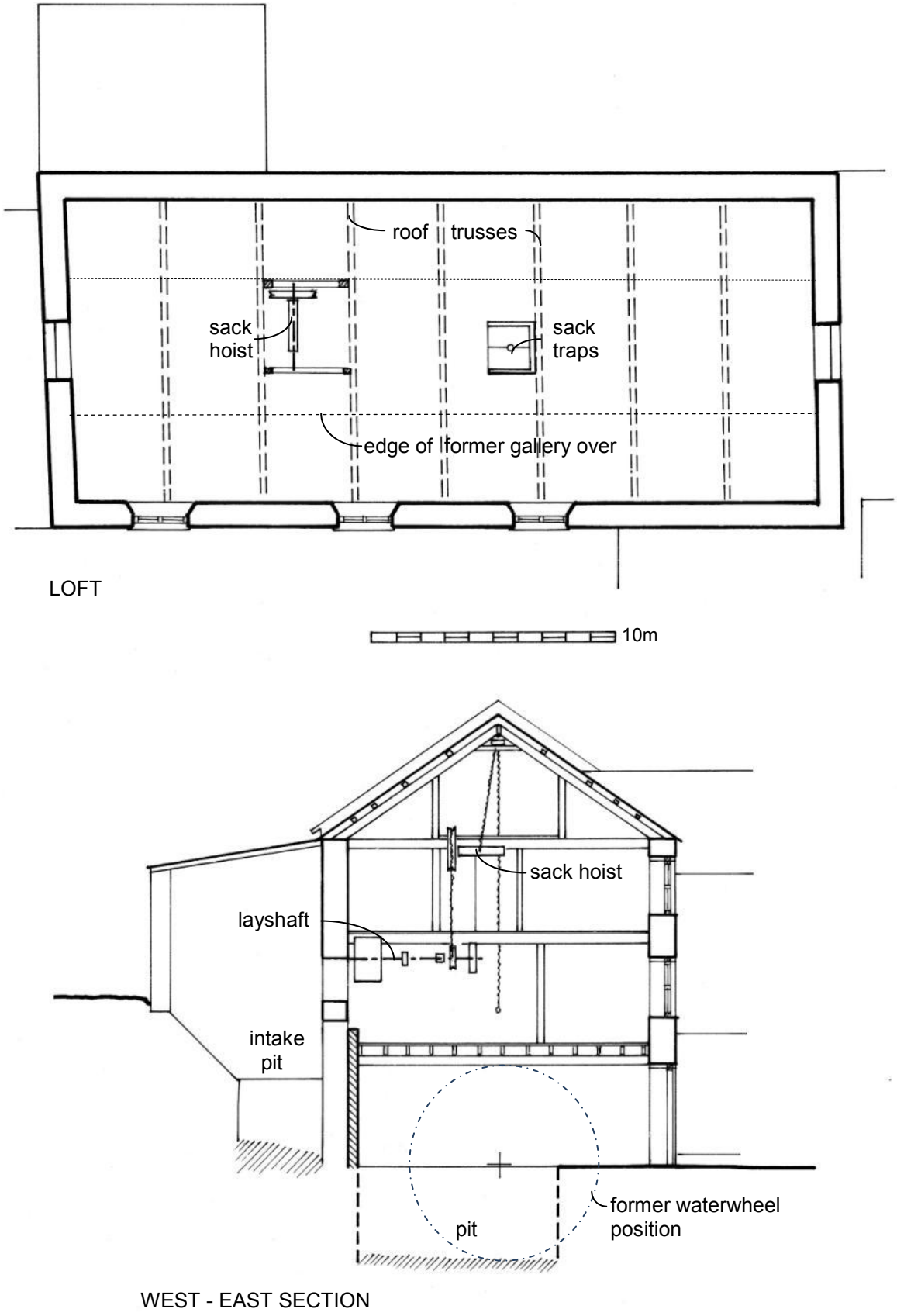

Figure 6: Heddon Mill. Loft floor plan and section

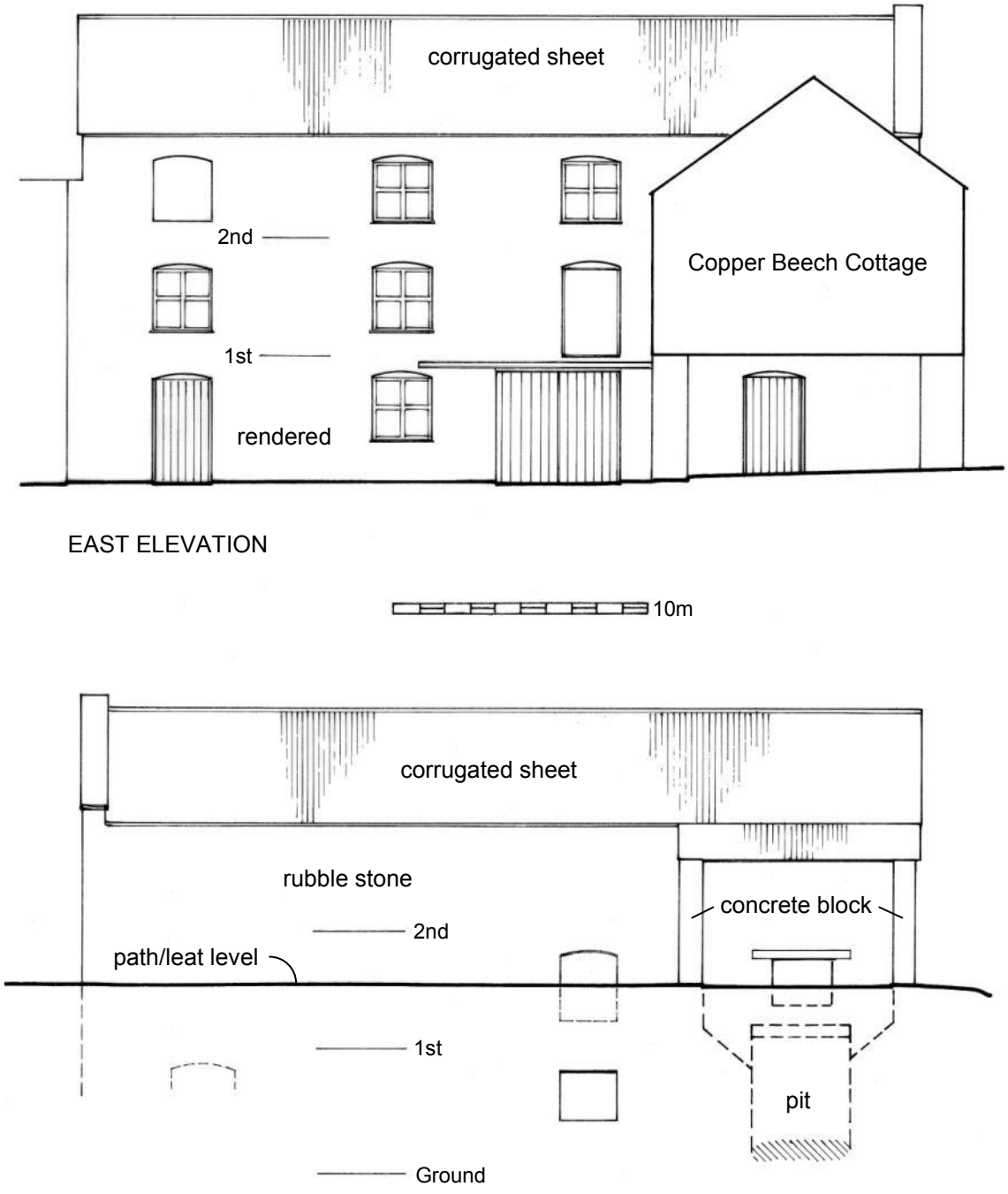

Figure 7: Heddon Mill. Elevations

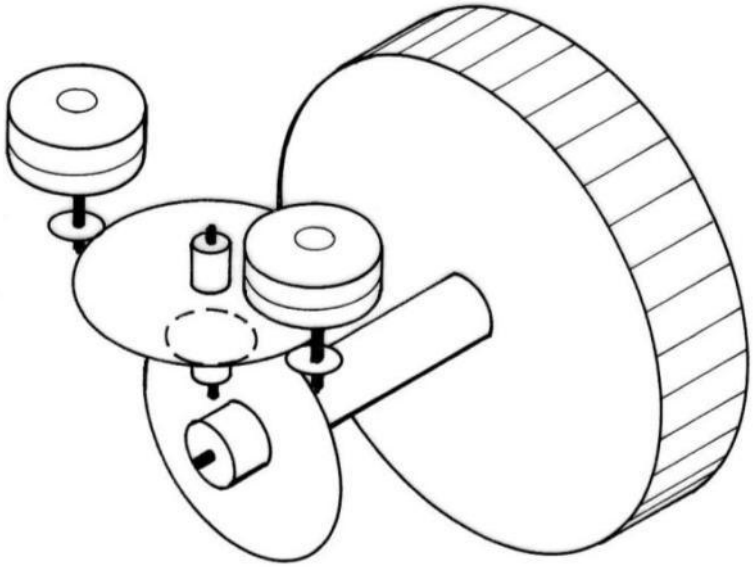

Figure 8a: Typical spurwheel drive to two pairs of millstones

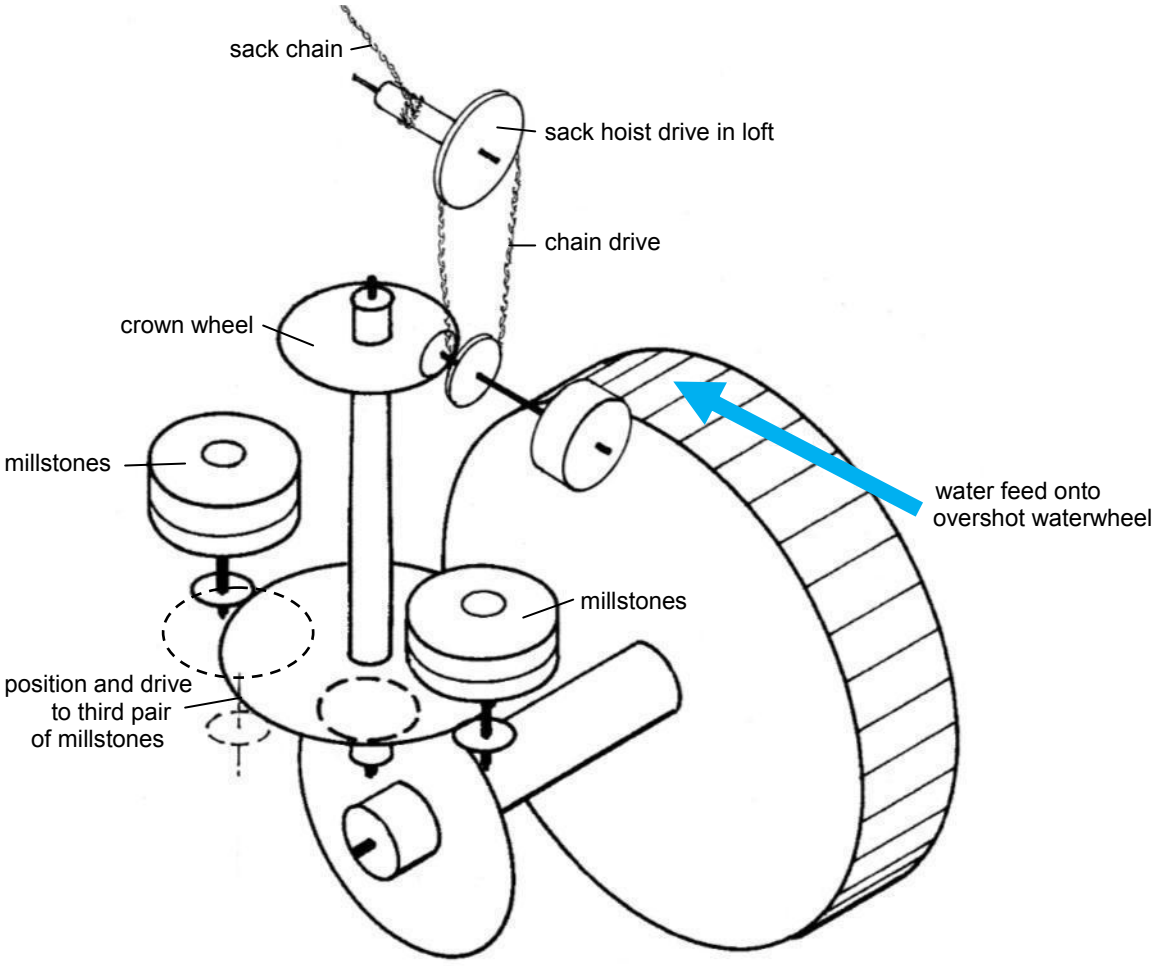

Figure 8b: Possible arrangement of machinery in Heddon Mill

Heddon Mill from the south east

Heddon Mill: east elevation

Heddon Mill: west elevation, from north-west, showing level of former leat bank

Heddon Mill: rear of villa and mill, showing south gable and extension over intake pit

Intake pit on west side

Interior view of blockwork wall to intake pit, south end of ground floor looking west

Ground floor looking south, showing ceiling beams with mortises and positions of timbers that formerly supported three pairs of millstones

Sack trap opening in first floor. Note chain abrasion on trimmers

Layshaft and pulleys below first floor ceiling

Sack hoist drive wheel and drum in loft

Roof structure, looking north, with sack chain to centre above gallery floor

Cut-outs in roof truss tie beams, looking north-east