WEST MILL, ASKRIGG, NORTH YORKSHIRE

ARCHAEOLOGICAL AND ARCHITECTURAL SURVEY

VOLUME 3: APPENDICES

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VOLUME 3: APPENDICES

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LIST OF IDENTIFIED SITES

APPENDIX 1: LIST OF IDENTIFIED SITES

Leas House Farm Survey Area

Site no	*Site name*	*NGR*
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2	Early routeway, running NW-SE	SD 93740 91790 (C)
3	Group of structures and enclosures, north side of early routeway	
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	3c: Structures and platforms	SD 93720 91810 (C)
	3d: Possible structure	SD 93645 91815 (C)
4	Group of structures and enclosures, either side of early routeway	
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6	Curvilinear earthwork, west side of Leas House enclosure	SD 93843 91696 (C)
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11	Slape Wath ford across Whitfield Gill	SD 93685 91780 (A)
12	Remains of 1913 hydro-electricity works	
	12a: Weir	SD 93705 91750 (A)
	12b: Underground culvert	SD 93723 91740 (C)
	12c: Pond	SD 93787 91718 (C)
	12d: Collecting chamber	SD 93800 91695 (A)
	12e: Possible leat	SD 93815 91720 (C)
13	Footbridge over Whitfield Gill	SD 93815 91610 (A)
14	Field barn	SD 93830 91660 (A)

Mill Gill Survey Area

Site no	*Site name*	*NGR*
15	Area of east-west aligned lynchets	SD 94210 91401 (C)
16	Area of lynchets, adjacent to West Mill	
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18	Possible quarry, north of Mill Gill	SD 94190 91401 (C)
19	Low earthworks, east of Building 31	SD 94050 91360 (C)
20	Possible footpath or leat, east of Building 31	SD 94140 91359 (C)
21	Small structure, within angle of Mill Gill	SD 93908 91380 (C)
22	Natural channel or possible pond, within angle of Mill Gill	SD 93910 91370 (C)
23	Quarry, south-east of Millgill Force	SD 93910 91405 (C)
24	Quarries and other features, north side of Mill Gill	SD 93980 91400 (C)
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26	Prominent scarp, north side of Mill Gill	SD 94160 91379 (C)
27	Trackway leading to and from the main area of quarrying	SD 94010 91380(C)

28	Rubble platforms, north-east of Building 31	SD 94090 91388 (C)
29	Water supply to West Mill	
	29a: Weir and sluice	SD 93980 91384 (A)
	29b: Mill race	SD 94060 91355 (C)
	29c: Mill pond	SD 94206 91315 (C)
	29d: Mill race	SD 94270 91280 (C)
	29e: Head race	SD 94320 91240 (C)
	29f: Header tank	SD 94328 91220 (A)
	29g: Overflow channel	SD 94328 91208 (C)
	29h: Launder into mill	SD 94333 91204 (C)
30	Water supply to power house	
	30a: Culvert	SD 93955 91410 (C)
	30b: Wall/pipe route	SD 93970 91394 (C)
31	Building east of the power house	SD 94025 91375 (A)
32	Power house	SD 93980 91387 (A)
33	Poultry house	SD 94280 91275 (A)
34	Former building adjacent to West Mill launder	SD 94335 91210 (A)
35	Low earthworks south of mill pond	SD 94262 91261 (C)

West Mill complex

Site no	*Site name*	*NGR*
36	West Mill complex	
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	36b: Garage	SD 94342 91184 (A)
	36c: Kiln range	SD 94348 91196 (A)
	36d: Barn	SD 94353 91179 (A)

APPENDIX 2
INVENTORY OF ROOMS IN MILL COMPLEX

APPENDIX 2: INVENTORY OF ROOMS IN MILL COMPLEX

Room number: **G1**	Room name: Wheelhouse
Location: West end of mill range	Floor level: Ground and first floors

Internal dimensions and height:
6.25m north-south by 1.60m east-west; height from base of wheelpit to ceiling is c.6.60m.

Description:

The wheelhouse is a two storey structure, rectangular in plan, the only access being through a low doorway in the west wall. The doorway leads through onto the 0.50m wide ledge or step which runs along the west side of the wheelpit. The wheelpit itself measures 6.25m long by 1.10m wide; the height from the top of the ledge to the base of the wheelpit is c.2.40m, although the base is somewhat choked with rubble and soil. The north wall of the wheelpit steps inwards slightly at the same level as the ledge itself. The tailrace for the waterwheel is located at the base of the south wall of the wheelpit, and is formed by a flag-topped opening, 0.95m wide and 0.60m in height [**7**/**180**]. The tailrace runs south-east, eventually emerging in the garden of the house some 20m to the south-east [**7**/**165**].

The waterwheel is 5.05m in diameter, 0.90m in width and is of hybrid cast-iron and timber construction. It is mounted on an octagonal cast-iron axle, 0.25m wide. An octagonal inner hub and flange, both of cast-iron, are mounted on the axle at either side of the wheel [**7**/**166**-**7**/**167**]. The wheel has eight square-section wooden spokes projecting from the inner hub in a compass arm pattern [**7**/**168**, **7**/**171**-**7**/**172**]. The shrouds of the wheel [**7**/**170**], which are formed from curved cast-iron felloes, are bolted to the spokes. The wheel has a total of 56 buckets, comprising wooden rising and bucket boards, and wooden sole plates [**7**/**169**]; some of these have been replaced recently in modern softwood [**7**/**174**, **1**/**177**]. The axle of the waterwheel is mounted on a bearing at the west end, which has had its brass removed [**7**/**173**]; the bearing plate is bolted to a piece of timber set into the upper surface of the wheelpit step or ledge. The axle passes through an opening in the east wall of the wheelhouse, and into the main body of the mill (see Room G2).

The waterwheel was overshot, and was fed by a launder entering the north wall of the wheelhouse at a height of 2.75m above the level of the step or ledge along the west side of the wheelpit [**7**/**991**]. The launder is supported on a single rolled steel I-section beam, inserted here after 1984. The end of the launder is angled over the waterwheel to direct water into the buckets [**7**/**992**].

It is noticeable that the waterwheel does not sit quite parallel to the sides of the wheelpit, and the axle is also offset to one side of the opening in the east wall through which it passes. There is evidence for alteration and development of the wheelhouse preserved in the internal elevations. The north wall of the wheelhouse has a slight outward step at the same height as the ledge or step running along the west side. Above this, there is a blocked doorway-sized opening, 0.80m wide, which is also visible externally (Elevation 3). Above this, the launder enters the wheelhouse through a flat-headed opening, at a slight angle to the wheel. The east wall is difficult to inspect in detail due to lack of access across the wheelpit, but a number of observations can be made. There are three sockets or possible sockets in this east wall, all set at approximately the same height. At the very north end, a c.0.15m square socket is set just beneath the base of the launder's wrought-iron plate. To the south, a small opening at a high level leads through from the first floor of the mill building (see Room 1F10). Behind the waterwheel, there may be a second central and shallow socket set at approximately the same level as the first, opposite a socket in the west wall. Finally, towards the south end of the wall, there is a third 0.15m square socket. Between this socket and the possible central example, there appears to be a sloping line in the wall where the masonry changes, sloping downwards from north to south [**7**/**179**].

As has already been noted, the tailrace is set at the base of the south wall [**7**/**178**]. Above the ledge or step on the west side of the wheelpit, there are two sockets, one at either end of the south wall, both between 0.15m and 0.20m square. The east socket is set 1.68m above the surface of the ledge, and the west socket 1.48m; the latter is 0.60m in depth, while the former could not be measured but is assumed to be of similar depth. Above them is a small plain opening [**7**/**993**] at first floor level. The west wall has an approximately centrally placed doorway with a flat stone lintel, which provides the only access to the interior of the wheelhouse. There are a number of sockets in this wall. Towards the north end, there is a 0.15m square socket set 1.80m above the level of the ledge, and another of similar size, vertically aligned, set 2.81m above the ledge; the lower socket is 0.60m deep, like those in the south wall. Closer to the central doorway, there is a 0.20m square socket set 2.57m above the ledge. This is set at approximately the same height as the existing steel beam to the south-west of the doorway which supports the launder, and so may be the remains of another support for this or an earlier launder. To the south, there is another socket set 2.98m above ledge level, and

beyond this, a final socket 1.38m above the ledge, measuring 0.40m in depth. Above all of these sockets, and the launder itself, there is a plain opening at first floor level, north of the central doorway [1].

Since 1984, a new oak block has been put in place for the waterwheel axle, all the spokes have been replaced, new buckets and boards have been provided, and buts and bolts replaced. Further buckets were replaced in 2010 [2].

Inventory:

The room contains no *in situ* or loose items which were catalogued in the inventory.

Photographs:

7/165-7/174, 7/177-7/180, 7/991-7/993.

References:

[1] Shaun Richardson EDAS, site visits, May-July 2011
[2] Pers. comm. Prof D Blake (owner), August 2012
[3] Peter Pace condition survey June-July 2012

Matters of concern/Issues:

The waterwheel is damp, leading to decay of the wooden and cast-iron elements. Rainwater is directed from the external guttering into the wheelhouse.

Recommendations:

Further investigation is required of the waterwheel, spokes, buckets, bearings etc, to assess the feasibility and practicalities of getting the wheel and machinery moving again [3].

Record created: SR 10/11	Record last updated: ED 9/12

Room number: **G2**	Room name: Ground floor of mill
Location: Central part of mill range	Floor level: Ground floor

Internal dimensions and height:
6.60m east-west by 5.95m north-south; average height from ground floor to ceiling is 2.20m.

Description:

Circulation

The ground floor of the mill is rectangular in plan, and the principal access is through an external doorway in the south wall. A doorway in the north wall leads through into a lean-to (Room G3), while a doorway in a timber partition at the south-east corner leads into the area (Room G4) to the east. On the west side of the room, there is a pit, measuring 3.10m north-south by 1.10m east-west. The pit is a maximum of 0.80m deep, and houses the pit wheel mounted on the waterwheel's axle. The north side of the pit is slightly stepped, whilst the south side of the pit slopes gently down towards the base. The east side of the pit has a low wall of mixed stone/timber construction mounted above it, which carries the bearing supporting the east end of the waterwheel's axle. The majority of the ground floor of the mill is floored with neatly cut rectangular flagstones of varying size, but to the south of centre, two millstones have been set into the floor. The northern millstone appears to have once been c.1.50m in diameter, and to be formed from a single piece of stone with sets of furrows radiating out from the centre [**7**/**057**]; it was not possible to identify the geological type. The southern millstone was once of similar size, but it has been cut down to give a roughly octagonal shape; again, it was not possible to identify the geological type [**7**/**055**]. Both stones have 0.20m diameter circular holes to the centre [**1**/**545**-**1**/**547**; **7**/**053**]. To the north-east of the northern millstone, a shallow rectangular socket is cut into the surface of the flagstones [**7**/**064**]. To the south of the pit, there is a second shallow impression left by the removal of a rectangular base plate, 0.90m long by 0.40m wide, once secured by two bolts; this appears to be placed within a third re-used millstone fragment [**7**/**019**].

The west wall of the room (Elevation 12) has a 0.25m square recess, 0.30m deep, with a flat lintel, near the south end. Above this recess, and running for a total length of 2.50m along the wall, a line of slightly projecting slabs are visible at 1.80m above the floor level. Where the slabs stop, a shallow inset is carried north across the whole of the wall at a slightly higher level. There is a second projecting slab at 0.15m above floor level, and above this, a small 0.15m square recess, 0.15m deep. This recess appears to be set at the base of a larger blocked opening, some 1.10m long by 0.60m high. To the north of the flat-headed opening through which the waterwheel axle passes, a bearing box holds one end of the line shaft running north-eastwards (see below). Below this, there is a slightly projecting stone, with a large timber lodged in the wall which forms part of the frame adjacent to the pit wheel's pit (see below).

The north wall (Elevation 13) has a 0.70m wide recess towards the west end, standing 0.75m high and 0.35m deep. Above this recess, the base of blocking beneath a first floor window (Room 1F10) is just visible below ceiling level. Adjacent to the east side of the recess, there is a smaller opening or recess, blocked with three upright timbers, and above this a large timber lodged in the wall which forms part of the frame adjacent to the pit wheel's pit (see below). Slightly to the east of centre, is a doorway fitted with a softwood plank and batten door, housed within a softwood frame; an eight-pane wooden framed fixed light, probably a later insertion, is placed in the upper part of the door [**7**/**063**]. This doorway leads through into a small lean-to (Room G3). The south face of the doorway's east side has been cut back to approximately two-thirds of its height to produce a curved profile. This cutting back has partly affected an apparent large block of bedrock on the same side of the doorway [**7**/**065**]. A line of similar blocks are visible at the base of the east wall (Elevation 14), which has also been cut back at its south end. At the top of the east wall, a shaft passes through the wall to emerge in the room (Room G4) to the east.

At the west end of the south wall (Elevation 11), the back of the splayed window opening set within the external semi-circular projection has two steps at the base [**7**/**020**]. Above the second step, but below the window sill, there is a small 0.20m square recess and 0.30m deep. The window opening has a flat timber lintel, and is fitted with a fixed two-pane wooden framed light set flush with the external face of the building. To the east of the window opening, a substantial timber is set into the wall, forming part of the frame adjacent to the pit wheel's pit (see below). This timber sits on a slightly projecting stone at its base, and on its immediate east side, there is a narrow upright recessed area of vertical scarring, suggesting that another timber may have been removed. Beyond this is the external doorway, fitted with a six-panelled door; the upper group of four panels are glazed [**8**/**862**]. The door was apparently once hung on strap hinges, but has been re-hung on smaller hinges mounted on the east jamb. It was once lockable, and has the initials 'E B' scratched on the rear face of the central upright of the glazed panels. Beyond the doorway, there are then two large posts which support the shaft mounted here (see below). Behind the shaft, a vertical joint, apparently one side of a narrow

blocked opening, is just visible in the wall. At the east end of this area of shafting, there is a large concrete block, 1.20m long by 0.50m wide and a maximum of 0.70m high. The north-east corner of the block is chamfered, and the top steps down from west to east, but it has been damaged by the removal of whatever was once attached to it.

Power transmission and machinery

The axle [**7**/**034**] from the waterwheel passes through an opening in the west wall and over a shallow pit to a bearing [**7**/**033**] secured on a low timber and stone wall [**7**/**036**] on the east side of the pit. A cast-iron toothed pit wheel is mounted on the axle, close to the west wall. This pit wheel is 2.30m in diameter, 0.12m wide and cast in two parts, bolted together along two of the eight arms, which are arranged in a compass pattern [**1**/**535**; **7**/**023**-**7**/**028**]. The pit wheel has 144 teeth, and meshes with a toothed pinion wheel mounted on a line shaft to the east. The pinion wheel is 0.35m in diameter, and has 20 teeth. The line shaft is mounted in a bearing box at the west end, and it runs 4.70m east, where the opposite end is secured by a hanging bracket bolted to one of the ceiling beams. At its east end, two flat belt pulleys are mounted on the line shaft. Both are 0.15m wide, but the western pulley is 0.90m in diameter, while the eastern pulley is slightly larger at 1.10m; the smaller pulley has slightly sinuous spokes, while the larger wheel has curving spokes [**1**/**548**; **7**/**058**]. Both appear to have powered belts which ran south, towards two further line shafts [**7**/**060**]. The nearest of these line shafts has a total length of 3.15m within the room, although it passes through the east wall into the area (Room G4) to the north-east, making 4.4m overall. At its west end, the line shaft is secured to a hanging bracket running between two ceiling timbers. Close to this bracket, there is a 0.25m flat belt pulley mounted on the shaft, while to the east, there is a 0.45m diameter flat belt pulley. The second (southern) line shaft is attached to vertical brackets which are themselves mounted on vertical posts adjacent to the south wall [**7**/**068**]. This shaft has a total length of 2.60m, and the west end has been covered by a re-used baby foot tin [**8**/**845**]. At the west end, there is a flat belt drive pulley, 0.20m wide and with a diameter of 0.40m. Towards the east end, there is a much larger spoked flat belt drive pulley, 0.25m wide and 1.15m in diameter. This is mounted very close to, indeed almost touching, the adjacent wall, and once appears to have turned a belt running south to a now removed flat pulley within the area (Room G7) to the south. Beyond this large pulley, there is a third flat belt drive pulley mounted on the very east end of the shaft; this is 0.18m wide and 0.55m in diameter. It too is spoked, but has a wooden casing, possibly forming part of a clutch, or for safety reasons [**7**/**073**].

Other features

The room is crossed by two substantial ceiling beams which, for the purposes of description, divides the ceiling area into three bays. The west bay is crossed by a number of irregularly spaced joists and other timbers, some of which are clearly relatively recent replacements or insertions. Towards the centre of the bay, one of the timbers has a semi-circular recess cut into the eastern side of the soffit, with a single bolt remaining in place within the recess. The next timber to the south has two bolts projecting from the soffit, while between the two timbers, there is a square slot cut into the ceiling boards.

The western ceiling beam, which divides the west bay from the central bay, is actually of composite construction, rather than comprising a single timber, and forms part of the frame on the east side of the pit wheel's pit. The frame is supported on three substantial upright posts. The southernmost post is buried in the south wall. It is c.0.35m square and stands 1.25m in height. There is a 0.45m long vertical slot in the north face, and the whole sits upon a slightly projecting base or padstone, although there is no evidence that it was ever a free-standing post. Above the slot, there is at least one small recess cut out of the visible face, and a horizontal timber set across the post above this [**7**/**021**-**7**/**022**].

The central post measures 0.38m north-south by 0.30m east-west, and stands a maximum of 1.47m in height. It too has a long vertical but shallow slot cut into the east face [**7**/**030**-**7**/**031**], with a slightly shallower slot to the south side. There are three circular holes left by bolts or screws to the latter, suggesting that a timber may have once ran south towards the southern post. A chamfered north-east corner rises the full height of the east face. A chain with small links is nailed to the head of the face - it loops downwards, and has a rusty metal tag suspended on it, and then rises again, being tied to a cord suspended from the ceiling, and rises once more to a nail on the east face of the ceiling beam. There are other nails here, from which other shorter lengths of chain are suspended, and also a small hook [**1**/**540**]. The north face of the central post has a shallow recess which rises the full height of the west side, and which incorporates a 0.20m square cut-out which extends across the face as far as the chamfer on the opposite (east) side [**7**/**051**]. The west face of the central post has another long vertical slot towards the base, although viewed from this side, it appears to a deeper opening blocked by a piece of timber, which may have the remnants of Roman numerals marked on it using grease. To the south of the slot's head, there is a single former bolt hole, and above, two

circular holes, one infilled, resembling former peg holes; a similar feature can be seen in the horizontal timber immediately above. The south face of the central post has a shallow slot approximately one third of the way up the east side. There is a broadly semi-circular cut-out, just over 1m in height, to the west side, with a broad chamfer carried the full height of the post above this. At its head, the post can be seen to be tenoned into the lower of the timbers forming the horizontal part of the frame [**1**/**539**; **7**/**029**] (see below).

The northern post measures 0.32m north-south by 0.25m east-west, and stands a maximum of 1.52m in height. The majority of the east face is occupied by a long vertical opening which runs the full width of the post [**7**/**038**-**7**/**039**]; the face is stop-chamfered to either corner flanking the opening. Above the opening, a tenon projects from the face of the post. The north face has a 0.45m long vertical slot positioned towards its east side, while on the opposite (west) side there is a semi-circular cut-out c.0.60m in height [**7**/**048**]. The west face [**7**/**049**] has the same opening as is visible in the east face, while the south face appears to be largely blank [**7**/**050**, **7**/**052**], with the exception of a possible bolt or peg hole towards the top. A horizontal timber runs westwards from the west face, skirting one end of the pit wheel's pit. To the immediate north of this horizontal timber, there is another post [**7**/**043**]. However, while this, like the others, is c.0.30m square, it stands only 0.75m high, and has no obvious connection with the rest of the frame.

The lower of the horizontal timbers forming part of the frame runs between the central post and the north wall, a distance of some 3.90m. It is, on average, 0.32m deep by 0.25m wide. As has already been noted, the head of the central post is tenoned into the soffit of the horizontal timber, and it is assumed that the northern post is jointed into it in a similar manner. The majority of the east face has the remnants of a broad stopped-chamfer to the soffit. To the north of the central post, there is a mortice to the base of the timber's face [**7**/**037**], and slightly beyond this, a shallow semi-circular cut-out to the upper part of the face. To the south of the northern post, the line shaft from the pinion wheel meshing with the pit wheel passes beneath the timber [**7**/**042**]. A semi-circular recess has been cut out of the face of the timber to allow this to happen, and a curving piece of cast-iron affixed to the face to support the shaft [**1**/**541**, **1**/**544**; **7**/**070**]. As might be expected, there is a great deal of grease staining to the face of the timber around the shaft. To the north, there are two further mortices, and above, partly overlapping with the ceiling beam, a sub-circular scar with a total diameter of 0.41m apparently caused by a pulley rubbing against the timber's face [**1**/**542**-**1**/**543**; **7**/**041**]. There are two distinct parts to the scar. The inner part is approximately 0.30m in diameter, and comprises a reasonably well-defined circle around a central recess; a mortice immediately below it is probably unconnected. The outer part is only well defined below the inner part, but appears to have been caused by a circular object of c.0.60m diameter moving around the same centre as the inner part. The west face of the horizontal timber is far simpler. It too has a chamfer running almost the entire length of the soffit, with two recesses, separated by an unmarked section of face, occupying the upper part of either end of the face. That at the south end is 1.14m long, and that to the north end 2.28m long [**7**/**045**-**7**/**046**]. As has already been noted above, the ceiling beam running over the frame is of composite construction, rather than comprising a single piece of timber; on average, it is 0.23m high by 0.18m wide. It generally rests directly on the upper surface of the frame's horizontal timber, but in at least one place a tapered piece of packing timber has been placed between the two, with a more modern softwood also to the west face. The first joint in the ceiling beam is set to the north of the central post, while two further joints are located close to the northern post.

Beyond the frame, within the central bay of the ceiling, on the immediate east side of the frame, the ceiling is pierced by a steeply inclined and rather worn flight of steps rising to the first floor [**7**/**032**]. To the immediate east, one of the ceiling joists has a small triangular piece of timber fixed to the soffit. This has a small grooved wooden disc fixed to one side. Further to the north, a partly broken cast-iron bracket to secure a short spindle is mounted on the west face of the second joist out from the wall. To the south of the stairs, a sack hoist is visible [**7**/**071**], and to the north, at least four small sub-square slots can be seen, clustered either side of the line shaft from the pinion wheel meshing with the pit wheel. Close by, a turned wooden object or peg of unknown function is suspended from the ceiling by a cord [**1**/**549**],with another object resembling a wooden weight or balance hanging from a nail [**7**/**069**]. On the north side of the central bay, a cross-timber with four bolts projecting from the soffit runs between two joists and has a slot cut in the ceiling to the east and west. The hardwood east ceiling beam measures on average 0.35m deep by 0.25m wide, and retains traces of stopped chamfers to either side; it is supported to the south of centre by a post. There is a ceiling slot in the centre of the east ceiling bay, adjacent to the beam, with a large ceiling trap to the north-east. The latter is large enough to have once housed a second staircase.

Electrical features

Within the central ceiling bay, close to the inclined wooden steps and adjacent to the frame, a horizontal timber is bolted to the ceiling joists. This timber retains a pair of two-part ceramic clamps,

each designed to hold two cables; each clamp is fixed to the soffit using a single screw [**1**/**540**]. There are two similar clamps above the lintel of the door in the south wall, and a similar, but larger, ceramic clamp to the east, designed to hold three cables [**8**/**846**]. There are two further ceramic two-cable clamps to the west face of the easternmost ceiling beam [1].

Other

The post supporting the hardwood east ceiling beam was introduced after 1984 because of concerns about the beam sagging [2].

Inventory:

[2.1] A large oil can, 0.19m tall, similar in style to a watering can, presumably used to oil bearings etc [**7**/**018**].
[2.2] A balk of timber lying on the floor, 0.90m long, 0.27m wide and 0.16m high. Also two strips of metal bolted onto square nuts; each nut is 0.035m wide and they are set 0.08m apart [**7**/**017**, **7**/**066**].
[2.3] A circular disc of wood 0.39m in diameter, 0.06m wide and with a central hole 0.04m in diameter [**7**/**017-7**/**019**].
[2.4] A drum containing very black grease used to grease the pit wheel and pinion wheel [**7**/**019**].
[2.5] One old screwdriver, one old chisel, one tin of Castrol Agri grease used for the axle bearings. Also a conical head bolt with a square nut [**7**/**028**].
[2.6] A wooden lid, broken into two pieces, for the axle bearing.
[2.7] Two iron wedges.
[2.8] Two drums of grease. Two oil containers of different sizes [**7**/**044**].
[2.9] A stack of weathered timbers, very water damaged, some with bolt holes at the ends. They have a maximum length of 2.30m, and might possible be old spokes taken off the waterwheel.
[2.10] An old wooden table with a large wicker basket beneath. Behind the table, there are some weathered pieces of wood, possibly part of waterwheel buckets, and a decorated cast-iron rectangular plate. On the top of the table, there is a brand new roll of belting with fasteners supplied by Sam Turner of Northallerton, and several large wooden boxes containing a variety of screws, nuts, woodworking tools, tin of leather dressing, fluxite, spanners etc [**1**/**551**].
[2.11] An improvised table of plywood on a trestle. On top of the table are three rolls of belting, all approximately 0.17m wide. There are further fragments of old belting beneath the table, with a very rusted curved metal component with a fastening device at one end placed on top of the belts [**7**/**067**].

Photographs:

1/535, 1/539-1/549, 1/551; 7/017-7/023, 7/027-7/034, 7/036-7/039, 7/041-7/046, 7/048-7/053, 7/055, 7/057-7/058, 7/060, 7/063-7/071, 7/073; 8/845-8/846, 8/862

References:

[1] Shaun Richardson EDAS, site visit, May-July 2011
[2] Pers. comm. Prof D Blake (owner), August 2012

Matters of concern/Issues:

Recommendations:

Record created: SR 10/11	Record last updated: ED 9/12

Room number: **G3**	Room name: Lean-to
Location: North side of mill range	Floor level: Ground floor

Internal dimensions and height:
2.45m north-south by 2.70m east-west; the maximum height from floor to ceiling is 4.35m.

Description:
The lean-to is a single storey structure, although it rises through the equivalent of two storeys of the main mill building. The only access is through the doorway in the south wall, which leads through into the ground floor of the mill building (Room G2). The lean-to was floored with dirt at the time of survey, and the original floor covering, which may well have been flagstones, was not visible. The south wall, housing the doorway, is largely blank, but has a line of projecting throughstones at 3.50m above the floor level, once formerly an external feature of the mill building. The east wall (Elevation 14) is also blank, but the west wall (Elevation 12) has a blocked doorway at the south end. The base of this doorway is set 0.50m above the existing internal floor level of the lean-to, while the door itself is 1.70m tall with a flat wooden lintel. The doorway was blocked in two stages, first being reduced in width by approximately half, and then blocked completely. The north wall has what appears to be a large block of limestone bedrock at the base, and also contains a tall opening, approximately centrally placed. The base of the opening is set c.1m above the existing internal floor level; the lower part is 1.25m tall and is boarded over, while the upper part, 0.80m high, is fitted with a modern two-pane wooden window frame. The roof over the lean-to is very simple, and is formed merely by two east-west aligned timbers [1].

Inventory:
[3.1] A quantity of timbers in poor condition, some of which might be old. There are also two iron or steel joists, one relatively slender, the other more substantial.

Photographs:

References:
[1] Shaun Richardson EDAS, site visit, May-July 2011

Matters of concern/Issues:
The waterwheel is damp, leading to decay of the wooden and cast-iron elements. Rainwater is directed from the external guttering into the wheelhouse.

Recommendations:

Record created: SR 10/11	Record last updated: ED 9/12

Room number: **G4**	Room name: 'Domestic' range
Location: East end of mill	Floor level: Ground floor

Internal dimensions and height:
Maximum of 4.80m north-south by a maximum of 2.80m east - west; height from floor to ceiling is 2.20m.

Description:

Circulation

The only access to this room is through an opening at the south-west corner; there is nothing here resembling a doorway, both walls running towards this corner having been substantially cut back. The floor was once flagged, but the majority of the flagstones are now in poor condition and very broken, particularly to the southern side [**7**/**110**]. All walls are whitewashed and also retain large areas of plaster.

The north wall (Elevation 13) has a large block of possible limestone bedrock at the base of the east end, while above, there is a low window opening, fitted with a fixed three-pane wooden framed window, with a deep sloping sill, the result of the raised external ground level here. The east wall (Elevation 15) has recesses at either end; both are set 0.85m above floor level, and are 0.45m wide by 0.30m deep. To the south of the northern recess, there is a faint circular scar or impression left on the wall plaster, 0.30m in diameter, perhaps caused by a pulley rubbing against it [**7**/**083**]. To the south of centre of the wall, there is a low former fireplace opening with a substantial stone lintel. The fireplace contains the remnants of an iron grate [**7**/**079**-**7**/**081**]. The south wall (Elevation 11) has been substantially truncated, but retains an interesting 'daisy' mark cut into the plaster [**7**/**084**-**7**/**087**]. The lower 1.10m of the west wall (Elevation 16) is set c.0.10m forward of the wall face above, and its upper part slopes into the wall face, but due to the thick plaster coating, it is not possible to tell if this is the remains of a proper offset or two different phases of building. Towards the top of the wall, the east end of one of the line shafts from the ground floor of the mill building (Room G2) projects into the room (see below). The ceiling of the room is formed by evenly spaced softwood joists running approximately parallel to the north wall.

Power transmission and machinery

To the south of centre of the west wall, the east end of the central line shaft from the ground floor of the mill building (Room G2) projects into the room. The east end of the shaft is secured in a bearing suspended between two heavily grease-stained wooden blocks fixed to two ceiling joists [**7**/**076**-**7**/**077**]. A spoked flat belt pulley, 0.15m wide by 0.45m in diameter, is mounted on the shaft and once drove a belt passing up through the ceiling into the room (Room 1F11) above.

Other features

Towards the north-west corner of the room, two vertical softwood posts rise up to ceiling level; they have a horizontal timber running between them at 1.50m above floor level. Immediately to their north, a timber projection, 0.55m square with boarded sides, hangs down 0.55m from the ceiling. The projection frames an opening in the ceiling above, resembling a former chute [1].

Inventory:

[4.1] A collection of flat belt pulleys of differing designs, the majority of spoked form, some one piece, others of split construction, ranging from 0.19m to 0.64m in diameter. One of the pulleys has 'Makies Ltd Reading' cast into the boss [**7**/**078**].

[4.2] A wooden box containing miscellaneous cast-iron items, including parts of small shaft-bearings. On either side of the box are more bearing components and a variety of miscellaneous iron items [**7**/**110**].

[4.3] A collection of rusted iron strips, a curved blade, bolts etc.

[4.4] Three pieces of line shafting, two with pulleys still mounted on them, measuring 4.40m, 0.97m and 2.80m in length. All three pieces of line shafting have a diameter of 0.06m.

[4.5] Several coiled bandsaw blades.

[4.6] Several circular saw blades 0.12m to 0.54m diameter. Also several sheets of thin zinc coated iron of varying shapes.

[4.7] Parts of a clamping device comprising a wooden base which holds slide bar supports, with a metal plate attached to two slide bars passing through two supports each. Operation was by handwheel actuating coarse screw thread, and the device is assumed to have been made at West Mill for use in clamping wood [**7**/**111**-**7**/**112**].

[4.8] Four wooden rollers with iron shafts, slung between two joists. The three complete rollers are each 0.51m long and have a diameter of 0.14m; the fourth shorter example may be broken.

Photographs:

7/076-7/081, 7/083, 7/084-7/087, 7/110-7/112	
References: [1] Shaun Richardson EDAS, site visit, May-July 2011	
Matters of concern/Issues:	
Recommendations:	
Record created: SR 10/11	Record last updated: ED 9/12

Room number: **G5**	Room name: Stair passage
Location: Between mill range and kiln range	Floor level: Ground floor
Internal dimensions and height: Approximately 1.95m east-west by a maximum of 2.95m north-south. Height unknown.	
Description: The passage was once accessed by a flight of five steps rising up from the ground floor of the garage (Room G7) [**7**/**115**]. The steps are of stone construction, and are on average 0.25m wide, although the step giving access to the ground floor (Room G6) of the kiln range is considerably wider, comprising two flagstones. The steps rise a total of 1.20m above the floor of the garage range (Room G7), before the passage is blocked by a thickly mortared stone wall [**7**/**114**]. It is possible to peer into the stair passage though the base of an external opening in the north wall, but little can be discerned, apart for the fact that it appears to be floored with flagstones [1].	
Inventory: The room contains no *in situ* or loose items which were catalogued in the inventory.	
Photographs: 7/114-7/115	
References: [1] Shaun Richardson EDAS, site visit, May-July 2011	
Matters of concern/Issues:	
Recommendations:	
Record created: SR 10/11	Record last updated: ED 9/12

Room number: **G6**	Room name: Kiln range
Location: Ground floor of kiln range	Floor level: Ground floor

Internal dimensions and height:
8.25m north-west/south-east by 4.05m north-east/south-west; maximum height from floor to ceiling is 2.15m.

Description:

Circulation

At the time of survey, the only access to the ground floor of the kiln range was through the doorway at the south end of the west wall. This doorway retains a plank and batten door, much repaired, but still substantially complete. The outer face has been repaired with a number of irregularly-shaped pieces of timber [**7**/**113**]. The door is hung on long round-headed and spear-headed strap hinges, mounted on the south jamb, and has a simple latch and lock block [**7**/**116**]. One of the battens has 'R ADDISON' carved or stamped into it [**7**/**117**].

The majority of the room is floored with well-cut flagstones. These continue around the narrow passage which runs around the south, east and north sides of the kiln itself. This passage is 0.90m wide on the south side of the kiln, but gradually narrows to 0.70m on the east and north sides. As the passage runs around the east and north sides of the kiln it rises, so that after passing beyond the western limit of the kiln it opens out onto a sub-rectangular raised area, measuring 2.90m east-west by 1.70m north-south. The raised area is set up to 0.40m above the level of the rest of the floor, and has sides built of stone rubble; its surface is also flagged, and has a pile of perforated clat tiles from the kiln's former drying floor stacked on it. On the lower floor level, immediately to the west of the kiln, one of the flagstones carries a circular scar just under 0.30m in diameter. The flagstones in the north-west area of the floor are badly broken and in addition, within this area, there are two slightly raised irregularly shaped 'lumps' of stone which appear to be worn limestone bedrock [**7**/**119**-**7**/**120**]. A similar lump can be seen adjacent to the bottom of the central part of the south wall.

The walls are generally whitewashed roughly coursed and squared stone. With the exception of the aforementioned doorway, the west wall (Elevation 22) is blank [**7**/**118**]. The north wall (Elevation 23) [**7**/**121**] has a low opening at the north-west end, fitted with a wrought-iron grille. There is a much smaller opening at the east end, which is similarly equipped [**7**/**139**]. The east wall (Elevation 24) is blank [**7**/**137**]. The south wall (Elevation 25) appears to have a low-level blocking or area of repair towards the east end and, beyond this, a small window opening with two wall-ties adjacent [**7**/**134**]. There is then another low level opening which appears to be a later insertion [**7**/**126**] and finally, a tall opening, 1.10m wide, which resembles a former doorway [**7**/**125**]; the lintel can be seen projecting above the floor of the room (Room 1F13) above. This opening has been blocked in two different phases.

The kiln itself has a base measuring 2.40m square. At c.1.60m above the lower floor level, all four sides of the kiln spring outwards to form broad half vaults [**7**/**136**]; if it covered the same area as these vaults, then the upper part of the kiln could have been as much as 4.10m square. The vaults on the north, east and south sides of the kiln meet the wall of the room, whereas as that to the west meets a substantial ceiling beam (see below). The kiln is constructed almost entirely in brownish-red handmade bricks (average dimensions 230mm by 110mm by 60mm) set with a lime mortar but not laid in any particular bonding pattern. There are two openings in the west face of the kiln (Elevation 26). The firehole is centrally positioned, and is 1.55m tall with a curved cast-iron lintel [**7**/**127**]. It is 0.45m wide, and runs back for a maximum of 0.95m from the face, preserving the remains of an internal iron fire grate [**7**/**130**-**7**/**131**]. The jambs are formed by bull-nosed yellow bricks, and there was once a closing external door hung on the south side, of which one pintle remains. The yellow bricks continue south to form one side of a smaller opening, positioned 0.80m above floor level and with a projecting lintel. This opening is 0.40m wide, and runs back 1.40m from the face. There may once have been an opening of similar size, but set at a lower level, to the north of the firehole [**7**/**128**-**7**/**129**]. By crawling into the firehole, it is possible to examine the interior of the kiln. Unfortunately, it has been badly truncated, and only fragments of the side walls, partly constructed in brick, remain to the northern and southern sides, with no surviving structural detail [**7**/**132**-**7**/**133**].

The room is crossed by two (hardwood?) ceiling beams, both 0.15m wide and with stopped chamfers to the soffits. They are not set quite parallel to one another, and have joists running between them. At the south end of the ceiling bay between the two beams, the joists are spaced much more closely together; one is substantially wider than the others, and also has stopped-chamfers to the soffit. Immediately adjacent to the east side of the east ceiling beam, there is a parallel timber, set at a slightly lower level, which supports the brick half-vault on the west side of the kiln.

Other features

In the north-west corner of the ceiling, there is a former trap, c.0.70m square; this might conceivably once have housed a ladder-like stair allowing internal communication between the floors of the building. To the east of this, the remains of a pair of chutes, each 0.15m square, project from the ceiling [1].

Other

Some parts of the kiln structure have been re-pointed since 1984 [2].

Inventory:

[6.1] A quantity of perforated square clay tiles once forming the drying floor of the kiln. They are of differing sizes and have differing configurations of holes [**7**/**121**-**7**/**124**].

[6.2] A small box of miscellaneous ironwork and other items, including a broken rake, pieces of zinc coated sheet metal and two pieces of wood with cylindrical ends. Also a 0.60m long piece of wood with a spade-shaped head and a narrow slot through the opposite end. The head has an attached wooden block to one side, bored through and leather-faced.

Photographs:

7/113, 7/116-7/134, 7/136-7/137, 7/139

References:

[1] Shaun Richardson EDAS, site visit, May-July 2011
[2] Pers. comm. Prof D Blake (owner), August 2012
[3] Peter Pace condition survey June-July 2012

Matters of concern/Issues:

Recommendations:

Brick vault over top of west face of kiln (Elevation 26) needs consolidating by slate wedging and grouting. The small number of fallen bricks should be re-set in their original positions [3].

Record created: SR 10/11	Record last updated: ED 9/12

Room number: **G7**	Room name: Ground floor of garage
Location: Ground floor of garage range	Floor level: Ground floor

Internal dimensions and height:
10.80m east-west by a maximum of 5.60m north-south; average floor to ceiling height of 2.65m.

Description:

Circulation

At the time of survey, the ground floor of the garage could be accessed either through a modern external doorway in the east wall or the opening at the south-east corner of the ground floor of the mill (Room G2). The room is floored with a variety of different materials [**7/089**]. At the east and west ends, there are patches of worn and fragmentary stone cobbles [**7/091**-**7/092**]. On the south side of the room, there is a spread of modern concrete which contains a sub-rectangular infilled pit measuring 1.60m long by 1.10m wide, perhaps a former vehicle maintenance pit, although it might be associated with the operation of machinery. The northern half of the floor consist of several well cut flagstones of varying sizes, some very large - the largest measures over 2m by 1.70m. Three of the flagstones bear the impression left by substantial base plates, all aligned east-west [**7/093**]. Described from east to west, these are as follows. The first is 1m long by 0.5m wide, with the remnants of holding-down bolts to three corners and a fourth bolt a short distance to the east. The second is 0.60m long by 0.40m wide, with the remnants of holding-down bolts to all four corners and a fifth bolt to the north-east. The third is 1m long by 0.50m wide, with the remnants of a holding-down bolt to each corner. Finally, adjacent to a concrete base at the south-west corner of the room (see Room G2), there is flagstone running parallel to the base, with a cut-out to the north side.

All walls are of whitewashed roughly coursed and squared stone. With the exception of the aforementioned inserted doorway, the east wall (Elevation 20) is largely blank. The doorway has a substantial timber lintel, with a line of projecting stones above. There is a blocked opening at the north end of the wall, 0.65m wide, 1m high with a stone lintel. The south wall (Elevation 21) is occupied by three window openings, averaging 2.30m long by 1.25m high [**7/108**]. All three have timber lintels and all three are fitted with modern fixed 12-pane (6 over 6) casements with boarding beneath. Much of the west wall (Elevation 17) appears to have been cut away to create a wide opening with a steel I-section beam for a lintel; beyond the lintel, the ceiling level drops by 0.30m, reflecting the lower first floor level within the main mill building (Room 1F10) [**7/075**]. The north wall of the room (Elevation 19) was formerly an external wall of the kiln range. The eastern half of the wall rises from a projecting plinth. This stops abruptly approximately halfway across the elevation, although a break in the masonry can be traced west at the same height towards the quoined west end of the wall. Described from east to west, there is a 0.45m square opening with a timber lintel passing through the thickness of the wall [**7/098**], and beyond this, a smaller possibly inserted lower level opening, just above the point where the plinth ceases to project. To the west, there is the tall partially blocked doorway-like opening described under the interior ground floor (Room G6) of the kiln range [**7/100**, **7/105**-**7/106**].

The room is crossed by a large number of softwood ceiling joists, generally set at a right-angle to the south wall, but with a number of cross-timbers, particularly at the west end.

Power transmission and machinery

Towards the west end of the south wall, a bearing box is set into the wall above one end of the window here. Rather than supporting one end of a line shaft within the garage, it appears that a pulley was once mounted here, powered by a belt from within the ground floor of the mill building and transferring power to a line shaft within a now-demolished lean-to formerly standing on the south side of the garage range. To the immediate east of the bearing box, there is a shallow recess associated with two threaded bolts projecting from the lintel of the next window, with a circular grease stain on the adjacent wall. Approximately 1.10m to the east of this feature, a belt drive pulley 0.25m in diameter by 0.10m wide, is suspended between two timbers attached to the ceiling joists. At the west end of the east window, there are two more threaded bolts projecting from the lintel, again associated with a grease stain and a shallow recess [**7/109**]. These are aligned on a grease stain and bolt on the opposite north wall of the room [**7/097**], suggesting that a line shaft ran across the room here.

On the north side of the room, a moveable upright wooden lever, c.1.30m in height, is secured to a block of stone on the floor [**7/101**-**7/102**]. The lever has the remains of a cord attached to it, and was associated with structures on the wall and in the ceiling above forming the remnants of a striking mechanism for a belt drive. In the ceiling above, there are two sub-rectangular openings. The smaller, eastern, of the pair, has an adjacent cut-out in the soffit of the joist on its east side, and a further aligned cut-out in the soffit of the joist beyond this. The larger, western, opening is set adjacent to the partially blocked doorway-sized opening in the wall here, which has a piece of timber

set across the top. The southern face of this timber has a cut-out with two projecting bolts, set at an angle to run parallel with the east wall of the garage. The piece of timber between the two openings has the striking mechanism bolted to it. The cord that was once attached to the lever rose to one end of the striking mechanism, and was used to operate it. A slightly curving timber, now loose, hangs down from the striking mechanism, while on the wall side, an L-shaped iron bracket has a chain attached to it, which is secured to a cord rising to the first floor (Room 1F12) of the garage range [**7**/**103**-**7**/**104**]. The upper part of the striking mechanism and associated features is described under Room 1F12 below.

Other features

In the eastern part of the ceiling, there is a rectangular slot set just to one side of the position of the line shaft that apparently crossed the room here. A short distance to the west, there are two lines of more irregular disturbance to the ceiling boards, the longer of which is roughly aligned with the joists with soffit cut-outs adjacent to the striking mechanism described above.

Electrical features

On the twelfth ceiling joist from the east end of the ground floor, there are a pair of two-part ceramic two-cable clamps fixed to the soffit. To their north, a ceramic light fitting is mounted on a wooden disc [**8**/**847**]. On one of the timbers running south-west from the former south-west external corner of the kiln range, there is a two-part ceramic three-cable clamp [**8**/**848**] [1].

Other

The modern garage doors in the east elevation were made after 1984 to replicate those that formerly existed here [2].

Inventory:

[7.1] Part of a wooden cartwheel, missing one spoke and over half of the rim [**7**/**100**, **7**/**107**].
[7.2] A length of line shafting, 0.06m in diameter and 4.75m long, with three pulleys [**7**/**100**-**7**/**101**]. Above, mounted on the wall, there is a large, c.1.40m diameter circular cover, of board construction, and with a central bolt [**7**/**099**].
[7.3] A construction of six parallel strips of iron with three sets of spacers.
[7.4] A machine mounted on a cast-iron bed and legs. The drive was taken from a worm via a pinion, a large spur gear driving small spur gears, two at each end, operating cross-shafts running in opposite directions of rotation. The centre housing, which appears capable of rotation, grips the material to be worked upon, while the rolls on the cross-shafts appear to pull it through. Possibly associated with covering electric cable? The machine was formerly fixed on a north-south alignment to the flagstones to the west, and four sawn-off bolts mark its former position (Prof. D Blake, *pers. comm.*) [**7**/**094**, **7**/**096**].
[7.5] A number of probable agricultural implements, mostly incomplete, including a fork with five tines and no handle.
[7.6] Miscellaneous ironwork including a pintle.
[7.7] A sack barrow with a wooden frame and cast-iron wheels.
[7.8] Single pulley and double pulley blocks. A hand auger for boring wood.
[7.9] A hand saw with very coarse teeth, 0.76m long [**7**/**108**].
[7.10] A hand-operated grindstone, 0.22m in diameter [**7**/**108**].
[7.11] A cutter, 0.13m in diameter and 0.09m in width, presumably used for slotting as it is too wide for a saw.
[7.12] A saw bench (with cast-mark 'W B Haigh Patent Oldham'), of one piece cast-iron construction comprising a table on four legs. The circular saw was driven by a shaft. The aspect of the patent is not obvious [**7**/**074**].

Photographs:

7/074-7/075, 7/089, 7/091-7/094, 7/096-7/109; 8/847-8/848

References:

[1] Shaun Richardson EDAS, site visit, May-July 2011
[2] Pers. comm. Prof D Blake (owner), August 2012

Matters of concern/Issues:

Recommendations:

Record created: SR 10/11	Record last updated: ED 9/12

Room number: **G8**	Room name: Barn
Location: West part of barn range	Floor level: Ground floor

Internal dimensions and height:
4.55m north-south by a maximum of 4.25m east-west.

Description:

Circulation

At the time of survey, the ground floor of the west part of the barn range could only be accessed through a doorway at the west end of the south wall. This doorway retains a modern plank and batten door. The eastern half of the room has a modern concrete floor, while the western half is floored with neatly cut flagstones on a slight north-east/south-west orientation [**7**/**142**]. The west and north walls are plastered and whitewashed, while the major part of the east wall is whitewashed only.

The west wall was formerly an external gable of the kiln range, and it has a shallow projecting plinth at its base. It has a recess, positioned c.1m above floor level, towards the south end; the interior of the recess is also plastered and whitewashed [**7**/**143**-**7**/**144**]. Other than this, the north, south and east walls are largely blank; the latter is a modern blockwork insertion. The north wall has a small window opening towards its north-west end [**7**/**145**], fitted with a modern six-pane fixed timber frame. On the south wall, on the east side of the doorway, there is some pencilled graffiti headed 'BARRELS, TRAPS ETC' and with a long column of figures beneath [**7**/**146**-**7**/**147**].

The room is crossed by a single north-south aligned beam.

Other features

There is a rectangular trap to the west of the ceiling beam, large enough to have once accommodated a steeply inclined set of steps or a ladder [1].

Other

The external door on the south side was introduced after 1984 [2].

Inventory:
The room contains a number of stored items, but these all appear to relate to modern ownership of the complex and so were not catalogued in the inventory.

Photographs:
7/142-7/147

References:
[1] Shaun Richardson EDAS, site visit, May-July 2011
[2] Pers. comm. Prof D Blake (owner), August 2012

Matters of concern/Issues:

Recommendations:

Record created: SR 10/11	Record last updated: ED 9/12

Room number: **G9**	Room name: Barn range
Location: East part of barn range	Floor level: Ground

Internal dimensions and height:
4.75m north-south by a maximum of 5.40m east-west.

Description:

Circulation

At the time of survey, the ground floor of the east part of the barn range was divided into two parts, separated by a post and board partition. The partition comprises three posts; a pair at the south end defining a former doorway, and a larger post to the north of centre. The posts support horizontal timbers, which have vertical planks nailed to the west face; the horizontal timber forming the doorway lintel has the same 'R ADDISON' stamp over it as was noted on the ground floor of the kiln range (Room G8) [**7**/**149**-**7**/**150**]. Beyond the doorway, there are upright flagstone partitions framed in timber running between the posts, resembling the boskins sometimes seen in barns [**7**/**164**]. Of the two parts of this room, the narrower western part was reached through the cart entrance in the south elevation of the barn; this part was used to store logs at the time of survey, and the original floor covering could not be seen [**7**/**148**]. The wider eastern part is accessed through a doorway at the east end of the south wall. This doorway retains a modern plank and batten door. A strip along the east side of the floor retains neatly cut flagstones, but the remainder is floored with modern concrete [**7**/**159**]. A board partition set at a right angle to the main post and board partition sub-divides this part of the barn still further, into two smaller parts of equal size [**7**/**160, 7**/**163**]. There is a window opening fitted with a modern six-pane fixed timber frame at the east end of the north wall [**7**/**162**], and a pair of recesses at the south end of the east wall. At 0.45m in width, the northern recess is slightly larger than the southern, but both are 0.35m deep [**7**/**161**] [1].

Other

The external doors on the south elevation were both renewed after 1984 [2].

Inventory:
The room contains a number of stored items, but these all appear to relate to modern ownership of the complex and so were not catalogued in the inventory.

Photographs:
7/148-7/150, 7/159-7/164

References:
[1] Shaun Richardson EDAS, site visit, May-July 2011
[2] Pers. comm. Prof D Blake (owner), August 2012

Matters of concern/Issues:

Recommendations:

Record created: SR 10/11	Record last updated: ED 9/12

Room number: **1F10**	Room name: Mill range
Location: First floor of mill range	Floor level: First floor

Internal dimensions and height:
5.75m east-west by a maximum of 6.50m north-south; average floor to ceiling height of 2.20m.

Description:

Circulation

The first floor of the mill is rectangular in plan, and the principal access from the ground floor (Room G2) is via the steeply inclined wooden steps. From the room, there is also access into the 'domestic' end of the mill (Room 1F11) and into the first floor of the garage range (Room 1F12), while a second flight of steeply inclined steps leads up to the second floor (Room 2F14) of the mill.

The first floor of the mill building is effectively divided into three bays by the two north-south ceiling beams (see below), and for the purposes of description, these are used to describe the features in the floor. The majority of the first floor is floored with east-west aligned boards, the majority of which are 0.19m wide, but with considerably disturbance, particularly to the north side. Many slots or former openings through the floor have been covered over by nailing slightly larger pieces of timber across them, and these are referred to as 'covered slots' below. In the west bay, there is a larger rectangular covered slot to the north of centre, with a smaller similar slot to the south. In the central bay, a sack hoist opening is fitted with a pair of small doors on leather hinges [**7**/**014**] and has a covered slot to the south, adjacent to a loading door. To the centre of this bay, east of where the steps rise from the ground floor, there is a sub-rectangular area measuring 2m long by 0.95m wide where the boards have been relaid. There are at least four small narrow covered slots to the immediate north of this area. Against the north wall, there is a further area of disturbance where boards have been relaid or altered. This area has a total length of 4.50m, extending into the east bay, and a maximum width of 1.30m, although it is generally no more than 1.0m. Described from west to east, there is a slightly raised T-shaped arrangement of timbers. Within this arrangement, the boards are not quite aligned on those in the main part of the floor, and in places are set at a very slightly higher level, particularly where they are edged with timbers running perpendicular to the floor boards [**7**/**008**-**7**/**009**]. To the east, there are three wider boards, and then another sub-rectangular area beyond in the east bay, with two bolts securing a hanging bracket on the ground floor ceiling below. There is a similar area of disturbance against the centre of the east wall, adjacent to the steps rising to the second floor (Room 2F14). In the south wall, two steps lead up into the first floor of the garage range (Room 1F12).

The majority of the walls are of whitewashed roughly coursed and squared stone, although the most substantial area of plaster survives to the west wall. The west wall (Elevation 12) [**7**/**984**] has a double-height recess, 0.35m deep, with a central stone shelf, at its south end [**7**/**986**]. A level line of projecting slabs runs north for 1.10m at the same height as the sill of the recess. The inscription 'JEB March 1898' is pencilled on the wall plaster in this area. Towards the north end of the wall, a small doorway fitted with a modern plank and batten door allows the upper part of the waterwheel and launder within the wheelhouse (Room G1) to be viewed [**7**/**987**, **7**/**990**].

There is a window opening at the west end of the north wall (Elevation 13), fitted with a modern 12-pane (6 over 6) two-light wooden frame; the upper light is top-hinged and opens outwards. The window opening has a shallow recess beneath which is approximately the same width as the window itself. The recess is quite shallow (only 0.20m deep) but has a slightly curved profile in plan [**7**/**995**]; it may be significant that this is placed approximately opposite the curved window recess in the south wall. Its base can also been seen to project slightly below the level of the ceiling on the floor (Room G2) below. To the east, between the window described above and another window opening (fitted with a similar modern frame) with unevenly splayed jambs at the east end of the wall, several pieces of timber are set into the wall, flush with the wall face, some having the appearance of having been sawn off [**7**/**997**, **7**/**003**]. Described from west to east, the first timber is set 0.75m above floor level but is only 0.30m long. The second timber is set 0.65m above floor level, but at 0.80m in length by 0.30m in depth, it is significantly larger and is secured by a central square-headed nut and bolt. Immediately to its east, there are two much smaller timbers set 1.15m above floor level.

The east wall (Elevation 14) is blank, and has a doorway at the south end. At the west end of the south wall (Elevation 11), the back of the splayed window opening set within the external semi-circular projection has a shallow arched head formed from a piece of curving timber [**7**/**982**]. To the east jamb, there is a very shallow rectangular recess set 0.70m above floor level, with another similar very shallow recess just above floor level [**7**/**983**]. The window opening itself is fitted with a pair of modern softwood shutters. To the east, a board is fixed to the wall on one side of a loading doorway fitted with a folding two-leaf plank and batten softwood door, hung on two-part spearhead strap hinges mounted on the east jamb and equipped with a sliding wooden bolt; the east leaf is slightly narrower than the west leaf [**7**/**980**-**7**/**981**, **7**/**016**]. Beyond this, there is a doorway leading up, via two wooden

steps, into the first floor of the garage range (Room 1F12). This doorway is 1.10m wide but above the head (and this is more clearly viewed from the second floor - Room 2F14), there appears to the remains of a much narrow opening, perhaps an earlier window, with a substantial but irregularly shaped stone lintel. On the east side of the doorway, vertical timbers affixed to the wall support the mechanism operating the water flow for the waterwheel's launder (see below). The wall plaster of the south wall retains a reasonable amount of historic pencilled graffiti, but much is so faint as to make it difficult to read. Examples that are more legible are 'A Walker, Silver Street, Askrigg, Yorks, 1938' [**8**/**853**], 'Railway (Jack or Tack?)' [**8**/**854**], a small drawing with 'base' written on it [**8**/**855**] and '29 ft single mould, 6-6 double mould' [**8**/**856**].

The floor is crossed by a pair of north-south hardwood ceiling beams, both with stopped-chamfers to the soffits. Each beam is 0.22m wide and 0.25m deep. There are east-west joists running between them. The joists to the central and east bays have long strips of softwood nailed to their soffits, running north-south and fairly regularly spaced, but not of the correct form to support a lath and plaster ceiling, for example.

Power transmission and machinery

Above the window at the west end of the north wall, there is small gap which runs the full width of the wall. A steel wire passes through the gap, and originates some distance to the north, the other end being attached to the metal sluice mechanism that controls water flow along the launder. Within the first floor of the mill, the steel wire crosses from north to south to a grooved metal disc suspended from a metal bracket adjacent to the east end of the south wall. Thereafter, it is attached to a chain, which itself passes through a long wooden lever mounted on two vertical timbers at the east end of the south wall, and then through a small gap in the floor to the ground floor (Room G2) of the mill [**7**/**978**]. Pegs set into the timbers allow the lever to be secured in either a raised or a lowered position. It was therefore possible to control the water flow across the waterwheel from inside the mill, rather than having to be done so externally; this also allowed the operations within the mill to be undertaken by fewer workers, perhaps a single operator only.

Other features

As with the board floor, for the purposes of description, the ceiling area has been divided up into three bays around the ceiling beams. The west bay has the remnants of three chutes, each 0.35m square and forming a straight line, projecting slightly downwards from the ceiling [**7**/**996**]. The southern chute has two smaller timbers affixed to the ceiling to the west. In the centre of the bay, there are two very small opposed grooved wooden pulleys, which appear to have once had a wire running between them. Within the central bay, the sack hoist in the ceiling is slightly misaligned with that rising from the ground floor, and there is another trap of similar dimensions in the centre of the east side of this bay. Two small timbers are fixed to the ceiling to the north of the point where the steps from the ground floor rise up. There is a semi-circular piece of timber fixed to the east face of the east ceiling beam, while there is an irregularly shaped piece of timber in a similar position to the north. The former has a shallow groove to the centre of the curved face, with a latch that fastens across it [**7**/**012**].

Electrical features

To the loading door in the south wall, there is a pair of two-part two-cable ceramic clamps, one to the lintel and one to the west jamb. Further east, the doorway to the first floor of the garage has two lines of similar clamps, one of five and one of two, re-used to take modern cables. On the south jamb of the doorway leading to the east end of the mill's first floor (Room 1F11), there is a re-used circular bakelite switch, mounted on a ceramic body which is in turn attached to a wooden disc [**8**/**850**-**8**/**851**] [1].

Other

The steps leading up to the small doorway in the west wall of the room were repaired after 1984 [2].

Inventory:

[10.1] Miscellaneous objects hanging on the wall including a bracket, a hinged assembly, three eye bolts, one belt and one chain (continuous, to drive sprockets) [**7**/**989**].

[10.2] Miscellaneous iron implements including two 'fire irons' (one poker, one rake), a bent piece of slender iron bar, one assembly with a pivoted handle, a wooden-handled lever acting on pegs in shaft with wooden end piece. The latter is possibly some kind of clutch, although the shaft does not rotate [**7**/**994**].

[10.3] A collection of small pulleys, some wooden, one with a leather periphery. A selection of spur gears of varying sizes (possibly the change wheels off a lathe), and the possible composite facings off the sides of a pulley. A composite cast-iron/wooden trough, long and narrow with partitions [**7**/**006**, **7**/**999**].

[10.4] A wooden box containing some large old square-headed bolts and nuts, washers, and a Hessian bag of modern square-headed bolts. On the top of these, there is a grey-painted wooden pattern, possibly for farm implements [**7**/**002**, **7**/**007**-**7**/**009**].

[10.5] A wooden box-like structure with a hinged lid. The lid has parallel slits above a chamfered hole in the base [**7**/**007**].

[10.6] A collection of change wheels, small pulleys, bearing components, two brackets and a striking mechanism for a belt drive [**7**/**010**].

[10.7] Two pieces of machinery. The first comprises a wooden block mounted on two cast-iron legs, beneath which is what appears to be cast-iron headstock off a lathe with thrust arrangement. The second is of cast-iron, again on two legs and with a similar headstock but larger than the one on the floor. It has a curious wooden 'cover' over where the work-piece would be, and two stepped pulleys, for changing speed, on the bed. There are also two wooden objects here, one bell-shaped. Beneath the second piece of machinery, there is another smaller headstock, and against the machine, a home-made piece of equipment built of wood and metal with a central sliding piece attached to a leather strap, possibly an old piece of belting [**7**/**004**-**7**/**005**, **7**/**011**].

[10.8] A large pile of stacked cut wood, all measuring 0.035m by 0.035m by 0.74m, forming blanks for hay-rakes. On top of the stack, there are some curved pieces of wood, and curving rim sections of thicker wood [**7**/**004**-**7**/**005**].

[10.9] Two cast-iron machine bases, one with a narrow bed with two parallel guides on two legs, the other a much broader machine used as a support for a now missing component. On the floor are a number of miscellaneous objects, including a pulley for what appears to be a V-belt [**7**/**004**].

[10.10] A bent piece of metal hanging on the wall.

[10.11] A piece of twisted chain attached to a joist.

[10.12] A cranked spanner hanging off a joist.

[10.13] A piece of flat bar with two attached spindles, on which revolve wooden rollers, one worn in the centre. Resting on nails projecting from a joist.

[10.14] Two bent pieces of metal, bolted together but capable of swivelling.

[10.15] A length of chain with a crudely-made hook attached.

[10.16] Five change wheels suspended on a nail from a joist.

[10.17] A rusty iron hoop.

Photographs:

7/002-7/012, 7/014, 7/016, 7/978, 7/980-7/984, 7/986-7/987, 7/989-7/990, 7/994-7/997, 7/999; 8/850-8/851, 8/853-8/856

References:

[1] Shaun Richardson EDAS, site visit, May-July 2011

[2] Pers. comm. Prof D Blake (owner), August 2012

[3] Peter Pace condition survey June-July 2012

Matters of concern/Issues:

Potential structural movement around west window opening in south wall (Elevation 11) needs investigation [3].

Recommendations:

Record created: SR 10/11	Record last updated: ED 9/12

Room number: **1F11**	Room name: 'Domestic' part of mill
Location: East end of mill range	Floor level: First

Internal dimensions and height:
Maximum of 4.90m north-south by a maximum of 2.95m east-west; average floor to ceiling height is 2.15m.

Description:

Circulation

The room can be accessed through two doorways, both in the south-west corner; one leads west into the first floor of the mill (Room 1F10) and the other leads south into the first floor pf the garage range (Room 1F12). The majority of the floor is formed by east-west aligned boards with an average width of 0.19m. There is a rectangular covered slot in the floor adjacent to the approximate centre of the west wall, and a 0.50m square trap to the front of the drilling machine (see below) occupying the north end of the room; it is thought likely that the latter was to enable sawdust created by the drilling to be swept directly into the room (Room G5) below. On the east side of the room, a large flagstone is set into the boards, projecting from beneath the stack of hay rake blanks (see inventory 11.3), was almost certainly once a hearth for a fireplace, now also hidden by the blanks. There is straight joint between two areas of boarding running across the southern end of the floor. There are also some very small rectangular cut-outs in the central part of the floor, together with at least three bolts flush with the floor surface.

The majority of the wall surfaces are plastered and whitewashed. The north wall (Elevation 13) has what was once an external doorway at the west end, 1.70m high by 0.95m wide. This was subsequently blocked on the outside, and two levels of stone shelving inserted. The stone shelving (especially the lower level) is now difficult to reach due to the position of the drilling machine, suggesting that the door was blocked as part of an earlier phase of works. The east wall (Elevation 15) has a small splayed window opening at the north end [**7**/**972**], fitted with a modern four-pane wooden frame, and there is almost certainly a fireplace in the centre of the wall, obscured by a stack of hay rake blanks at the time of survey. Above the blanks, close to the window, 'Sept 15th' and '(Paid?) (£)' are written on the wall plaster in a flowing hand using red crayon. At the south end, there is a doorway. This doorway is now partly occupied by a lathe (see below) and opens out into a restricted area of the first floor of the garage range (Room 1F12), which is crowded with machinery and fittings. The sides of the doorway opening indicate that there are two separate phases of wall here, a 0.25m wide outer skin which projects slightly into the doorway opening, and a 0.35m wide inner skin. The doorway in the south wall (Elevation 11) has three steps, rising a total of 0.60m, to the first floor of the garage range (Room 1F12), but the walls flanking to either side are largely obscured by either the mechanism for operating the sluice of the waterwheel's launder (see Room 1F10) or by shelving (see inventory 11.4). To the east of the doorway, 'The End of a Perfect Night' is written on the wall plaster using a pencil, together with crossed out writing [**8**/**852**]. There is a doorway at the south end of the west wall (Elevation 16) but it is otherwise largely blank, with the exception of a small square recess towards the north end positioned 1.30m above floor level. There is however an amount of interesting early-mid 1940s pencilled graffiti here. The majority comprises totalled columns of figures, of varying amounts, in their tens, hundreds and thousands [**7**/**968**]; one example is dated 'Feb ^{19} 40' and has a column of figured beneath which add up to 2,280 together with an arrow dated 'May 1943' [**7**/**969**], while another dated '1945' has two figures totalling 2,097. There is also a pencilled sketch of what appears to be engines showing different crank/driving arrangements [**7**/**970**].

The room is crossed by east-west aligned ceiling joists.

Power transmission and machinery

The slot in the floor adjacent to the approximate centre of the west wall once housed a belt passing up from a pulley mounted on a line shaft on the floor below (Room G4). This belt transferred power to a c.2.15m long line shaft, aligned east-west and once crossing the room close to the drilling machine at the north end. The line shaft, which was suspended from a bracket at the west end [**7**/**973**], has now been removed. However, it clearly once had at least one pulley at its east end, with a belt passing down to the drilling machine. The drilling machine itself is located at the north end of the room, and is aligned east-west. It has total dimensions of 2.15m in length by 0.80m in width, and stands 1.15m in height. It is secured to a substantial stone base, which supports the timber frame, which is itself partly encased by vertical boards [**1**/**529**-**1**/**531**; **7**/**930**, **7**/**932**-**7**/**934**]. The line shaft which drove the machine is mounted at approximate eye level over the foot pedal, and one assumes that, to keep out of the way of the shaft, the operator must have assumed a somewhat crouched or even a sitting position. The drive was taken off the east end of the line shaft to fast and loose pulleys mounted on a spindle which runs the majority of the length of the machine, but there is no trace of a

striking mechanism. The spindle is supported in four places. At the east end of the machine, there is a cast-iron flywheel, the spindle rotating clockwise when viewed from the flywheel end. The drive to the multiple drills was transmitted through bevel gears, one pair to each drill. There is provision for a maximum of 20 drills (although only 16 were in place at the time of survey), which are of the conventional auger type. The piece of wood forming the hay rake blank was clamped by means of a simple snail clamp arrangement, and the wood was raised to meet the drills by use of a foot pedal. There is an example of a hay rake blank still resting on the machine, showing 16 holes. The holes are drilled right through the wood, obviating the necessity to have the drills all of a constant length. The drills are fixed in length, but it would be possible to alter the spacing between them by removing every other one for example. The machine exemplifies an example of individual design, in house manufacture and the re-use of many of the components.

It appears that a belt also ran south from the same line shaft driving the drilling machine, towards a slot in the ceiling (see below). However, it appears to have been unconnected with a lathe set against the south wall of the room, and extending into the area [Room 1F12] to the north. The lathe has a maximum total length of 3.20m and stands 0.75m high [**7**/**960**-**7**/**961**]. The bed is formed by two parallel timbers with a gap between, set into the wall at the east end and on a single timber block or leg at the west end. A vertical timber bolted to the west end has a circular hole cut into the top. Approximately one third of the way along its length, a tailstock is mounted over the central gap, with a crank handle to one side; a shaft projects from the opposite side of the mounting [**7**/**963**]. Beyond this, there is a box-section timber channel or housing set at a right angle to, and on top of, the parallel blocks [**7**/**957**]. This housing is 0.40m square, and has a diamond shaped hole cut into the top surface, directly over a bearing secured inside the housing [**7**/**958**]. The housing runs north as far as an external boarded opening, and local oral information suggests that it may once have been associated with external driving from either a traction engine or a tractor. This may have interrupted the operation of the 'lathe', and so is presumably a later addition/alteration. The parallel blocks continues beyond the housing, and have a headstock, 0.25m in diameter, mounted on the east end [**7**/**954**]. This was clearly once driven by a belt running between it and a line shaft to the south (see Room 1F12).

Other features

As has been noted above, it appears that a belt ran south from the same line shaft driving the drilling machine, towards a slot in the ceiling located just to the south of centre of the west wall.

Electrical features

There are a line of four re-used two-part two-cable ceramic clamps supporting the modern cable leading to the modern light fitting in the room. Over the doorway in the west wall, a wooden disc remains from an earlier light fitting [1].

Inventory:

[11.1] A four-speed stepped pulley assembly off a lathe.

[11.2] A four-speed steeped pulley (possibly matching 11.1 but from the countershaft], a lathe chuck (three jaws, self-centring, by Chas. Taylor of Birmingham), a bevel gear (off a drilling machine) and the back gear off a lathe. On the shelf below, there is one large curved iron-strap and two rack and pinion window-opening mechanisms [**7**/**971**].

[11.3] A large stack of wooden hay-rake blanks, the same size as those given in room [10] [**1**/**530**; **7**/**974**-**7**/**975**].

[11.4] Shelving. Top row: Two large vice or clamp screws, tool rests for a lathe, wooden bearing housing, two drills from a drilling machine, a metal sleeve, two lathe dogs for turning work. Middle row: Assorted files, star drill, metal sleeve, parts from a drilling machine, lathe centre, nuts, bolts, sprocket, two small abrasive wheels, the rotating head from one of the pieces of machinery on the ground floor (see 7.4) and other miscellaneous items. Bench: Files, spanner, metal plates, a grey-painted wooden pattern (plate with slots, two lugs and three wheels), a flat iron, a grease gun, an old lock, a foot pedal, hair clippers, a hand-saw frame (with no handle) and a square bar. A softwood box retains a paper label titled 'W H BURTON, Mill Gill Saw Mill, ASKRIGG, R.S.O' [**1**/**552**; **7**/**965**].

Photographs:

1/529-1/531, 1/552; 7/930, 7/932-7/934, 7/954, 7/957-7/965, 7/968-7/975; 8/852

References:

[1] Shaun Richardson EDAS, site visit, May-July 2011

Matters of concern/Issues:

Recommendations:

Record created: SR 10/11	Record last updated: ED 9/12

Room number: **1F12**	Room name: Garage range
Location: First floor of garage range	Floor level: First floor

Internal dimensions and height:
Maximum of 10.40m east-west by a maximum of 7m north-south; maximum floor to ceiling height of 4.15m.

Description:

Circulation

At the time of survey, the first floor of the garage range could be accessed either through a modern external doorway in the east wall, reached by a flight of external stairs, or by the two doorways at the south-east corner of the first floor of the mill (Room 1F10). The majority of the room is laid with east-west aligned softwood floorboards [**1**/**519**]. These have an average width of 0.15m but opposite the doorway in the east wall, there is an area where the boards have a width of up to 0.32m. However, at the north-west corner, within the irregularly shaped space over the blocked-up passage (Room G5) on the ground floor, the floor is of concrete. In addition, on the north side of this area, the floor level drops vertically by over 0.50m. Because of the modern repairs to the floor, there is surprisingly little evidence for alteration, apart from on the north side, where there is an opening associated with a striking mechanism (see below).

The walls are of roughly coursed and squared rubble, the majority of which are whitewashed. With the exception of the aforementioned doorway, the east wall (Elevation 20) is largely blank [**1**/**496**, **7**/**908**]. The doorway is of plank and batten construction, softwood throughout and appears relatively recent in date, although it re-uses earlier hinges. The door is of three leaves; the narrower north leaf is divided in separately opening upper and lower parts of equal size, hung on long strap hinges of varying form and width. The wider pair of southern leaves were probably also once of similar form, but the upper parts have been replaced by a fixed panel with a small glazed opening. The lower parts are hung on long strap-hinges, including one round headed example [**1**/**490**]. The doorway has a substantial wooden lintel. Over the wider southern leaves, there is projecting shelf, supported on three projecting timber brackets [**1**/**498**]. Above the shelf, there is a second horizontal board, with an angled board rising from the north end towards a roof purlin [**1**/**497**]. Above the second board, in the approximate centre of the wider part of the doorway, there is a narrow opening fitted with a small plank and batten door; a chain is suspended from the roof timbers to the front of the opening [**1**/**499**]. At the north end of the elevation, there is a window, above which two stones project at a higher level.

As on the ground floor, the south wall (Elevation 21) is occupied by two window openings, averaging 2.10m in length by 1.60m in height [**1**/**521**; **7**/**936**-**7**/**937**]. Both have timber lintels and are fitted with modern fixed 18-pane (6 over 6 over 6) casements with boarding beneath. They flank a blocked opening, perhaps formerly another window, of similar size.

The west wall (Elevation 17) has been the subject of much alteration, partly as a result of once having been an external elevation of the mill building. At 1.85m above ground level, the stonework changes. Below this level, the wall is of roughly coursed squared stone, largely whitewashed. Above this level, the stonework is better coursed and more regularly shaped, and is laid to a watershot profile. It is also partly whitewashed [**1**/**526**-**1**/**527**]. Just above this level, the quoins at the north end of the wall (the former south-east corner of the mill building) change to neat edge-laid quoins. The doorway at the south end of the wall has a slightly curving recess to the centre of the north jamb, with a blocked opening of some kind, c.0.35m wide, beyond this. The north doorway has large quoins to the south jamb, but small stones to the north jamb. A vertical board is mounted to the wall, and appears to rise through the roof here [**1**/**512**].

Beyond this point, one moves into the irregularly shaped space over the blocked ground floor passage (Room G5). As has been noted above, the floor level within this space drops, so that part of the base of the south wall is set 0.70m lower than the rest of the first floor level of the garage range. In addition, part of this wall was once also an external elevation of the mill. The quoins at the south-east end rise to 1.50m above the upper floor level, and then there is a break before they resume again in a more regular edge-laid form. A doorway, 0.90m wide, rises 2m above the lower floor level, and is crossed by a timber housing (see Room 1F11). Over the doorway, a part stepped, part sloping earlier roof line can be seen within the stonework; if this was projected downwards, then its base would tally approximately with the break in the quoins described above. The earlier roof line can also been seen externally (Elevation 4). Above this earlier roof line, there are a couple of projecting throughstones. The north wall of the irregularly shaped space is formed by a curving wall, largely blank, with a tall opening at the western end. The east wall (Elevation 18) was once the external west gable of the kiln range, and this has a blocked doorway at the north end; the doorway has a quoined south jamb and a wooden lintel. In the central part of the wall, there is an irregularly-shaped hole passing through the thickness of the wall, with much disturbance to one side, including brickwork

blocking, and a projecting throughstone above. The south end of the wall is quoined to 2.55m above the upper floor level.

The north wall (Elevation 19) of the main first floor garage range space was also formerly an external wall of the kiln range. It is built of roughly coursed squared stone, whitewashed for the main part [**1**/**517**-**1**/**518**]. At the western corner, quoins rise to 2.55m above floor level, and then stop. A break in the stonework at this level, which gradually becomes a shallow inset, can be traced eastwards across the whole elevation [**7**/**909**]. Above the inset, the stonework is also whitewashed, but is built of generally larger pieces laid to deeper courses. There is a small window, fitted with a 9-pane wooden fixed casement, towards the west end of the elevation, and a doorway towards the east end, fitted with narrow double doors of plank and batten softwood construction, the west leaf fitted with a decorative latch plate [**7**/**907**]. At a higher level, just below the inset, projecting timbers relate to the roof structure within the first floor of the kiln range (Room 1F13).

The roof over the room has been subject to much repair, most recently in 1985, and it was repaired again at the end of 2010. The roof over the main body of the room was constructed entirely in softwood, and basically comprises two north-south aligned principal rafters [**1**/**493**]; the eastern principal is set substantially higher than the other, and a variety of different joists run between them, fanning out to the east as the room widens [**1**/**491**-**1**/**492**, **1**/**495**, **1**/**514**, **1**/**520**]. The joists support the common rafters on which the stone roof slates are secured [**1**/**500**-**1**/**501**]. The ends of the principal rafters are set directly into the walls of the room, but the feet of the common rafters rest upon a composite wall plate [**1**/**503**]. The irregularly-shaped space at the north-west corner is crossed by a number of softwood timbers [**1**/**511**] at varying centres, although many of these formerly supported the line shaft here (see below). One of a cluster of timbers at the south end of this area has a cast-iron fitting hung on projecting nails on the north-face [**1**/**513**].

Power transmission and machinery

Over the irregularly-shaped space over the blocked ground floor passage (Room G4), there is a north-south aligned line shaft, with a total length of 2.70m [**7**/**967**]. This line shaft formerly passed through bearings bolted to the upper surface of a number of softwood cross-timbers here, although surviving cut-outs indicate that it is no longer quite *in situ*. The shaft has a pair of fast and loose flat belt pulleys, both 0.30m in diameter, mounted on the south end. A belt from these formerly ran west and upwards through a slot in the adjacent wall into the second floor of the domestic range (Room 2F16). Towards the north end of the line shaft, there are three further flat belt pulleys, varying between 0.20m and 0.35m in diameter. The southern pulley has stepped wooden casing (possibly part of a former clutch mechanism of fitted for safety reasons), while the two flat-belt pulleys are of spoked form [**7**/**953**]; a belt passed from one of these to the pulley mounted on the lathe to the west. A wooden striking mechanism is suspended from beneath the south part of the shaft [**7**/**945**-**7**/**946**, **7**/**948**].

On the north side of the main room, there is an opening in the floor, apparently associated with a striking mechanism mounted on the wall of the ground floor (Room G7) of the garage range [**7**/**917**]. There is a bench-like structure set across the southern side of this opening but a slight angle to it. The structure has a total length of 2.60m and stands 0.75m high, being set on a sturdy leg or piece of timber at either end. The upper surface has a shallow square recess to the east of centre, and a slightly curved piece of timber bolted to the north face [**7**/**915**-**7**/**916**].

Towards the west side of the room, a north-south aligned line shaft crosses the room at a height of 2.20m. The shaft has a total length of 2.95m and the south end is just set into the wall. The north end is carried by a bearing set on a substantial cast-iron shield shaped bracket, bolted to the wall at the head of a 1.70m tall vertical timber [**1**/**523**-**1**/**524**]. At its north end, the shaft carries a 0.55m diameter spoked split pulley with stepped wooden casing [**1**/**525**; **7**/**921**, **7**/**924**-**7**/**925**], again possibly part of a former clutch mechanism or fitted for safety reasons. The post is crossed by one end of a curving 2.20m long wooden lever, pivoting on a slanting timber positioned above the bench-like structure described above [**1**/**522**; **7**/**918**-**7**/**920**].

Adjacent to the east end of the blocked opening in the centre of the south wall, two vertical timbers are mounted on the wall, with a board nailed onto them. One of the vertical timbers has a broken remnant of a cast-iron bracket bolted onto it. Two additional softwood timbers hang down from the bracket [**1**/**504**, **1**/**506**]. Above this assembly, adjacent to the eastern principal rafter, there is a 0.14m diameter grooved wooden disc bolted onto the wall plate [**1**/**505**] but still able to revolve. Between the two principals, two of the common rafters have U-shaped clips nailed to their soffits [**1**/**507**]. The western principal has a curving cut-out to the upper surface [**1**/**508**], perhaps once associated with the aforementioned line shaft towards the west side of the room. To the west of the western window opening, there are two wooden discs of the same form as that described above bolted to the wall plate [**1**/**515**-**1**/**516**].

Electrical fittings

To the north of the opening above the second board over the doorway in the east wall, there are some historic electrical fittings which have been re-used with modern plastic cabling. A ceramic light fitting is suspended from a cable wrapped around one of the roof timbers. The cable descends to a two-part two-cable ceramic clamp held in place by a single screw, and then runs north for a short distance before it has been cut off. Two further cables originate around the same roof timber and run north. The lower cable enters a circular bakelite switch mounted on a wooden disc over the doorway. It then leaves, and together with the other cable, passes through a two-part ceramic clamp secured by a single central screw. Beyond this, both cables pass into a circular fitting, probably a junction box, with a domed profile and a small raised circular area to the top of the dome. A single cable emerges from the opposite side of the fitting, eventually making its way to the doorway at the east end of the north wall [**7**/**907**]. It then enters a wooden disc mounted on the soffit of the doorway lintel and then descends to a composite ceramic/bakelite switch on the east side of the doorway. On the soffit of the western principal rafter, there are further two-part two-cable ceramic clamps [1].

Other

Many of the floorboards in this room were re-used after 1984. The bench-like structure against the north wall was originally in the now demolished building which used to abut the south side of the garage. The doors in the east elevation were made after 1984 to replicate the doors that formerly existed here [2].

Inventory:

[12.1] On shelf in blocked doorway, two electrical insulators, a rotating head (also from machine [7.4]), a block of wood with three curved knives attached, and miscellaneous pieces of wood.
[12.2] A lathe. A metal-turning 8" centre lathe, with an 8 feet long bed. It has been converted to a single speed by the removal of a stepped pulley and back gear, and set up for turning between centres. The lead screw is two threads per inch. It bears the maker's plate 'James B Watson & Sons Tool Merchants, Leeds' and presumably dates to pre-1914. Behind the lathe there is a large iron hoop, and beneath, a machine for tube cutting and a bearing support. On a rough ledge behind the lathe, there are miscellaneous small pieces of metal [**7**/**941**, **7**/**944**, **7**/**950**-**7**/**952**].
[12.3] Several miscellaneous wooden items, and the remnants of a hand-operated milk centrifuge (for separating cream) [**7**/**952**].
[12.4] A collection of items in poor condition resting on the top of a wooden lid, including a four-jaw independent chuck, a tool rest, a faceplate, a second tool rest, a face plate with four dogs (for holding work), large clamping screw, a rack and pinion window operating-mechanism, a grey-painted wooden pattern, and a sprocket-driven device with a fluted roller [**7**/**957**].
[12.5] Several miscellaneous wooden items, including one with a large base which may be another possible pattern [**7**/**955**].
[12.6] A shaft with four pulleys mounted on it, 1.85m long [**7**/**947**].
[12.7] A large bearing hanger/bracket [**7**/**918-7**/**920**]
[12.8] A wooden box containing nuts, bolts and packing pieces [**7**/**929**].
[12.9] A box containing the internal parts of a cream centrifuge.
[12.10] Remnants of a very long brush with short soft bristles, two possible jigs with a slot holding numerous square-headed bolts (free to slide).
[12.11] Hanging on the wall; a small metal hoop, two pieces of twisted metal, one with pivots and the other with triangular teeth [**1**/**522**, **7**/**918**-**7**/**920**].
[12.12] A machine comprising a cast-iron table and base, with a central rotating shaft and jacking screw. It bears the maker's mark 'W B Haigh & Col Ltd Oldham'. On top of this there are two unidentified metal components and a piece of brush, possibly broken off [12.10] [**7**/**910**, **7**/**914**].
[12.13] A large diameter flat belt split pulley with curving spokes and the tailstock off a lathe (but not that described under 12.2) [**7**/**910**].
[12.14] Two single-piece pulleys and a headstock with a small diameter pulley and two bearings.
[12.15] A bandsaw blade.
[12.16] A bandsaw blade, and an early form of chain of composite materials [**7**/**935**].
[12.17] A large 0.90m diameter single-piece spoked flat belt pulley [**1**/**521**].
[12.18] A heavy wooden bench with what appear to be telegraph poles for legs. It has two hand-wheels with jacking screws to clamp work in place [**7**/**938**, **7**/**940**].

Photographs:

1/490-1/493, 1/495-1/501, 5/503-1/508, 1/511-1/527; 7/908-7/910, 7/914-7/921, 7/924-7/925, 7/929, 7/935- 7/938, 7/940-7/941, 7/944-7/948, 7/950-7/953, 7/967

References:

[1] Shaun Richardson EDAS, site visit, May-July 2011
[2] Pers. comm. Prof D Blake (owner), August 2012
[3] Peter Pace condition survey June-July 2012

Matters of concern/Issues: Fractures in the centre of north wall (Elevation 19) need investigation [3].	
Recommendations: The loose and unsupported brickwork in the centre of the west external face of the kiln (Elevation 18) needs building up. The fractures evident on the east internal wall (Elevation 20) also need grouting and strengthening with ties. Rotten and rotting floor boards at west end of the room, caused by leaks before recent roof repairs, need replacing [3].	
Record created: SR 10/11	Record last updated: ED 9/12

Room number: **1F13**	Room name: Kiln range
Location: First floor of kiln range	Floor level: First floor

Internal dimensions and height:
8.40m east-west by 3.95m north-south; maximum height from floor to ceiling of 4.40m

Description:

Circulation

At the time of survey, the only access to the first floor of the kiln range was through the doorway at the east end of the south wall. The majority of the room is floored with north-south aligned boards, with an average width of 0.19m. There is however a rectangular flagstone, measuring 1.35m by 0.85m, at the south-east corner, with a line of three large three large flagstones (one of which measures 1.30m by 1.65m) crossing the floor just to the west of centre [**7/905**]. The eastern part of the floor has a large rectangular area of disturbance, centrally positioned, measuring 1.90m long and 0.50m wide.

The walls are all of roughly coursed and squared stone, the majority of which are whitewashed. The west wall (Elevation 22) has a blocked doorway at the north end, with two holes to the south, relating to the area of disturbance that can be seen on the opposite face of the same wall (Room 1F12) [**7/900**]. The north wall (Elevation 23) is largely occupied by three windows, all with timber lintels and sills and all measuring 1.10m wide by 1.45m high [**7/903**]. At the very east end of the wall, where it meets the east wall and commencing at 2.10m above floor level, the wall faces are crudely corbelled out across the corner. On the east wall (Elevation 24), this corbelling out appears to be placed just above an earlier roof line visible within the wall face [**7/895**]. This earlier roof line is pitched, in contrast to the existing single pitch roof, with the apex set at 3m above floor level. There is a blocked central opening to this gable, with a stone lintel which is slightly recessed, and a stone sill [**7/897**]. The blocking comprises a single upright stone slab, and the whole has been subject to heavy repointing with cement, especially around the base. Above the blocked opening, a line of four recesses crosses the wall. Above these, there is a second earlier pitched roof line, the apex of which is set c.0.80m higher than that described above. Finally, the existing single pitch roof rises above this. At the east end of the south wall (Elevation 21), at 2.10m above floor level (i.e. the same height as the corbelling described above), there may be a small recess, above which the wall bulges outwards. At the top of this bulge, 3m above floor level, a horizontal joint can be traced west across approximately half the length of the wall. The doorway at the east end of the wall retains much chalked graffiti, but all of this appears relatively recent [**7/898**]. Between the doorway and the window at the west end, there are two further features. A very narrow opening, 0.10m wide and 0.70m high, resembles a slit breather. A smaller blocked recess, set 0.85m above floor level, appears to have a straight joint on its south-east side.

The room is crossed by three softwood half trusses, all of the same form, comprising a narrow tei-beam with a raking strut to a deep principal rafter. Each principal carries four through-tenoned butt purlins.

Electrical features

A number of two-part two-cable ceramic clamps have been re-used within the room, principally on the soffits of the trusses, to support plastic cables for modern light-fittings[1].

Other

The roof structure of this room was repaired after 1984 [2].

Inventory:
The room contains a number of stored items, but these all appear to relate to modern ownership of the complex and so were not catalogued in the inventory.

Photographs:
7/895, 7/897-7/898, 7/900, 7/903, 7/905

References:
[1] Shaun Richardson EDAS, site visit, May-July 2011
[2] Pers. comm. Prof D Blake (owner), August 2012
[3] Peter Pace condition survey June-July 2012

Matters of concern/Issues:

Recommendations:
Fractures above the central recess in east wall (Elevation 24), and at the junction of the east and south walls, need grouting [3].

Record created: SR 10/11	Record last updated: ED 9/12

Room number: **1F14**	Room name: Barn range
Location: First floor of barn range	Floor level: First floor

Internal dimensions and height:
Maximum of 9.75m east-west by 4.95m north-south

Description:

Circulation

At the time of survey, the only access to the first floor of the barn range was by setting up a ladder in the central bay of the ground floor (Room G9), which is open to roof apex height. The condition of the board floors of the two-bay wide areas flanking the open central bay was uncertain, and so these were not inspected in detail. The two areas are linked by a wooden ramp positioned adjacent to the north wall.

All walls are of roughly coursed and squared stone. The west wall, formerly the external east gable of the kiln range, has a blocked opening at a low level, which appears to correspond with that visible to the first floor of the kiln range (Room 1F13). However, due to thick repointing, it is difficult to see the earlier gable lines which are visible inside the kiln range [**7**/**154**-**7**/**155**]. The north wall has a 1m wide central opening fitted with a board and batten door, flanked by narrower inner and outer openings [**7**/**152**, **7**/**156**]. There is a further 0.50m wide opening to the south of centre of the east wall, with a blocked opening of similar width to the south end [**7**/**157**]. The south wall has 0.90m wide openings fitted with board and batten doors to the west [**7**/**153**] and east [**7**/**158**] ends, with two narrower openings between.

The room is crossed by four (hardwood?) roof trusses, set at equal centres and all of similar form. They are formed by what appear to be slightly tapered principal rafters, butting at the apex where there is a plank ridge piece. Each principal carries a pair of staggered purlins. The feet of the principals are set directly into the walls of the barn. There is a softwood timber bolted to either face of the principals, essentially forming a collar [**7**/**151**] [1].

Other

Some repairs were carried out to the roof of this room after 1984 [2].

Inventory:
The room contains no *in situ* or loose items which were catalogued in the inventory.

Photographs:
7/151-7/158

References:
[1] Shaun Richardson EDAS, site visit, May-July 2011
[2] Pers. comm. Prof D Blake (owner), August 2012

Matters of concern/Issues:

Recommendations:

Record created: SR 10/11	Record last updated: ED 9/12

Room number: **2F15**	Room name: Mill range
Location: Second floor of mill range	Floor level: Second floor

Internal dimensions and height:
8.80m east-west by 6.20m north-south; maximum height from floor to roof apex of 3.85m.

Description:

Circulation

The second floor of the mill can only be accessed via the steeply inclined wooden steps leading up from the first floor [Room 1F10] [**7/869**]. From the room, there is also access into the 'domestic' end (Room 2F16) to the east.

The second floor of the mill building is effectively divided into four bays by the three north-south roof trusses (see below), and these are used to describe the features in the floor. The majority of the floor is laid with north-south aligned boards of varying widths; the floor of the western bay, over the wheelhouse (Room G1), is entirely modern. In the west central bay, there are three sub-square openings marking the position of the chutes visible on the floor below [Room 1F10]; each opening is fitted with a moveable cover with a simple handle [**7/884**]. To the south, there are two sets of much smaller paired timbers set into the surface of the boards; a long narrow slot, blocked by a timber, is visible adjacent to the south wall. In the east central bay, the sack hoist opening survives as a 0.70m square slot, with the similarly sized trap in the centre of the east side retaining a pair of small doors on leather hinges [**7/886**]. There are at least four other smaller possible covered openings or slots to the north and south. Within the easternmost bay, just to the east of the trap, there is a similar narrow feature set at an approximate right angle to it, with further examples to the north and south, close to the walls of the room.

The west wall (Elevation 12) is plastered and white-washed to c.2m above floor level, above which bare, roughly coursed and squared stone is visible [**7/861**]. With the exception of a splayed window opening at the north end, the west wall is largely blank, although much of the face is obscured by hanging frames (see inventory 15.3). The north wall (Elevation 13) has a splayed window at the east end but is also largely blank; the wall is plastered and white-washed to full height. A large quantity of hay rake blanks are stored at a raised level against the central part of the wall on hanging frames and timbers running between two roof trusses (see inventory 15.4). There is a line of what appear to be former joist holes placed just above the existing floor level, and the scar left by the removal of a skirting board at the east end [**7/866**-**7/867**]. The east wall (Elevation 14) has two sets of paired timbers projecting from c.1.80m above floor level [**7/870**-**7/871**], with the remains of a skirting board at the base. A doorway at the south end retains a door of nailed softwood plank and batten form. The west face is formed by three broad planks and one narrower plank, and there is a decorative metal latch plate with a keyhole above [**7/872**]. The door is hung on spear-head strap hinges and the wooden lock block retains decorative metal Gothic Revival mountings [**7/889**, **7/891**]. To the immediate north of the door, a picture of a machine (?) has been lightly sketched on the wall in pencil [**8/857**]. The south wall (Elevation 11) is plastered and whitewashed for its full height [**7/880**]. Above the loading doorway here, there is a 0.20m square opening which passes through the thickness of the wall, while below the east window, the irregularly-shaped stone lintel of a narrow opening projects above floor level [**7/887**]; the opening appears to have been largely destroyed by the creation of a doorway directly below on the first floor (Room 1F10). The jambs of the window opening are c.0.40m deeper internally than the height of the window frame itself [**7/873**], which is of modern six-pane (three over three) form. The loading doorway retains a folding two-leaf plank and batten softwood door, hung on two-part spearhead strap hinges mounted on the east jamb and equipped with a sliding wooden bolt; the east leaf is half the width of the west leaf [**7/874**]. Above the doorway, there is a 0.20m square opening that passes through the thickness of the wall. The west window in the wall is fitted with a modern 12-pane (four rows of three) frame. The south wall retains a moderate amount of historic pencilled graffiti, but this is not always legible. Examples that are include writing relating to chicks and poultry [**8/859**], figures relating to March and April of an unknown year [**8/860**] and further columns of figures [**8/861**].

The floor is crossed by three north-south aligned softwood roof trusses, all of similar construction [**7/881**]. The trusses are of tie-beam and principal rafter form; the principals are lapped at the apex, where there is a ridge piece. Each principal supports a pair of through-tenoned butt purlins; to the east face of the south principal of the central truss there are the incised marks 'JPA 1867' [**7/882**-**7/883**]. There are no wall plates, the feet of the common rafters resting directly upon the wall tops. A later strut has been nailed to the east face of the east truss.

Other features

As with the board floor, for the purposes of description, the upper area of the room has been

divided up into four bays around the roof trusses. On the south side of the east central bay, a small grooved wooden disc is suspended from a roof purlin. On the opposite side of the purlin, there is a projecting wooden peg. Close by to the north, two timbers suspended from a common rafter once housed a similar grooved wooden disc, set on the same alignment [**7**/**879**]. It is not clear what purpose the wire or cable that once passed through them served, but it might have been associated with the opening over the loading doorway. A similar disc survives over the south-east corner of the east bay, but is set on the opposite alignment to that described above.

Electrical features

At the very north end of the west wall, two ceramic pipes are inserted horizontally through the wall [**8**/**858**]. A similar feature in the power house further up the valley appears to mark the point where an electrical cable left the building, and so the pipes may have served a similar purpose. There is also an isolated example of a two-part two-cable ceramic clamp to the south end of the same wall, and a re-used circular bakelite switch on a wooden base over the doorway. To the south wall, two similar clamps, but of the larger three-cable form, can be seen over the east window. Both the east and central trusses retain re-used two-cable ceramic clamps for modern cabling [1].

Other

The floor over the western bay (over the wheelhouse) was replaced after 1984 [2].

Inventory:

[15.1] A length of heavy chain hanging on a nail.
[15.2] A length of light chain hanging on a nail.
[15.3] A large group of rectangular wooden frames of varying sizes. One has a rusty G-clamp and a curved piece of wood hanging from bolts in the framework [**7**/**863**-**7**/**865**].
[15.4] A quantity of hay-rake blanks, of the dimensions described before. Stacked on top of these rectangular, circular and broadly semi-circular pieces of timber, as well as small number of pieces which are similar to the blanks but of larger square-section [**7**/**868**].
[15.5] A large oil can.
[15.6] Bandsaw blades [**7**/**870**-**7**/**871**].

Photographs:

7/861, 7/863-7/874, 7/89-7/884; 7/886-7/887, 7/889, 7/891; 8/857-8/861

References:

[1] Shaun Richardson EDAS, site visit, May-July 2011
[2] Pers. comm. Prof D Blake (owner), August 2012
[3] Peter Pace condition survey June-July 2012

Matters of concern/Issues:

Fractures at the top of the north wall (Elevation 13) need investigation [3].

Recommendations:

Record created: SR 10/11	Record last updated: ED 9/12

Room number: **2F16**	Room name: 'Domestic' part of mill
Location: East end of mill range	Floor level: Second

Internal dimensions and height:
Maximum of 4.90m north-south by 2.85m east-west; maximum floor to roof apex height of 3.85m.

Description:

Circulation

The room can only be accessed via the second floor of the mill range (Room 2F15), through the doorway at the south end of the west wall. The majority of the floor is formed by north-south aligned boards. There are two narrow rectangular slots in the floor adjacent to the west wall, with a smaller sub-square slot between them. A larger rectangular covered slot, 0.95m long by 0.50m wide, is placed at the south-east corner, and in the north-east corner there are two square-headed bolts used to secure one end of a line shaft on the floor below (see Room 1F11).

The west wall (Elevation 16) has a doorway at the south end [**7**/**889**]. The opposite face of the door is described as part of the second floor of the mill range (Room 2F15). The door is hung on spear-head strap hinges and the wooden lock block retains decorative metal Gothic Revival mountings [**7**/**891**]. To the immediate north of the doorway, a slightly projecting piece of timber, set 1.75m above floor level, passes through the wall to project from the opposite face (Room 2F15) [**7**/**893**]. At the north end of the wall, there is a small square recess placed at a very similar height and aligned with another projecting timber within Room 2F15. At 1.95m above floor level, there is a line of six small square recesses and also a softwood timber which crosses the room on a slight east-west alignment [**7**/**894**]. The north wall (Elevation 13) is blank, with the top of the wall rising gently from west to east. This wall is plastered and whitewashed to c.1.30m above floor level, whitewashed only for a further 1m above this and then of bare roughly coursed and squared rubble to roof height [**7**/**892**]. The east wall (Elevation 15) has a window opening (fitted with a modern four-pane fixed frame) at the north end, with a line of four small square recesses and a timber at the same height and spacing as those described above in the west wall. This suggests that the room was once ceiled, and there was a limited loft or attic space over. The south wall (Elevation 11) is plastered and whitewashed to c.0.90m above ground level, with whitewashed roughly squared and coursed rubble above this [**7**/**888**]. At the east end of the south wall, there is a 0.70m high opening, 0.30m wide and with a base placed 0.25m above floor level. The opening has a stone lintel and still, and a belt once passed up through the opening from a line shaft located on the first floor of the garage range (Room 1F12). To the south, there are two smaller recesses placed just above floor level.

The roof structure over the room is very simple, comprising a number of east-west aligned softwood purlins, carrying the common rafters which meet at a ridge piece. There appear to be no wall plates.

Electrical fittings

Two two-part two-cable ceramic clamps are re-used within the room [1].

Inventory:
The room contains no *in situ* or loose items which were catalogued in the inventory.

Photographs:
7/888-7/894

References:
[1] Shaun Richardson EDAS, site visit, May-July 2011

Matters of concern/Issues:

Recommendations:

Record created: SR 10/11	Record last updated: ED 9/12

APPENDIX 3
PHOTOGRAPHIC RECORD

West Mill Photographic Catalogue (by number)

Film 1: Digital colour prints taken 20th October 2010
Film 2: Digital colour prints taken 1st April 2011
Film 3: Digital colour prints taken 7th April 2011
Film 4: Digital colour prints taken 10th May 2011
Film 5: Digital colour prints taken 30th June 2011
Film 6: Digital colour prints taken 14th July 2011
Film 7: Digital colour prints taken 20th July 2011
Film 8: Digital colour prints taken 8th March 2012
Film 9: Digital colour prints taken 18th May 2012

Film	*Frame*	*Subject*	*Scale*
1	490	Garage (Site 36b), room 1F12, E wall [20], looking E	1m
1	491	Garage (Site 36b), room 1F12, roof timbers to NE corner, looking SE	-
1	492	Garage (Site 36b) , room 1F12, roof timbers, looking W	-
1	493	Garage (Site 36b), room 1F12, roof timbers, looking W	-
1	495	Garage (Site 36b), room 1F12, roof timbers to SE corner, looking S	0.50m
1	496	Garage (Site 36b), room 1F12, E wall [20], looking E	0.50m
1	497	Garage (Site 36b), room 1F12, recess over doorway in E wall [20], looking E	0.50m
1	498	Garage (Site 36b), room 1F12, shelf over doorway in E wall [20], looking E	0.50m
1	499	Garage (Site 36b), room 1F12, recess and chains over doorway in E wall [20], looking E	-
1	500	Garage (Site 36b), room 1F12, detail of roof stone slate, looking S	-
1	501	Garage (Site 36b), room 1F12, detail of roof stone slate, looking S	-
1	503	Garage (Site 36b), room 1F12, detail of strap to truss S end, looking SW	0.50m
1	504	Garage (Site 36b), room 1F12, detail of wooden pulley to truss S end, looking S	0.50m
1	505	Garage (Site 36b), room 1F12, detail of wooden pulley to truss S end, looking S	0.50m
1	506	Garage (Site 36b), room 1F12, detail of wall timbers to S wall [21], looking S	0.50m
1	507	Garage (Site 36b), room 1F12, detail of fittings to common rafters, looking S	-
1	508	Garage (Site 36b), room 1F12, detail of cut out to upper surface of roof timber, looking E	0.50m
1	511	Garage (Site 36b), room 1F12, roof timbers to NW corner, looking NW	-
1	512	Garage (Site 36b), room 1F12, wall mounted timber to W wall [17], looking W	-
1	513	Garage (Site 36b), room 1F12, roof timbers to NW corner, looking SW	-
1	514	Garage (Site 36b), room 1F12, detail of N end of line shaft, looking E	-
1	515	Garage (Site 36b), room 1F12, small grooved discs bolted to window lintel, W end of S wall [21], looking SW	-
1	516	Garage (Site 36b), room 1F12, small grooved disc bolted to window lintel, W end of S wall [21], looking W	0.50m
1	517	Garage (Site 36b), room 1F12, N wall [19], looking NW	1m
1	518	Garage (Site 36b), room 1F12, N wall [19], looking NW	1m
1	519	Garage (Site 36b), room 1F12, looking W	1m
1	520	Garage (Site 36b), room 1F12, looking W	1m
1	521	Garage (Site 36b), room 1F12, S wall [21], looking SW	1m
1	522	Garage (Site 36b), room 1F12, lever and timber to N wall [19], looking N	1m
1	523	Garage (Site 36b), room 1F12 and line shaft, looking W	1m
1	524	Garage (Site 36b), room 1F12, timber and shaft to N wall [19], looking NE	1m
1	525	Garage (Site 36b), room 1F12, pulley to shaft to N wall [19], looking E	-
1	526	Garage (Site 36b), room 1F12, doorways to W wall [17], looking W	1m
1	527	Garage (Site 36b), room 1F12, doorways to W wall [17], looking W	1m
1	529	Mill (Site 36a), room 1F11, drilling machine, looking N	-
1	530	Mill (Site 36a), room 1F11, drilling machine and hay-rake blanks (item 11.3), looking N	-
1	531	Mill (Site 36a), room 1F11, drilling machine, looking N	-
1	535	Mill (Site 36a), room G2, pit wheel, looking NW	-
1	539	Mill (Site 36a), room G2, S face of central post, looking N	-
1	540	Mill (Site 36a), room G2, E face of central post and frame, looking NW	-
1	541	Mill (Site 36a), room G2, N post and frame, looking NW	-
1	542	Mill (Site 36a), room G2, E face of N post and frame, looking W	-
1	543	Mill (Site 36a), room G2, E face of frame, looking W	-
1	544	Mill (Site 36a), room G2, E face of N post and frame, looking SW	-

1	545	Mill (Site 36a), room G2, millstones set into floor, looking S	-
1	546	Mill (Site 36a), room G2, millstones set into floor, looking S	-
1	547	Mill (Site 36a), room G2, millstones set into floor, looking S	-
1	548	Mill (Site 36a), room G2, looking NE	-
1	549	Mill (Site 36a), room G2, shaped wooden object hanging from central bay of ceiling, looking N	-
1	551	Mill (Site 36a), room G2, table and basket (item 2.10) in NE corner, looking NE	-
1	552	Mill (Site 36a), room 1F11, box with paper name tag (item 11.4), looking S	-
2	667	Mill Gill, ruined wall line above quarry 23, looking W	-
2	668	Mill Gill, culvert outlet (Site 30a) for pipe from Leas House survey area, looking N	0.30m
2	671	Mill Gill, interior of culvert outlet (Site 30a) for pipe from Leas House survey area, looking N	-
2	674	Mill Gill, upper part of former wall (Site 30b) carrying turbine pipe, looking N	-
2	675	Mill Gill, upper part of former wall (Site 30b) carrying turbine pipe, looking S	-
2	676	Mill Gill, channel with possible stone lining (Site 22), west end of survey area, looking NE	-
2	677	Mill Gill, ruined structure (Site 21), west end of survey area, looking E	-
3	715	Poultry house (Site 33) from above, looking S	-
3	717	Poultry house (Site 33), N elevation, looking S	1m
3	718	Poultry house (Site 33), N elevation of central cell, looking SW	1m
3	719	Poultry house (Site 33), N elevation, looking W	1m
3	720	Poultry house (Site 33), W elevation, looking SE	1m
3	721	Poultry house (Site 33), E elevation, looking NW	1m
3	722	Poultry house (Site 33), S elevation, looking N	1m
3	723	Poultry house (Site 33), S elevation of central cell, looking N	1m
3	724	Poultry house (Site 33), doorway in S elevation of central cell, looking N	1m
3	725	Poultry house (Site 33), doorway in S elevation of E cell, looking N	1m
3	726	Poultry house (Site 33), doorway in S elevation of W cell, looking N	1m
3	727	Poultry house (Site 33), wall to SW, looking E	1m
3	728	Poultry house (Site 33), interior of W cell, looking N	-
3	730	Poultry house (Site 33), interior of W cell, looking W	1m
3	731	Poultry house (Site 33), interior of central cell, looking SW	1m
3	732	Poultry house (Site 33), interior of central cell, looking E	1m
3	733	Poultry house (Site 33), interior of E cell, looking N	1m
3	735	Poultry house (Site 33), loft over central cell, looking SW	-
3	736	Poultry house (Site 33), loft over central cell, looking SE	-
4	001	Leas House, interior of collecting chamber (Site 12d), looking SE	1m
4	002	Leas House, N elevation of collecting chamber (Site 12d), looking S	1m
4	003	Leas House, E elevation of collecting chamber (Site 12d), looking W	1m
4	004	Leas House, E elevation of collecting chamber (Site 12d), looking SW	1m
4	005	Leas House, sluice passage to E elevation of collecting chamber (Site 12d), looking W	-
4	006	Leas House, S elevation of collecting chamber (Site 12d), looking N	1m
4	007	Leas House, footbridge (Site 13), looking SE	-
4	008	Leas House, remains of pier (Site 8b) on S side of beck, looking S	-
4	009	Leas House, collecting chamber (Site 8c), looking E	-
4	010	Leas House, weir (Site 8a), looking SE	-
4	011	Leas House, collecting chamber (Site 12d), looking NW	-
4	013	Leas House, clamp to SE corner of pier (Site 8b)	1m
4	014	Leas House, remains of pier (Site 8b) on S side of beck, looking W	1m
4	015	Leas House, weir (Site 8a), looking NE	1m
4	016	Leas House, weir timbers (Site 8a), looking NE	-
4	017	Leas House, S elevation of collecting chamber (Site 8c), looking NE	-
4	018	Leas House, S elevation of collecting chamber (Site 8c), looking NE	-
4	019	Leas House, bolt adjacent to channel (Site 7b), looking NE	1m
4	020	Leas House, boundary (Site 6) south-west of Leas House, looking S	1m
4	021	Leas House, boundary (Site 6) south-west of Leas House, looking N	1m
4	022	Leas House, continuation of boundary (Site 6) to the north-west, looking N	1m
4	955	View to Leas House, looking N	-
4	956	View to Leas House, looking N	-
4	957	Leas House, structural platforms (Site 4b) at W end of survey area, looking NW	1m

4	960	Leas House survey area, looking SE	-
4	961	Leas House survey area, looking SE	-
4	964	Leas House survey area, looking SE	-
4	965	Leas House survey area, looking SE	-
4	966	Leas House survey area, looking SE	-
4	967	Leas House, routeway (Site 2) and structures (Site 3b), looking NE	-
4	968	Leas House, 'porous' stone within rubble spread, looking N	1m
4	969	Leas House, 'porous' stones within rubble spread, looking N	1m
4	970	Leas House, ruined structure (Site 3a), looking E	1m
4	973	Leas House, ruined structure (Site 3a), looking N	1m
4	975	Leas House, possible ruined structures (Site 3b), looking NE	1m
4	976	Leas House, former course of beck, looking SE	1m
4	978	Leas House, Slape Wath (Site 11), looking S	-
4	980	Leas House, pit on line of culvert (Site 12b), looking N	1m
4	981	Leas House, pit on line of culvert (Site 12b), looking S	1m
4	982	Leas House, weir (Site 12a) across beck, looking W	-
4	983	Leas House, culvert and N end of weir (Site 12a) across beck, looking N	1m
4	984	Leas House, N end of weir (Site 12a) across beck, looking N	1m
4	988	Leas House, bank and ditch (Site 5), looking N	-
4	989	Leas House, bank and ditch (Site 5), looking N	-
4	990	Leas House, remains of culvert (Site 12b), looking N	1m
4	991	Leas House, pond (Site 12c), looking SE	1m
4	992	Leas House, ceramic pipe in base of pond (Site 12c), looking S	1m
4	993	Leas House, mark on ceramic pipe in base of pond (Site 12c), looking S	-
4	994	Leas House, W elevation of collecting chamber (Site 12d), looking E	1m
4	995	Leas House, W elevation of collecting chamber and sluice (Site 12d), looking SE	1m
4	996	Leas House, detail of sluice in W elevation of collecting chamber (Site 12d), looking E	1m
4	997	Leas House, detail of sluice in W elevation of collecting chamber (Site 12d), looking E	1m
4	999	Leas House, interior of collecting chamber (Site 12d), looking E	-
5	538	Hay meadow to N of mill complex showing lynchets (Site 16a), looking NW	-
5	539	Mill (Site 36a), E external elevation [4] of 'domestic' range, looking W	1m
5	540	Mill (Site 36a), E external elevation [4] of 'domestic' range, looking W	1m
5	541	Mill (Site 36a), E external elevation of 'domestic' range [4], upper part, looking W	-
5	542	Garage (Site 36b), N external elevation [5] of curving wall between 'domestic' range and kiln range, looking SE	1m
5	543	Garage (Site 36b), opening in N external elevation [5] of curving wall between 'domestic' range and kiln range, looking SE	1m
5	544	Kiln range (Site 36c), N external elevation [5], looking S	1m
5	545	Kiln range (Site 36c), N external elevation [5], showing change in masonry, looking S	1m
5	546	Kiln range (Site 36c), N external elevation [5], small opening with grille and plinth at E end, looking S	1m
5	547	Barn (Site 36d), N external elevation [6], looking S	1m
5	549	Mill (Site 36a), 'domestic' range, graffiti to NE wall quoin, looking S	-
5	553	Mill (Site 36a), wheelhouse, W external elevation [2], looking NE	1m
5	554	Mill (Site 36a), wheelhouse, W external elevation [2], looking E	1m
5	564	Mill (Site 36a), S external elevation [1], looking N	1m
5	566	Garage (Site 36b), S external elevation [10], looking N	1m
5	567	Garage (Site 36b), S external elevation [10], looking N	1m
5	568	Garage (Site 36b), S external elevation [10], looking N	1m
5	569	Garage (Site 36b), E external elevation [9], looking W	1m
5	570	Garage (Site 36b), E external elevation [9], looking W	1m
5	571	Barn (Site 36d), S external elevation [8], looking N	1m
5	572	Barn (Site 36d), S external elevation [8], looking N	1m
5	573	Barn (Site 36d), S external elevation [8], looking NW	1m
5	574	Barn (Site 36d), E external elevation [7], looking NW	1m
5	576	Mill (Site 36a), pit wheel [G2], looking NW	-
6	751	Power house (Site 32), recess to NE corner, looking NE	1m
6	754	Power house (Site 32), internal E wall, looking E	1m
6	756	Power house (Site 32), recess over window in E wall, looking E	-

6	757	Power house (Site 32), former cable route to E wall over doorway, looking E	-
6	758	Power house (Site 32), isolator over doorway in E wall, looking E	-
6	759	Power house (Site 32), inside of doorway to E elevation, looking E	1m
6	760	Power house (Site 32), E end of N wall, looking N	1m
6	761	Power house (Site 32), large concrete base to E end, looking N	1m
6	762	Power house (Site 32), large concrete base to E end, looking N	1m
6	765	Power house (Site 32), concrete base and threaded bolts to E end, looking E	1m
6	769	Power house (Site 32), retaining wall to NE, looking N	1m
6	773	Power house (Site 32), N wall, W end, looking NW	1m
6	774	Power house (Site 32), circular base to NW corner, looking W	1m
6	776	Power house (Site 32), S return of W wall, looking NW	1m
6	777	Power house (Site 32), opening in S return of W wall, looking NW	-
6	778	Power house (Site 32), W wall, looking W	1m
6	779	Power house (Site 32), W end of S wall, looking SW	1m
6	780	Power house (Site 32), S wall, looking S	1m
6	781	Power house (Site 32), E end of S wall, looking SE	1m
6	782	Power house (Site 32), E end of S wall, looking S	1m
6	783	Power house (Site 32), bakelite clips to S wall, looking S	-
6	784	Power house (Site 32), remains of operating instructions to W wall, looking W	-
6	785	Power house (Site 32), remains of operating instructions to W wall, looking W	-
6	791	Power house (Site 32), roof trusses, looking NE	-
6	792	Power house (Site 32), W external elevation, looking E	1m
6	793	Mill Gill, sluice channel (Site 29a) to S side of power house, looking SE	1m
6	794	Mill Gill, sluice channel (Site 29a) to S side of power house, looking NW	1m
6	795	Mill Gill, sluice and channel (Site 29a) to SW of power house, looking W	1m
6	797	Mill Gill, sluice and channel (Site 29a) to SW of power house, looking W	1m
6	798	Power house (Site 32), culvert beneath W end of floor, looking N	-
6	800	Power house (Site 32), looking NW	1m
6	801	Power house (Site 32), looking N	1m
6	803	Power house (Site 32), retaining wall to N bank of Mill Gill to the N, looking N	-
6	804	Power house (Site 32) and sluice (Site 29a), looking NE	1m
6	805	Power house (Site 32) and sluice (Site 29a), looking NE	1m
6	806	Churn stand, looking NW	1m
6	807	Churn stand, looking NE	1m
6	808	Cheese press, looking S	1m
6	809	Cheese press, press section, looking S	1m
6	810	Cheese press, stone weight, looking S	1m
6	811	Cheese press, press section, looking S	1m
7	002	Mill (Site 36a), room 1F10, wooden box etc (item 10.4), looking N	1m
7	003	Mill (Site 36a), room 1F10, wooden blocks in N wall [13], looking N	1m
7	004	Mill (Site 36a), room 1F10, machinery etc (items 10.7-10.9), looking E	1m
7	005	Mill (Site 36a), room 1F10, hay-rake blanks etc (items 10.7-10.8), looking NE	1m
7	006	Mill (Site 36a), room 1F10, pulleys, spur gears etc (item 10.3), looking N	0.50m
7	007	Mill (Site 36a), room 1F10, wooden box etc (item 10.4), looking N	0.50m
7	008	Mill (Site 36a), room 1F10, wooden box (item 10.4) and features in floor, looking N	0.50m
7	009	Mill (Site 36a), room 1F10, wooden box etc (item 10.4) and features in floor, looking N	0.50m
7	010	Mill (Site 36a), room 1F10, change wheels etc (item 10.6), looking N	0.50m
7	011	Mill (Site 36a), room 1F10, machinery (item 10.7), looking N	0.50m
7	012	Mill (Site 36a), room 1F10, semi-circular timber to E face of E beam, looking SW	-
7	014	Mill (Site 36a), room 1F10, trap for sack hoist, looking E	0.50m
7	016	Mill (Site 36a), room 1F10, sliding latch to loading door in S wall [11], looking S	-
7	017	Mill (Site 36a), room G2, can and disc (items 2.1 & 2.3), looking W	1m
7	018	Mill (Site 36a), room G2, can, drums and timbers etc (items 2.1-2.4), looking S	1m
7	019	Mill (Site 36a), room G2, plate impression in SW corner of room, looking W	0.50m
7	020	Mill (Site 36a), room G2, window recess at W end of S wall [11], looking S	0.50m
7	021	Mill (Site 36a), room G2, S post of frame, looking S	1m
7	022	Mill (Site 36a), room G2, S post of frame, looking S	1m
7	023	Mill (Site 36a), room G2, pit wheel, looking NW	1m
7	027	Mill (Site 36a), room G2, pit wheel, axle and bearing, looking N	0.50m
7	028	Mill (Site 36a), room G2, pit wheel, axle and bearing (item 2.5), looking N	0.50m
7	029	Mill (Site 36a), room G2, S face of central post of frame, looking N	1m
7	030	Mill (Site 36a), room G2, E face of central post of frame, looking NW	1m

7	031	Mill (Site 36a), room G2, E faces of central post of frame, looking NW	1m
7	032	Mill (Site 36a), room G2, frame and steps to 1F10, looking N	1m
7	033	Mill (Site 36a), room G2, bearing for waterwheel axle, looking W	0.50m
7	034	Mill (Site 36a), room G2, bearing for waterwheel axle, looking W	0.50m
7	036	Mill (Site 36a), room G2, timbers supporting bearing for waterwheel axle, looking W	0.50m
7	037	Mill (Site 36a), room G2, E face of frame, looking W	-
7	038	Mill (Site 36a), room G2, N post of frame and shaft, E face, looking SW	1m
7	039	Mill (Site 36a), room G2, N post of frame and beams, E face, looking W	1m
7	041	Mill (Site 36a), room G2, N end of frame, E face, looking W	0.50m
7	042	Mill (Site 36a), room G2, N post of frame and shaft, E face, looking SW	1m
7	043	Mill (Site 36a), room G2, post and timber at N end of frame, looking NE	-
7	044	Mill (Site 36a), room G2, drums of grease (item 2.8) and W end of N wall [13], looking NW	1m
7	045	Mill (Site 36a), room G2, N end of frame, W face, looking E	0.50m
7	046	Mill (Site 36a), room G2, frame and line shaft, W face, looking SE	-
7	048	Mill (Site 36a), room G2, N post of frame, N face, looking SW	-
7	049	Mill (Site 36a), room G2, N post of frame, W face, looking NE	-
7	050	Mill (Site 36a), room G2, N post of frame, S face, looking N	-
7	051	Mill (Site 36a), room G2, central post of frame, N face, looking S	-
7	052	Mill (Site 36a), room G2, N post of frame, S face, looking N	-
7	053	Mill (Site 36a), room G2, former millstones in floor, looking S	0.50m
7	055	Mill (Site 36a), room G2, former millstones in floor, looking N	0.50m
7	057	Mill (Site 36a), room G2, former millstone in floor, looking W	0.50m
7	058	Mill (Site 36a), room G2, line shaft and pulleys, looking NE	1m
7	060	Mill (Site 36a), room G2, line shafts and pulleys, looking N	1m
7	063	Mill (Site 36a), room G2 [13], doorway to lean-to, looking N	1m
7	064	Mill (Site 36a), room G2, socket in floor flags, looking S	1m
7	065	Mill (Site 36a), room G2, large bedrock slabs in N wall [13], looking N	1m
7	066	Mill (Site 36a), room G2, S wall [11] and timbers (item 2.2), looking SW	1m
7	067	Mill (Site 36a), room G2, line shaft, pulleys and items (item 2.11), looking SE	0.50m
7	068	Mill (Site 36a), room G2, line shafts and pulleys, looking E	0.50m
7	069	Mill (Site 36a), room G2, pulleys and object hanging from central bay of ceiling, looking N	-
7	070	Mill (Site 36a), room G2, line shaft and E face of frame, looking SW	-
7	071	Mill (Site 36a), room G2, sack hoist in central bay of ceiling, looking S	-
7	073	Mill (Site 36a), room G2, concrete base and line shaft, looking W	0.50m
7	074	Garage (Site 36b), room G7, saw bench (item 7.12), looking W	0.50m
7	075	Garage (Site 36b), room G7, W part, looking W	-
7	076	Mill (Site 36a), room G4, pulley and belting, looking NW	-
7	077	Mill (Site 36a), room G4, pulley and belting, looking NW	-
7	078	Mill (Site 36a), room G4, flat belt pulleys (item 4.1), looking NW	-
7	079	Mill (Site 36a), room G4, E wall [15], looking NE	1m
7	080	Mill (Site 36a), room G4, fireplace in E wall [15], looking NE	1m
7	081	Mill (Site 36a), room G4, fireplace and recess in E wall [15], looking E	1m
7	083	Mill (Site 36a), room G4, pulley scar? in E wall [15], looking E	-
7	084	Mill (Site 36a), room G4, daisy mark in S wall [11] of 'domestic' range, looking S	
7	085	Mill (Site 36a), room G4, daisy mark in S wall [11] of 'domestic' range, looking S	-
7	086	Mill (Site 36a), room G4, daisy mark in S wall [11] of 'domestic' range, looking S	-
7	087	Mill (Site 36a), room G4, daisy mark in S wall [11] of 'domestic' range, looking S	-
7	089	Garage (Site 36b), room G7, looking E	1m
7	091	Garage (Site 36b), room G7, cobbles to W end, looking E	1m
7	092	Garage (Site 36b), room G7, cobbles to W end, looking E	1m
7	093	Garage (Site 36b), room G7, flagstones and plate impressions, looking E	1m
7	094	Garage (Site 36b), room G7, machine (item 7.4), looking NE	-
7	096	Garage (Site 36b), room G7, machine (item 7.4), looking NE	-
7	097	Garage (Site 36b), room G7, grease stains in N wall [19], looking N	1m
7	098	Garage (Site 36b), room G7, N wall [19], looking NE	1m
7	099	Garage (Site 36b), room G7, line shaft etc (items 7.2-7.3), looking NE	1m
7	100	Garage (Site 36b), room G7, cart wheel etc (items 7.1-7.2), looking NW	1m
7	101	Garage (Site 36b), room G7, line shaft (item 7.2), looking NW	1m
7	102	Garage (Site 36b), room G7, lever on N wall [19], looking N	0.50m
7	103	Garage (Site 36b), room G7, striking mechanism on N wall [19], looking N	-
7	104	Garage (Site 36b), room G7, striking mechanism on N wall [19], looking N	-

7	105	Garage (Site 36b), room G7, N wall [19], looking NE	-
7	106	Garage (Site 36b), room G7, doorway in N wall [19], looking N	1m
7	107	Garage (Site 36b), room G7, N wall [19] & cartwheel (item 7.1), looking NW	1m
7	108	Garage (Site 36b), room G7, S wall [21], looking SW	1m
7	109	Garage (Site 36b), room G7, S wall [21], looking SE	1m
7	110	Mill (Site 36a), room G4, looking NE	1m
7	111	Mill (Site 36a), room G4, clamping device (item 4.7), looking SE	-
7	112	Mill (Site 36a), room G4, clamping device (item 4.7), looking SE	-
7	113	Kiln range (Site 36c), doorway to G6 [18], looking E	1m
7	114	Garage (Site 36b), room G5, steps to blocked passage, looking N	1m
7	115	Garage (Site 36b), room G5, steps to blocked passage, looking N	1m
7	116	Kiln range (Site 36c), room G6, doorway in W wall [22], looking W	1m
7	117	Kiln range (Site 36c), room G6, mark on door in W wall [22], looking W	0.50m
7	118	Kiln range (Site 36c), room G6, W wall [22], looking W	1m
7	119	Kiln range (Site 36c), room G6, floor slabs in NW part, looking NW	1m
7	120	Kiln range (Site 36c), room G6, floor slabs in NW part, looking NW	1m
7	121	Kiln range (Site 36c), room G6, W end of N wall [23] & clay tiles (item 6.1), looking NW	1m
7	122	Kiln range (Site 36c), room G6, clay tiles (item 6.1), looking W	0.50m
7	123	Kiln range (Site 36c), room G6, clay tiles (item 6.1), looking W	0.50m
7	124	Kiln range (Site 36c), room G6, clay tiles (item 6.1), looking W	0.50m
7	125	Kiln range (Site 36c), room G6, W end of S wall [25], looking S	1m
7	126	Kiln range (Site 36c), room G6, E end of S wall [25], looking SE	1m
7	127	Kiln range (Site 36c), room G6, W face of kiln [26], looking E	1m
7	128	Kiln range (Site 36c), room G6, E end of N wall [23], looking NE	1m
7	129	Kiln range (Site 36c), room G6, W face of kiln [26], looking E	1m
7	130	Kiln range (Site 36c), room G6, stoking hole and grate to kiln [26], looking E	0.50m
7	131	Kiln range (Site 36c), room G6, stoking hole and grate to kiln [26], looking E	0.50m
7	132	Kiln range (Site 36c), room G6, interior of kiln, looking NE	-
7	133	Kiln range (Site 36c), room G6, ceiling over interior of kiln, looking NE	-
7	134	Kiln range (Site 36c), room G6, E part of S wall [25], looking SE	1m
7	136	Kiln range (Site 36c), room G6, passage and S part of E wall [24], looking E	1m
7	137	Kiln range (Site 36c), room G6, passage and E end of S wall [25], looking S	1m
7	139	Kiln range (Site 36c), room G6, passage and E end of N wall [23], looking N	1m
7	142	Barn (Site 36d), room G8, W part, looking N	1m
7	143	Barn (Site 36d), room G8, W wall, W part, looking W	1m
7	144	Barn (Site 36d), room G8, W wall, W part, looking NW	-
7	145	Barn (Site 36d), room G8, N wall, W part, looking N	-
7	146	Barn (Site 36d), room G8, graffiti on W end of S wall, looking S	-
7	147	Barn (Site 36d), room G8, graffiti on W end of S wall, looking S	-
7	148	Barn (Site 36d), room G9, W part, looking N	-
7	149	Barn (Site 36d), room G9, partition, looking NE	-
7	150	Barn (Site 36d), room G9, partition, looking NE	-
7	151	Barn (Site 36d), room 1F14, typical roof truss, looking NE	-
7	152	Barn (Site 36d), room 1F14, central bay, N wall, looking N	-
7	153	Barn (Site 36d), room 1F14, W end, S wall, looking SW	-
7	154	Barn (Site 36d), room 1F14, W wall, looking W	-
7	155	Barn (Site 36d), room 1F14, W wall, looking NW	-
7	156	Barn (Site 36d), room 1F14, N wall, looking NE	-
7	157	Barn (Site 36d), room 1F14, E wall, looking E	-
7	158	Barn (Site 36d), room 1F14, E end of S wall, looking SE	-
7	159	Barn (Site 36d), room G9, E part, looking N	1m
7	160	Barn (Site 36d), room G9, E part, looking N	1m
7	161	Barn (Site 36d), room G9, recesses in S end of E wall, E part, looking E	0.50m
7	162	Barn (Site 36d), room G9, E wall, N part, looking N	1m
7	163	Barn (Site 36d), room G9, E part, looking N	1m
7	164	Barn (Site 36d), room G9, E part, looking N	-
7	165	Mill Gill, culvert through wall for head race (Site 29e), looking NE	-
7	166	Mill (Site 36a), room G1, waterwheel hub and bearing, looking E	0.50m
7	167	Mill (Site 36a), room G1, waterwheel hub and bearing, looking E	0.50m
7	168	Mill (Site 36a), room G1, waterwheel, looking S	-
7	169	Mill (Site 36a), room G1, buckets to waterwheel, looking S	-
7	170	Mill (Site 36a), room G1, buckets and shrouds to waterwheel, looking SE	-
7	171	Mill (Site 36a), room G1, waterwheel, looking S	-

7	172	Mill (Site 36a), room G1, hubs and spokes to waterwheel, looking SE	-
7	173	Mill (Site 36a), room G1, hubs, spokes and bearing to waterwheel, looking SE	-
7	174	Mill (Site 36a), room G1, waterwheel, looking N	-
7	177	Mill (Site 36a), room G1, waterwheel, looking N	-
7	178	Mill (Site 36a), room G1, tailrace to waterwheel, looking SE	-
7	179	Mill (Site 36a), room G1, scar to E wall, looking E	-
7	180	Mill (Site 36a), room G1, tailrace to waterwheel, looking SE	-
7	814	Mill Gill, sluice at E end of pond (Site 29c), looking W	1m
7	816	Mill Gill, sluice at E end of pond (Site 29c), looking SE	1m
7	817	Mill Gill, sluice at E end of pond (Site 29c), looking NE	1m
7	818	Mill Gill, sluice at E end of pond (Site 29c), detail of sluice mechanism, looking W	0.50m
7	819	Mill Gill, sluice at E end of pond (Site 29c), detail of sluice mechanism, from above	0.50m
7	824	Mill Gill, flagged culvert (Site 29d), SE of poultry house, looking NW	0.50m
7	825	Mill Gill, head race (Site 29e), looking NW	1m
7	826	Mill Gill, head race (Site 29e), looking SE	1m
7	827	Mill Gill, wall culvert to head race (Site 29e), looking S	1m
7	828	Mill Gill, head race (Site 29e), looking NW	1m
7	829	Mill Gill, wall culvert to head race (Site 29e), looking S	1m
7	830	Mill Gill, iron railings to footpath, looking SW	1m
7	831	Mill Gill, overflow for launder (Site 29g), looking NW	0.50m
7	833	Mill Gill, launder (Site 29h), typical section of side, with sluice, looking N	0.50m
7	834	Mill Gill, launder (Site 29h), typical joint between two sections of side, looking N	0.50m
7	836	Mill Gill, overflow for launder (Site 29g), looking N	1m
7	837	Mill Gill, overflow for launder (Site 29g), flagged section, looking N	0.50m
7	838	Mill Gill, overflow for launder (Site 29g), flagged section, looking S	0.50m
7	839	Mill Gill, SE end of base for launder (Site 29h), looking N	1m
7	840	Mill Gill, base of metal sheath for launder (Site 29h), looking N	-
7	841	Mill Gill, pillar support for launder (Site 29h), looking S	1m
7	842	Mill (Site 36a), N elevation [3] of lean-to, looking S	1m
7	843	Mill (Site 36a), E elevation of lean-to, looking W	1m
7	844	Mill (Site 36a), E elevation of lean-to and N mill elevation [3], looking SW	1m
7	845	Mill (Site 36a), W elevation of lean-to, looking E	1m
7	846	Mill (Site 36a), W elevation of lean-to, looking E	1m
7	847	Mill (Site 36a), W end of N elevation [3], looking SE	1m
7	851	Mill Gill, structure (Site 34) to NE side of launder, looking N	1m
7	853	Mill Gill, sluice mechanism to launder (Site 29h), looking W	0.50m
7	861	Mill (Site 36a), room 2F15, W wall [12], frames (item 15.3), looking W	1m
7	863	Mill (Site 36a), room 2F15, W wall [12], frames (item 15.3), looking S	1m
7	865	Mill (Site 36a), room 2F15, W wall [12], frames (item 15.3), looking W	0.50m
7	866	Mill (Site 36a), room 2F15, N wall [13], looking NE	1m
7	867	Mill (Site 36a), room 2F15, N wall [13], looking NW	1m
7	868	Mill (Site 36a), room 2F15, N wall [13], hay-rake blanks (item 15.4), looking N	1m
7	869	Mill (Site 36a), room 2F15, steps down to 1F, looking S	0.50m
7	870	Mill (Site 36a), room 2F15, E wall [14] & saw blades (item 15.6), looking N	1m
7	871	Mill (Site 36a), room 2F15, E wall [14] & saw blades (item 15.6), looking S	1m
7	872	Mill (Site 36a), room 2F15, doorway in E wall [14], looking E	1m
7	873	Mill (Site 36a), room 2F15, S wall [11], E end, looking SE	1m
7	874	Mill (Site 36a), room 2F15, S wall [11], loading door, looking S	1m
7	875	Garage (Site 36b), roof and wall rising behind, looking E	-
7	876	Garage (Site 36b), roof and wall rising behind, looking NE	-
7	877	Garage (Site 36b), S external elevation [10] and roof, looking E	-
7	879	Mill (Site 36a), room 2F15, grooved disc and other features at S end of central ceiling bay, looking S	-
7	880	Mill (Site 36a), room 2F15, W end of S wall [11], looking SW	1m
7	881	Mill (Site 36a), room 2F15, typical roof truss, looking E	-
7	882	Mill (Site 36a), room 2F15, inscription to central roof truss, looking SW	-
7	883	Mill (Site 36a), room 2F15, inscription to central roof truss, looking SW	-
7	884	Mill (Site 36a), room 2F15, typical chute cover in W central bay, looking SE	0.50m
7	886	Mill (Site 36a), doors to sack hoist trap, E central bay, 2F15, looking E	0.50m
7	887	Mill (Site 36a), room 2F15, window at E end of S wall [11], looking S	0.50m
7	888	Mill (Site 36a), room 2F16, S wall [11] of 'domestic' range, looking S	1m
7	889	Mill (Site 36a), room 2F16, door at S end of W wall [16], looking W	1m
7	890	Mill (Site 36a), room 2F16, detail of lock block on door at S end of W wall [16], looking W	-

7	891	Mill (Site 36a), room 2F16, detail of lock block on door at S end of W wall [16], looking W	0.50m
7	892	Mill (Site 36a), room 2F16, N wall [13], looking N	1m
7	893	Mill (Site 36a), room 2F16, W wall [16], looking SW	1m
7	894	Mill (Site 36a), room 2F16, E wall [15], looking NE	1m
7	895	Kiln range (Site 36c), room 1F13, E wall [24], looking E	1m
7	897	Kiln range (Site 36c), room 1F13, blocked opening in E wall [24], looking E	1m
7	898	Kiln range (Site 36c), room 1F13, S wall [25], looking SW	1m
7	900	Kiln range (Site 36c), room 1F13, W wall [22], looking W	1m
7	903	Kiln range (Site 36c), room 1F13, N wall [23], looking NW	1m
7	905	Kiln range (Site 36c), room 1F13, flagstones to floor, looking W	0.50m
7	907	Garage (Site 36b), room 1F12, doorway at E end of N wall [19], looking N	1m
7	908	Garage (Site 36b), room 1F12, E wall [20], looking E	1m
7	909	Garage (Site 36b), room 1F12, N wall [19], looking N	1m
7	910	Garage (Site 36b), room 1F12, machine etc (item 12.12), looking N	1m
7	914	Garage (Site 36b), room 1F12, machine etc (items 12.12-12.13), looking NW	0.50m
7	915	Garage (Site 36b), room 1F12, surface of 'bench' structure, looking W	0.50m
7	916	Garage (Site 36b), room 1F12 , 'bench' structure, looking N	0.50m
7	917	Garage (Site 36b), room 1F12, striking mechanism through opening, looking N	0.50m
7	918	Garage (Site 36b), room 1F12, wall lever etc (items 12.7 & 12.11), looking N	0.50m
7	919	Garage (Site 36b), room 1F12, wall lever etc (items 12.7 & 12.11), looking N	0.50m
7	920	Garage (Site 36b), room 1F12, wall lever etc (items 12.7 & 12.11), looking W	0.50m
7	921	Garage (Site 36b), room 1F12, pulley with wooden casing on line shaft, looking NW	-
7	924	Garage (Site 36b), room 1F12, pulley with wooden casing on line shaft, looking E	-
7	925	Garage (Site 36b), room 1F12, pulley with wooden casing on line shaft, looking NE	-
7	929	Garage (Site 36b), room 1F12, box etc (item 12.8), looking N	1m
7	930	Mill (Site 36a), room 1F11, drilling machine in 'domestic' range, looking N	0.50m
7	932	Mill (Site 36a), room 1F11, drilling machine in 'domestic' range, looking N	0.50m
7	933	Mill (Site 36a), room 1F11, drilling machine in 'domestic' range, looking N	0.50m
7	934	Mill (Site 36a), room 1F11, drilling machine in 'domestic' range, looking N	1m
7	935	Garage (Site 36b), room 1F12, S wall [21] & bandsaw blade (item 12.16), looking S	1m
7	936	Garage (Site 36b), room 1F12, S wall [21] & bandsaw blade (item 12.16), looking SW	1m
7	937	Garage (Site 36b), room 1F12, W wall [17], looking SW	-
7	938	Garage (Site 36b), room 1F12, bench (item 12.18), looking SE	0.50m
7	940	Garage (Site 36b), room 1F12, bench (item 12.18), looking SE	0.50m
7	941	Garage (Site 36b), room 1F12, NW area & lathe etc (item 12.2), looking N	1m
7	944	Garage (Site 36b), room 1F12, lathe etc (item 12.2), looking N	0.50m
7	945	Garage (Site 36b), room 1F12, striking mechanism over NW area, looking N	-
7	946	Garage (Site 36b), room 1F12, striking mechanism over NW area, looking N	-
7	947	Garage (Site 36b), room 1F12, shaft (item 12.6), looking NE	0.50m
7	948	Garage (Site 36b), room 1F12, line shaft over NW area, looking N	-
7	950	Garage (Site 36b), room 1F12, lathe (item 12.2), looking N	0.50m
7	951	Garage (Site 36b), room 1F12, lathe (item 12.2), looking N	0.50m
7	952	Garage (Site 36b), room 1F12, lathe etc (items 12.2-12.3), looking N	0.50m
7	953	Garage (Site 36b), room 1F12, line shaft over NW area, looking N	-
7	954	Mill (Site 36a), room 1F11, lathe, looking NW	0.50m
7	955	Garage (Site 36b), room 1F12, misc wooden items (item 12.5), looking W	0.50m
7	957	Garage (Site 36b), room 1F12, timber section etc (item 12.4), looking NW	0.50m
7	958	Garage (Site 36b), room 1F12, bearing and grooved pulley, interior of timber section, looking NW	-
7	959	Mill (Site 36a), room 1F11, lathe, looking NW	0.50m
7	960	Mill (Site 36a), room 1F11, lathe, looking NE	-
7	961	Mill (Site 36a), room 1F11, lathe, looking NE	1m
7	963	Mill (Site 36a), room 1F11, lathe, looking NE	1m
7	965	Mill (Site 36a), room 1F11, shelving (item 11.4), looking S	0.50m
7	966	Mill (Site 36a), room 1F11, lathe, looking NE	0.50m
7	967	Garage (Site 36b), room 1F12, line shaft etc	-
7	968	Mill (Site 36a), room 1F11, graffiti on W wall [16], looking W	-
7	969	Mill (Site 36a), room 1F11, graffiti on W wall [16], looking W	-
7	970	Mill (Site 36a), room 1F11, graffiti on W wall [16], looking W	-
7	971	Mill (Site 36a), room 1F11, drilling machine and pulley (item 11.2), looking NE	0.50m

7	972	Mill (Site 36a), room 1F11, window at N end of E wall [15], looking NE	0.50m
7	973	Mill (Site 36a), room 1F11, bearing bracket, looking NE	-
7	974	Mill (Site 36a), room 1F11, hay-rake blanks (item 11.3), looking NE	0.50m
7	975	Mill (Site 36a), room 1F11, hay-rake blanks (item 11.3), looking N	0.50m
7	978	Mill (Site 36a), room 1F10, sluice control at E end of S wall [11], looking S	0.50m
7	980	Mill (Site 36a), room 1F10, S wall [11], looking S	1m
7	981	Mill (Site 36a), room 1F10, door in S wall [11], looking S	1m
7	982	Mill (Site 36a), room 1F10, W end of S wall [11], looking S	1m
7	983	Mill (Site 36a), room 1F10, W end of S wall [11], looking S	1m
7	984	Mill (Site 36a), room 1F10, W wall [12], looking SW	1m
7	986	Mill (Site 36a), room 1F10, recess in W wall [12], looking W	0.50m
7	987	Mill (Site 36a), room 1F10, W wall [12], looking W	1m
7	989	Mill (Site 36a), room 1F10, W wall [12], looking NW	1m
7	990	Mill (Site 36a), room 1F10, W wall [12], looking SW	1m
7	991	Mill (Site 36a), room G1, launder within wheelhouse, looking N	-
7	992	Mill (Site 36a), room G1, launder within wheelhouse, looking S	-
7	993	Mill (Site 36a), room G1, launder within wheelhouse, looking S	-
7	994	Mill (Site 36a), room 1F10, implements etc (item 10.2), looking SW	1m
7	995	Mill (Site 36a), room 1F10 W end of N wall [13], looking N	1m
7	996	Mill (Site 36a), room 1F10, typical chute in W ceiling bay, looking NW	-
7	997	Mill (Site 36a), room 1F10, N wall [13], looking NE	1m
7	999	Mill (Site 36a), room 1F10, spur gears, pulleys etc (item 10.3), looking N	1m
8	745	Mill (Site 36a), S external elevation [1], looking N	1m
8	746	Mill (Site 36a), semi-circular projection to S external elevation [1], looking N	1m
8	747	Mill Gill, launder and aqueduct (Site 29h), looking N	1m
8	748	Mill Gill, launder, aqueduct & overflow/bypass (Sites 29g-h), looking N	1m
8	749	Mill (Site 36a), N external elevation [3], looking S	1m
8	750	Mill (Site 36a), N external elevation [3], looking S	1m
8	751	Mill (Site 36a), E end of N external elevation [3], looking S	1m
8	752	Mill Gill, structure (Site 34) on E side of launder, looking NW	1m
8	753	Mill Gill, sluice from header tank (Site 29f), looking S	1m
8	754	Mill Gill, sluice from header tank (Site 29f), looking S	1m
8	755	Mill Gill, header tank (Site 29f), looking N	1m
8	756	Mill Gill, launder (Site 29h), looking SE	-
8	757	Mill Gill, launder and sluice mechanism (Site 29h), looking SE	-
8	758	Mill Gill, headrace (Site 29e), looking N	-
8	759	Mill Gill, quarry (Site 23), looking E	1m
8	760	Mill Gill, quarry (Site 23), looking N	1n
8	761	Mill Gill, trackway (Site 27) to S of quarry, looking E	1m
8	762	Mill Gill, ruined structures (Site 21), looking S	1m
8	764	Mill Gill, ruined structures (Site 21), looking W	1m
8	765	Mill Gill, ruined structures (Site 21), looking E	1m
8	766	Mill Gill, channel (Site 22), looking NE	1m
8	767	Mill Gill, channel (Site 22), looking NE	1m
8	770	Mill Gill, channel (Site 22), looking SW	1m
8	773	Mill Gill, pipeline (Site 30b) to power house, looking N	1m
8	774	Mill Gill, quarrying (Site 24), looking E	-
8	775	Mill Gill, bolts on pipeline (Site 30b) to power house, looking N	0.50m
8	776	Mill Gill, bolts on pipeline (Site 30b) to power house, looking N	0.50m
8	779	Mill Gill, pipeline (Site 30b) looking towards power house, looking S	-
8	780	Power house (Site 32), W window, S elevation, looking S	0.50m
8	781	Power house (Site 32), typical metal-framed window in S elevation, looking S	0.50m
8	782	Power house (Site 32), internal E wall, looking E	1m
8	784	Power house (Site 32), internal W wall, looking W	1m
8	785	Power house (Site 32), N part of internal W wall, looking NW	1m
8	787	Power house (Site 32), W return of internal W wall, looking W	1m
8	789	Power house (Site 32), impression left by turbine at SW corner, looking W	1m
8	791	Power house (Site 32), S part of internal W wall, looking W	1m
8	792	Power house (Site 32), concrete bases NW part of floor, looking NE	1m
8	794	Power house (Site 32), concrete bases NW part of floor, looking NE	1m
8	796	Power house (Site 32), concrete base, looking W	1m
8	797	Power house (Site 32), concrete base to SE part, looking E	1m
8	798	Power house (Site 32), half-truss over W end, looking W	-

8	799	Power house (Site 32), light fitting to soffit of E truss	-
8	800	Power house (Site 32), light fittings to soffit of central truss	-
8	801	Power house (Site 32), 3-phase and neutral supply wiring to W of concrete base, looking E	0.50m
8	802	Power house (Site 32), 3-phase and neutral supply wiring to W of concrete base, looking E	0.50m
8	803	Power house (Site 32), fitting to external E gable, looking S	-
8	805	Power house (Site 32), interior face of doorway in E wall, looking E	1m
8	806	Power house (Site 32), cable clips to internal E wall, looking E	-
8	807	Power house (Site 32), door to external E gable, looking W	1m
8	808	Power house (Site 32), external E gable, looking W	1m
8	809	Power house (Site 32), external E gable, looking W	1m
8	811	Power house (Site 32), approach trackway, looking W	1m
8	812	Power house (Site 32), former switch position, S internal wall, looking S	-
8	813	Power house (Site 32), fireplace to W internal wall, looking W	-
8	814	Power house (Site 32), light fittings to lintel of W window, S internal wall, looking S	-
8	815	Building (Site 31), S elevation, looking N	1m
8	816	Building (Site 31), E gable, looking W	1m
8	817	Mill Gill, typical quarrying area (Site 24), looking NW	-
8	818	Building (Site 31), N elevation & W gable, looking SE	1m
8	820	Building (Site 31), fireplace to W internal wall, looking W	1m
8	821	Mill Gill, modern gabions on site of weir close to power house (Site 32), looking SW	-
8	822	Mill Gill, headrace (Site 29b), looking SW	1m
8	823	Mill Gill, bolts to headrace at overflow (Site 29b), looking N	-
8	824	Mill Gill, headrace (Site 29b), looking W	-
8	825	Mill Gill, headrace (Site 29b), looking E	-
8	826	Mill Gill, concrete base (Site 28), looking N	1m
8	827	Mill Gill, concrete base (Site 28), looking W	1m
8	828	Mill Gill, raised area to N of mill race (Site 29b), looking E	1m
8	829	Mill Gill, mill race (Site 29b), looking E	1m
8	830	Mill Gill, mill race (Site 29b) where enters mill pond (Site 29c), looking S	1m
8	831	Mill Gill, depression (part of Site 20), looking W	1m
8	832	Mill Gill, concentration of rubble (part of Site 20), looking E	1m
8	833	Mill Gill, mill pond (Site 29c), looking S	-
8	834	Mill Gill, structure to S of poultry house (Site 33), looking N	1m
8	835	Mill Gill, flagged headrace (Site 29d) to S of poultry house, looking NW	0.50m
8	836	Mill Gill, flagged headrace (Site 29d) to S of poultry house where crossed by trackway, looking NE	0.50m
8	838	Mill Gill, pit to S of head race (Site 29e), looking NE	1m
8	845	Mill (Site 36a), room G2, former tin covering W end of line shaft in S wall [11], looking E	-
8	846	Mill (Site 36a), room G2, typical two-part ceramic three cable holder, S side of room, looking S	-
8	847	Garage (Site 36b), room G7, light fitting and typical two-part ceramic two cable holder, looking E	-
8	848	Mill (Site 36a), room G7, typical two-part ceramic two cable holder to S side of room, looking S	-
8	850	Mill (Site 36a), room 1F10, bakelite and wooden switch to S jamb of doorway at S end of E wall [14], looking SE	-
8	851	Mill (Site 36a), room 1F10, bakelite and wooden switch to S jamb of doorway at S end of E wall [14], looking S	-
8	852	Mill (Site 36a), room 1F11, pencilled graffiti on S wall [11], looking S	-
8	853	Mill (Site 36a), room 1F10, pencilled graffiti on S wall [11], looking S	-
8	854	Mill (Site 36a), room 1F10, pencilled graffiti on S wall [11], looking S	-
8	855	Mill (Site 36a), room 1F10, pencilled graffiti on S wall [11], looking S	-
8	856	Mill (Site 36a), room 1F10, pencilled graffiti on S wall [11], looking S	-
8	857	Mill (Site 36a), room 2F15, pencilled graffiti on E wall [14], looking E	-
8	858	Mill (Site 36a), room 2F15, ceramic pipes, N end of E wall [14], looking NE	-
8	859	Mill (Site 36a), room 2F15, pencilled graffiti on S wall [11], looking S	-
8	860	Mill (Site 36a), room 2F15, pencilled graffiti on S wall [11], looking S	-
8	861	Mill (Site 36a), room 2F15, pencilled graffiti on S wall [11], looking S	-
8	862	Mill (Site 36a), room G2, inner face of doorway in S wall [11], looking S	1m
8	863	Former millstone, S of barn range, looking S	-

8	864	Barn (Site 36d), S elevation [8], looking N	-
8	865	Mill Gill, pond (Site 29c), looking E	-
8	866	Mill Gill, pond (Site 29c), looking E	-
9	004	Mill Gill, sluice and revetment wall to pond (Site 29c), looking SE	-
9	005	Building (Site 31) after restoration, looking N	-
9	006	Building (Site 31), E gable, looking N	-
9	007	Building (Site 31), internal fireplace after restoration, looking N	-
9	008	Building (Site 31) after restoration, looking SE	-
9	016	Mill Gill, sluice to pond (Site 29c), looking SE	-
9	017	Mill Gill, sluice to pond (Site 29c), looking SE	-
9	019	Mill Gill, structure to S of poultry house (Site 33), looking NE	1m
9	020	Mill Gill, culvert in wall into header tank (Site 29f), looking S	1m
9	022	Mill Gill, culvert in wall into header tank (Site 29f), looking S	-
9	023	Mill Gill, sluice arrangement in header tank (Site 29f), looking S	-
9	024	Mill Gill, sluice arrangement in header tank (Site 29f), looking S	-
9	025	Mill Gill, launder and sluice (Site 29h), looking SE	-
9	026	Mill Gill, launder (Site 29h), looking SE	-
9	027	Mill Gill, culvert in wall into header tank (Site 29f), looking N	-
9	028	Mill Gill, structure (Site 34) to NE side of launder, looking NW	1m
9	029	Mill Gill, structure (Site 34) to NE side of launder, looking NW	1m
9	031	Mill Gill, overflow for launder (Site 29g), looking N	-
9	032	Mill Gill, overflow for launder (Site 29g), looking N	-
9	033	Mill (Site 36a), W end of N elevation [3], looking SW	1m
9	034	Power house (Site 32), central recess in N wall, looking N	1m
9	035	Power house (Site 32), roof structure at NE corner, looking NE	-
9	972	Leas House, pond (Site 12c), looking NE	-
9	973	Leas House, north revetment wall to pond (Site 12c), looking S	1m
9	974	Leas House, culvert structure (Site 12e), looking N	-
9	975	Leas House, view to barn (Site 14) and footbridge (Site 13), looking SE	-
9	977	Leas House, collecting chamber (Site 12d), looking NE	-
9	978	Leas House, pond (Site 12c), looking SE	-
9	979	Leas House, view along early routeway (Site 2), looking SE	-
9	980	Leas House, enclosures or structures (Site 3b), looking N	-
9	981	Leas House, building (Site 3a) and platforms (Site 3c), looking N	-
9	982	Leas House, modern springhead close to building (Site 3a), looking NE	1m
9	983	Leas House, modern springhead close to building (Site 3a), looking N	1m
9	984	Leas House, rubble scatter close to platform (Site 3c), looking N	1m
9	985	Leas House, general view to Slape Wath ford (Site 11), looking SW	-
9	986	Leas House, inlet for culvert (Site 12b), looking N	1m
9	987	Leas House, inlet for culvert (Site 12b), looking N	1m
9	988	Leas House, view up Whitfield Gill from Slape Wath (Site 11), looking NW	-
9	989	Leas House, timber in bank close to inlet for culvert (Site 12b), looking N	1m
9	990	Leas House, timber in bank close to inlet for culvert (Site 12b), looking N	-
9	991	Leas House, collecting chamber (Site 12d), looking E	-
9	992	Leas House, possible kiln (Site 9), looking NE	1m
9	993	Leas House, field barn (Site 14), looking E	-
9	994	Leas House, footbridge (Site 13), looking NW	-
9	995	Leas House, collecting chamber (Site 8c), looking W	-
9	996	Leas House, field barn (Site 14), looking NW	-
9	997	Leas House, field barn (Site 14), looking NW	-
9	998	Leas House, collecting chamber (Site 8c), looking N	-
9	999	Leas House, weir (Site 8a), looking N	-

West Mill Photographic Catalogue (by survey area and buildings)

Film 1: Digital colour prints taken 20th October 2010
Film 2: Digital colour prints taken 1st April 2011
Film 3: Digital colour prints taken 7th April 2011
Film 4: Digital colour prints taken 10th May 2011
Film 5: Digital colour prints taken 30th June 2011
Film 6: Digital colour prints taken 14th July 2011
Film 7: Digital colour prints taken 20th July 2011
Film 8: Digital colour prints taken 8th March 2012
Film 9: Digital colour prints taken 18th May 2012

a) Leas House survey area

Film	*Frame*	*Subject*	*Scale*
4	001	Leas House, interior of collecting chamber (Site 12d), looking SE	1m
4	002	Leas House, N elevation of collecting chamber (Site 12d), looking S	1m
4	003	Leas House, E elevation of collecting chamber (Site 12d), looking W	1m
4	004	Leas House, E elevation of collecting chamber (Site 12d), looking SW	1m
4	005	Leas House, sluice passage to E elevation of collecting chamber (Site 12d), looking W	-
4	006	Leas House, S elevation of collecting chamber (Site 12d), looking N	1m
4	007	Leas House, footbridge (Site 13), looking SE	-
4	008	Leas House, remains of pier (Site 8b) on S side of beck, looking S	-
4	009	Leas House, collecting chamber (Site 8c), looking E	-
4	010	Leas House, weir (Site 8a), looking SE	-
4	011	Leas House, collecting chamber (Site 12d), looking NW	-
4	013	Leas House, clamp to SE corner of pier (Site 8b)	1m
4	014	Leas House, remains of pier (Site 8b) on S side of beck, looking W	1m
4	015	Leas House, weir (Site 8a), looking NE	1m
4	016	Leas House, weir timbers (Site 8a), looking NE	-
4	017	Leas House, S elevation of collecting chamber (Site 8c), looking NE	-
4	018	Leas House, S elevation of collecting chamber (Site 8c), looking NE	-
4	019	Leas House, bolt adjacent to channel (Site 7b), looking NE	1m
4	020	Leas House, boundary (Site 6) south-west of Leas House, looking S	1m
4	021	Leas House, boundary (Site 6) south-west of Leas House, looking N	1m
4	022	Leas House, continuation of boundary (Site 6) to the north-west, looking N	1m
4	955	View to Leas House, looking N	-
4	956	View to Leas House, looking N	-
4	957	Leas House, structural platforms (Site 4b) at W end of survey area, looking NW	1m
4	960	Leas House survey area, looking SE	-
4	961	Leas House survey area, looking SE	-
4	964	Leas House survey area, looking SE	-
4	965	Leas House survey area, looking SE	-
4	966	Leas House survey area, looking SE	-
4	967	Leas House, routeway (Site 2) and structures (Site 3b), looking NE	-
4	968	Leas House, 'porous' stone within rubble spread, looking N	1m
4	969	Leas House, 'porous' stones within rubble spread, looking N	1m
4	970	Leas House, ruined structure (Site 3a), looking E	1m
4	973	Leas House, ruined structure (Site 3a), looking N	1m
4	975	Leas House, possible ruined structures (Site 3b), looking NE	1m
4	976	Leas House, former course of beck, looking SE	1m
4	978	Leas House, Slape Wath (Site 11), looking S	-
4	980	Leas House, pit on line of culvert (Site 12b), looking N	1m
4	981	Leas House, pit on line of culvert (Site 12b), looking S	1m
4	982	Leas House, weir (Site 12a) across beck, looking W	-
4	983	Leas House, culvert and N end of weir (Site 12a) across beck, looking N	1m
4	984	Leas House, N end of weir (Site 12a) across beck, looking N	1m
4	988	Leas House, bank and ditch (Site 5), looking N	-
4	989	Leas House, bank and ditch (Site 5), looking N	-
4	990	Leas House, remains of culvert (Site 12b), looking N	1m
4	991	Leas House, pond (Site 12c), looking SE	1m

4	992	Leas House, ceramic pipe in base of pond (Site 12c), looking S	1m
4	993	Leas House, mark on ceramic pipe in base of pond (Site 12c), looking S	-
4	994	Leas House, W elevation of collecting chamber (Site 12d), looking E	1m
4	995	Leas House, W elevation of collecting chamber and sluice (Site 12d), looking SE	1m
4	996	Leas House, detail of sluice in W elevation of collecting chamber (Site 12d), looking E	1m
4	997	Leas House, detail of sluice in W elevation of collecting chamber (Site 12d), looking E	1m
4	999	Leas House, interior of collecting chamber (Site 12d), looking E	-
9	972	Leas House, pond (Site 12c), looking NE	-
9	973	Leas House, north revetment wall to pond (Site 12c), looking S	1m
9	974	Leas House, culvert structure (Site 12e), looking N	-
9	975	Leas House, view to barn (Site 14) and footbridge (Site 13), looking SE	-
9	977	Leas House, collecting chamber (Site 12d), looking NE	-
9	978	Leas House, pond (Site 12c), looking SE	-
9	979	Leas House, view along early routeway (Site 2), looking SE	-
9	980	Leas House, enclosures or structures (Site 3b), looking N	-
9	981	Leas House, building (Site 3a) and platforms (Site 3c), looking N	-
9	982	Leas House, modern springhead close to building (Site 3a), looking NE	1m
9	983	Leas House, modern springhead close to building (Site 3a), looking N	1m
9	984	Leas House, rubble scatter close to platform (Site 3c), looking N	1m
9	985	Leas House, general view to Slape Wath ford (Site 11), looking SW	-
9	986	Leas House, inlet for culvert (Site 12b), looking N	1m
9	987	Leas House, inlet for culvert (Site 12b), looking N	1m
9	988	Leas House, view up Whitfield Gill from Slape Wath (Site 11), looking NW	-
9	989	Leas House, timber in bank close to inlet for culvert (Site 12b), looking N	1m
9	990	Leas House, timber in bank close to inlet for culvert (Site 12b), looking N	-
9	991	Leas House, collecting chamber (Site 12d), looking E	-
9	992	Leas House, possible kiln (Site 9), looking NE	1m
9	993	Leas House, field barn (Site 14), looking E	-
9	994	Leas House, footbridge (Site 13), looking NW	-
9	995	Leas House, collecting chamber (Site 8c), looking W	-
9	996	Leas House, field barn (Site 14), looking NW	-
9	997	Leas House, field barn (Site 14), looking NW	-
9	998	Leas House, collecting chamber (Site 8c), looking N	-
9	999	Leas House, weir (Site 8a), looking N	-

b) Mill Gill survey area

Film	*Frame*	*Subject*	*Scale*
2	667	Mill Gill, ruined wall line above quarry 23, looking W	-
2	668	Mill Gill, culvert outlet (Site 30a) for pipe from Leas House survey area, looking N	0.30m
2	671	Mill Gill, interior of culvert outlet (Site 30a) for pipe from Leas House survey area, looking N	-
2	674	Mill Gill, upper part of former wall (Site 30b) carrying turbine pipe, looking N	-
2	675	Mill Gill, upper part of former wall (Site 30b) carrying turbine pipe, looking S	-
2	676	Mill Gill, channel with possible stone lining (Site 22), west end of survey area, looking NE	-
2	677	Mill Gill, ruined structure (Site 21), west end of survey area, looking E	-
5	538	Hay meadow to N of mill complex showing lynchets (Site 16a), looking NW	-
6	793	Mill Gill, sluice channel (Site 29a) to S side of power house, looking SE	1m
6	794	Mill Gill, sluice channel (Site 29a) to S side of power house, looking NW	1m
6	795	Mill Gill, sluice and channel (Site 29a) to SW of power house, looking W	1m
6	797	Mill Gill, sluice and channel (Site 29a) to SW of power house, looking W	1m
7	165	Mill Gill, culvert through wall for head race (Site 29e), looking NE	-
7	814	Mill Gill, sluice at E end of pond (Site 29c), looking W	1m
7	816	Mill Gill, sluice at E end of pond (Site 29c), looking SE	1m
7	817	Mill Gill, sluice at E end of pond (Site 29c), looking NE	1m
7	818	Mill Gill, sluice at E end of pond (Site 29c), detail of sluice mechanism, looking W	0.50m

7	819	Mill Gill, sluice at E end of pond (Site 29c), detail of sluice mechanism, from above	0.50m
7	824	Mill Gill, flagged culvert (Site 29d), SE of poultry house, looking NW	0.50m
7	825	Mill Gill, head race (Site 29e), looking NW	1m
7	826	Mill Gill, head race (Site 29e), looking SE	1m
7	827	Mill Gill, wall culvert to head race (Site 29e), looking S	1m
7	828	Mill Gill, head race (Site 29e), looking NW	1m
7	829	Mill Gill, wall culvert to head race (Site 29e), looking S	1m
7	830	Mill Gill, iron railings to footpath, looking SW	1m
7	831	Mill Gill, overflow for launder (Site 29g), looking NW	0.50m
7	833	Mill Gill, launder (Site 29h), typical section of side, with sluice, looking N	0.50m
7	834	Mill Gill, launder (Site 29h), typical joint between two sections of side, looking N	0.50m
7	836	Mill Gill, overflow for launder (Site 29g), looking N	1m
7	837	Mill Gill, overflow for launder (Site 29g), flagged section, looking N	0.50m
7	838	Mill Gill, overflow for launder (Site 29g), flagged section, looking S	0.50m
7	839	Mill Gill, SE end of base for launder (Site 29h), looking N	1m
7	840	Mill Gill, base of metal sheath for launder (Site 29h), looking N	-
7	841	Mill Gill, pillar support for launder (Site 29h), looking S	1m
7	851	Mill Gill, structure (Site 34) to NE side of launder, looking N	1m
7	853	Mill Gill, sluice mechanism to launder (Site 29h), looking W	0.50m
8	747	Mill Gill, launder and aqueduct (Site 29h), looking N	1m
8	748	Mill Gill, launder, aqueduct & overflow/bypass (Sites 29g-h), looking N	1m
8	752	Mill Gill, structure (Site 34) on E side of launder, looking NW	1m
8	753	Mill Gill, sluice from header tank (Site 29f), looking S	1m
8	754	Mill Gill, sluice from header tank (Site 29f), looking S	1m
8	755	Mill Gill, header tank (Site 29f), looking N	1m
8	756	Mill Gill, launder (Site 29h), looking SE	-
8	757	Mill Gill, launder and sluice mechanism (Site 29h), looking SE	-
8	758	Mill Gill, headrace (Site 29e), looking N	-
8	759	Mill Gill, quarry (Site 23), looking E	1m
8	760	Mill Gill, quarry (Site 23), looking N	1n
8	761	Mill Gill, trackway (Site 27) to S of quarry, looking E	1m
8	762	Mill Gill, ruined structures (Site 21), looking S	1m
8	764	Mill Gill, ruined structures (Site 21), looking W	1m
8	765	Mill Gill, ruined structures (Site 21), looking E	1m
8	766	Mill Gill, channel (Site 22), looking NE	1m
8	767	Mill Gill, channel (Site 22), looking NE	1m
8	770	Mill Gill, channel (Site 22), looking SW	1m
8	773	Mill Gill, pipeline (Site 30b) to power house, looking N	1m
8	774	Mill Gill, quarrying (Site 24), looking E	-
8	775	Mill Gill, bolts on pipeline (Site 30b) to power house, looking N	0.50m
8	776	Mill Gill, bolts on pipeline (Site 30b) to power house, looking N	0.50m
8	779	Mill Gill, pipeline (Site 30b) looking towards power house, looking S	-
8	817	Mill Gill, typical quarrying area (Site 24), looking NW	-
8	821	Mill Gill, modern gabions on site of weir close to power house (Site 32), looking SW	-
8	822	Mill Gill, headrace (Site 29b), looking SW	1m
8	823	Mill Gill, bolts to headrace at overflow (Site 29b), looking N	-
8	824	Mill Gill, headrace (Site 29b), looking W	-
8	825	Mill Gill, headrace (Site 29b), looking E	-
8	826	Mill Gill, concrete base (Site 28), looking N	1m
8	827	Mill Gill, concrete base (Site 28), looking W	1m
8	828	Mill Gill, raised area to N of mill race (Site 29b), looking E	1m
8	829	Mill Gill, mill race (Site 29b), looking E	1m
8	830	Mill Gill, mill race (Site 29b) where enters mill pond (Site 29c), looking S	1m
8	831	Mill Gill, depression (part of Site 20), looking W	1m
8	832	Mill Gill, concentration of rubble (part of Site 20), looking E	1m
8	833	Mill Gill, mill pond (Site 29c), looking S	-
8	834	Mill Gill, structure to S of poultry house (Site 33), looking N	1m
8	835	Mill Gill, flagged headrace (Site 29d) to S of poultry house, looking NW	0.50m
8	836	Mill Gill, flagged headrace (Site 29d) to S of poultry house where crossed by trackway, looking NE	0.50m
8	838	Mill Gill, pit to S of head race (Site 29e), looking NE	1m
8	863	Former millstone, S of barn range, looking S	-

8	865	Mill Gill survey area, pond (Site 29c), looking E	-
8	866	Mill Gill survey area, pond (Site 29c), looking E	-
9	004	Mill Gill, sluice and revetment wall to pond (Site 29c), looking SE	-
9	016	Mill Gill, sluice to pond (Site 29c), looking SE	-
9	017	Mill Gill, sluice to pond (Site 29c), looking SE	-
9	019	Mill Gill, structure to S of poultry house (Site 33), looking NE	1m
9	020	Mill Gill, culvert in wall into header tank (Site 29f), looking S	1m
9	022	Mill Gill, culvert in wall into header tank (Site 29f), looking S	-
9	023	Mill Gill, sluice arrangement in header tank (Site 29f), looking S	-
9	024	Mill Gill, sluice arrangement in header tank (Site 29f), looking S	-
9	025	Mill Gill, launder and sluice (Site 29h), looking SE	-
9	026	Mill Gill, launder (Site 29h), looking SE	-
9	027	Mill Gill, culvert in wall into header tank (Site 29f), looking N	-
9	028	Mill Gill, structure (Site 34) to NE side of launder, looking NW	1m
9	029	Mill Gill, structure (Site 34) to NE side of launder, looking NW	1m
9	031	Mill Gill, overflow for launder (Site 29g), looking N	-
9	032	Mill Gill, overflow for launder (Site 29g), looking N	-
9	033	Mill (Site 36a), W end of N elevation [3], looking SW	1m

c) Mill complex

Film	*Frame*	*Subject*	*Scale*
1	490	Garage (Site 36b), room 1F12, E wall [20], looking E	1m
1	491	Garage (Site 36b), room 1F12, roof timbers to NE corner, looking SE	-
1	492	Garage (Site 36b) , room 1F12, roof timbers, looking W	-
1	493	Garage (Site 36b), room 1F12, roof timbers, looking W	-
1	495	Garage (Site 36b), room 1F12, roof timbers to SE corner, looking S	0.50m
1	496	Garage (Site 36b), room 1F12, E wall [20], looking E	0.50m
1	497	Garage (Site 36b), room 1F12, recess over doorway in E wall [20], looking E	0.50m
1	498	Garage (Site 36b), room 1F12, shelf over doorway in E wall [20], looking E	0.50m
1	499	Garage (Site 36b), room 1F12, recess and chains over doorway in E wall [20], looking E	-
1	500	Garage (Site 36b), room 1F12, detail of roof stone slate, looking S	-
1	501	Garage (Site 36b), room 1F12, detail of roof stone slate, looking S	-
1	503	Garage (Site 36b), room 1F12, detail of strap to truss S end, looking SW	0.50m
1	504	Garage (Site 36b), room 1F12, detail of wooden pulley to truss S end, looking S	0.50m
1	505	Garage (Site 36b), room 1F12, detail of wooden pulley to truss S end, looking S	0.50m
1	506	Garage (Site 36b), room 1F12, detail of wall timbers to S wall [21], looking S	0.50m
1	507	Garage (Site 36b), room 1F12, detail of fittings to common rafters, looking S	-
1	508	Garage (Site 36b), room 1F12, detail of cut out to upper surface of roof timber, looking E	0.50m
1	511	Garage (Site 36b), room 1F12, roof timbers to NW corner, looking NW	-
1	512	Garage (Site 36b), room 1F12, wall mounted timber to W wall [17], looking W	-
1	513	Garage (Site 36b), room 1F12, roof timbers to NW corner, looking SW	-
1	514	Garage (Site 36b), room 1F12, detail of N end of line shaft, looking E	-
1	515	Garage (Site 36b), room 1F12, small grooved discs bolted to window lintel, W end of S wall [21], looking SW	-
1	516	Garage (Site 36b), room 1F12, small grooved disc bolted to window lintel, W end of S wall [21], looking W	0.50m
1	517	Garage (Site 36b), room 1F12, N wall [19], looking NW	1m
1	518	Garage (Site 36b), room 1F12, N wall [19], looking NW	1m
1	519	Garage (Site 36b), room 1F12, looking W	1m
1	520	Garage (Site 36b), room 1F12, looking W	1m
1	521	Garage (Site 36b), room 1F12, S wall [21], looking SW	1m
1	522	Garage (Site 36b), room 1F12, lever and timber to N wall [19], looking N	1m
1	523	Garage (Site 36b), room 1F12 and line shaft, looking W	1m
1	524	Garage (Site 36b), room 1F12, timber and shaft to N wall [19], looking NE	1m
1	525	Garage (Site 36b), room 1F12, pulley to shaft to N wall [19], looking E	-
1	526	Garage (Site 36b), room 1F12, doorways to W wall [17], looking W	1m
1	527	Garage (Site 36b), room 1F12, doorways to W wall [17], looking W	1m
1	529	Mill (Site 36a), room 1F11, drilling machine, looking N	-

1	530	Mill (Site 36a), room 1F11, drilling machine and hay-rake blanks (item 11.3), looking N	-
1	531	Mill (Site 36a), room 1F11, drilling machine, looking N	-
1	535	Mill (Site 36a), room G2, pit wheel, looking NW	-
1	539	Mill (Site 36a), room G2, S face of central post, looking N	-
1	540	Mill (Site 36a), room G2, E face of central post and frame, looking NW	-
1	541	Mill (Site 36a), room G2, N post and frame, looking NW	-
1	542	Mill (Site 36a), room G2, E face of N post and frame, looking W	-
1	543	Mill (Site 36a), room G2, E face of frame, looking W	-
1	544	Mill (Site 36a), room G2, E face of N post and frame, looking SW	-
1	545	Mill (Site 36a), room G2, millstones set into floor, looking S	-
1	546	Mill (Site 36a), room G2, millstones set into floor, looking S	-
1	547	Mill (Site 36a), room G2, millstones set into floor, looking S	-
1	548	Mill (Site 36a), room G2, looking NE	-
1	549	Mill (Site 36a), room G2, shaped wooden object hanging from central bay of ceiling, looking N	-
1	551	Mill (Site 36a), room G2, table and basket (item 2.10) in NE corner, looking NE	-
1	552	Mill (Site 36a), room 1F11, box with paper name tag (item 11.4), looking S	-
5	539	Mill (Site 36a), E external elevation [4] of 'domestic' range, looking W	1m
5	540	Mill (Site 36a), E external elevation [4] of 'domestic' range, looking W	1m
5	541	Mill (Site 36a), E external elevation of 'domestic' range [4], upper part, looking W	-
5	542	Garage (Site 36b), N external elevation [5] of curving wall between 'domestic' range and kiln range, looking SE	1m
5	543	Garage (Site 36b), opening in N external elevation [5] of curving wall between 'domestic' range and kiln range, looking SE	1m
5	544	Kiln range (Site 36c), N external elevation [5], looking S	1m
5	545	Kiln range (Site 36c), N external elevation [5], showing change in masonry, looking S	1m
5	546	Kiln range (Site 36c), N external elevation [5], small opening with grille and plinth at E end, looking S	1m
5	547	Barn (Site 36d), N external elevation [6], looking S	1m
5	549	Mill (Site 36a), 'domestic' range, graffiti to NE wall quoin, looking S	-
5	553	Mill (Site 36a), wheelhouse, W external elevation [2], looking NE	1m
5	554	Mill (Site 36a), wheelhouse, W external elevation [2], looking E	1m
5	564	Mill (Site 36a), S external elevation [1], looking N	1m
5	566	Garage (Site 36b), S external elevation [10], looking N	1m
5	567	Garage (Site 36b), S external elevation [10], looking N	1m
5	568	Garage (Site 36b), S external elevation [10], looking N	1m
5	569	Garage (Site 36b), E external elevation [9], looking W	1m
5	570	Garage (Site 36b), E external elevation [9], looking W	1m
5	571	Barn (Site 36d), S external elevation [8], looking N	1m
5	572	Barn (Site 36d), S external elevation [8], looking N	1m
5	573	Barn (Site 36d), S external elevation [8], looking NW	1m
5	574	Barn (Site 36d), E external elevation [7], looking NW	1m
5	576	Mill (Site 36a), pit wheel [G2], looking NW	-
7	002	Mill (Site 36a), room 1F10, wooden box etc (item 10.4), looking N	1m
7	003	Mill (Site 36a), room 1F10, wooden blocks in N wall [13], looking N	1m
7	004	Mill (Site 36a), room 1F10, machinery etc (items 10.7-10.9), looking E	1m
7	005	Mill (Site 36a), room 1F10, hay-rake blanks etc (items 10.7-10.8), looking NE	1m
7	006	Mill (Site 36a), room 1F10, pulleys, spur gears etc (item 10.3), looking N	0.50m
7	007	Mill (Site 36a), room 1F10, wooden box etc (item 10.4), looking N	0.50m
7	008	Mill (Site 36a), room 1F10, wooden box (item 10.4) and features in floor, looking N	0.50m
7	009	Mill (Site 36a), room 1F10, wooden box etc (item 10.4) and features in floor, looking N	0.50m
7	010	Mill (Site 36a), room 1F10, change wheels etc (item 10.6), looking N	0.50m
7	011	Mill (Site 36a), room 1F10, machinery (item 10.7), looking N	0.50m
7	012	Mill (Site 36a), room 1F10, semi-circular timber to E face of E beam, looking SW	-
7	014	Mill (Site 36a), room 1F10, trap for sack hoist, looking E	0.50m
7	016	Mill (Site 36a), room 1F10, sliding latch to loading door in S wall [11], looking S	-
7	017	Mill (Site 36a), room G2, can and disc (items 2.1 & 2.3), looking W	1m
7	018	Mill (Site 36a), room G2, can, drums and timbers etc (items 2.1-2.4), looking S	1m
7	019	Mill (Site 36a), room G2, plate impression in SW corner of room, looking W	0.50m

7	020	Mill (Site 36a), room G2, window recess at W end of S wall [11], looking S	0.50m
7	021	Mill (Site 36a), room G2, S post of frame, looking S	1m
7	022	Mill (Site 36a), room G2, S post of frame, looking S	1m
7	023	Mill (Site 36a), room G2, pit wheel, looking NW	1m
7	027	Mill (Site 36a), room G2, pit wheel, axle and bearing, looking N	0.50m
7	028	Mill (Site 36a), room G2, pit wheel, axle and bearing (item 2.5), looking N	0.50m
7	029	Mill (Site 36a), room G2, S face of central post of frame, looking N	1m
7	030	Mill (Site 36a), room G2, E face of central post of frame, looking NW	1m
7	031	Mill (Site 36a), room G2, E faces of central post of frame, looking NW	1m
7	032	Mill (Site 36a), room G2, frame and steps to 1F10, looking N	1m
7	033	Mill (Site 36a), room G2, bearing for waterwheel axle, looking W	0.50m
7	034	Mill (Site 36a), room G2, bearing for waterwheel axle, looking W	0.50m
7	036	Mill (Site 36a), room G2, timbers supporting bearing for waterwheel axle, looking W	0.50m
7	037	Mill (Site 36a), room G2, E face of frame, looking W	-
7	038	Mill (Site 36a), room G2, N post of frame and shaft, E face, looking SW	1m
7	039	Mill (Site 36a), room G2, N post of frame and beams, E face, looking W	1m
7	041	Mill (Site 36a), room G2, N end of frame, E face, looking W	0.50m
7	042	Mill (Site 36a), room G2, N post of frame and shaft, E face, looking SW	1m
7	043	Mill (Site 36a), room G2, post and timber at N end of frame, looking NE	-
7	044	Mill (Site 36a), room G2, drums of grease (item 2.8) and W end of N wall [13], looking NW	1m
7	045	Mill (Site 36a), room G2, N end of frame, W face, looking E	0.50m
7	046	Mill (Site 36a), room G2, frame and line shaft, W face, looking SE	-
7	048	Mill (Site 36a), room G2, N post of frame, N face, looking SW	-
7	049	Mill (Site 36a), room G2, N post of frame, W face, looking NE	-
7	050	Mill (Site 36a), room G2, N post of frame, S face, looking N	-
7	051	Mill (Site 36a), room G2, central post of frame, N face, looking S	-
7	052	Mill (Site 36a), room G2, N post of frame, S face, looking N	-
7	053	Mill (Site 36a), room G2, former millstones in floor, looking S	0.50m
7	055	Mill (Site 36a), room G2, former millstones in floor, looking N	0.50m
7	057	Mill (Site 36a), room G2, former millstone in floor, looking W	0.50m
7	058	Mill (Site 36a), room G2, line shaft and pulleys, looking NE	1m
7	060	Mill (Site 36a), room G2, line shafts and pulleys, looking N	1m
7	063	Mill (Site 36a), room G2 [13], doorway to lean-to, looking N	1m
7	064	Mill (Site 36a), room G2, socket in floor flags, looking S	1m
7	065	Mill (Site 36a), room G2, large bedrock slabs in N wall [13], looking N	1m
7	066	Mill (Site 36a), room G2, S wall [11] and timbers (item 2.2), looking SW	1m
7	067	Mill (Site 36a), room G2, line shaft, pulleys and items (item 2.11), looking SE	0.50m
7	068	Mill (Site 36a), room G2, line shafts and pulleys, looking E	0.50m
7	069	Mill (Site 36a), room G2, pulleys and object hanging from central bay of ceiling, looking N	-
7	070	Mill (Site 36a), room G2, line shaft and E face of frame, looking SW	-
7	071	Mill (Site 36a), room G2, sack hoist in central bay of ceiling, looking S	-
7	073	Mill (Site 36a), room G2, concrete base and line shaft, looking W	0.50m
7	074	Garage (Site 36b), room G7, saw bench (item 7.12), looking W	0.50m
7	075	Garage (Site 36b), room G7, W part, looking W	-
7	076	Mill (Site 36a), room G4, pulley and belting, looking NW	-
7	077	Mill (Site 36a), room G4, pulley and belting, looking NW	-
7	078	Mill (Site 36a), room G4, flat belt pulleys (item 4.1), looking NW	-
7	079	Mill (Site 36a), room G4, E wall [15], looking NE	1m
7	080	Mill (Site 36a), room G4, fireplace in E wall [15], looking NE	1m
7	081	Mill (Site 36a), room G4, fireplace and recess in E wall [15], looking E	1m
7	083	Mill (Site 36a), room G4, pulley scar? in E wall [15], looking E	-
7	084	Mill (Site 36a), room G4, daisy mark in S wall [11] of 'domestic' range, looking S	
7	085	Mill (Site 36a), room G4, daisy mark in S wall [11] of 'domestic' range, looking S	-
7	086	Mill (Site 36a), room G4, daisy mark in S wall [11] of 'domestic' range, looking S	-
7	087	Mill (Site 36a), room G4, daisy mark in S wall [11] of 'domestic' range, looking S	-
7	089	Garage (Site 36b), room G7, looking E	1m
7	091	Garage (Site 36b), room G7, cobbles to W end, looking E	1m
7	092	Garage (Site 36b), room G7, cobbles to W end, looking E	1m
7	093	Garage (Site 36b), room G7, flagstones and plate impressions, looking E	1m
7	094	Garage (Site 36b), room G7, machine (item 7.4), looking NE	-
7	096	Garage (Site 36b), room G7, machine (item 7.4), looking NE	-

7	097	Garage (Site 36b), room G7, grease stains in N wall [19], looking N	1m
7	098	Garage (Site 36b), room G7, N wall [19], looking NE	1m
7	099	Garage (Site 36b), room G7, line shaft etc (items 7.2-7.3), looking NE	1m
7	100	Garage (Site 36b), room G7, cart wheel etc (items 7.1-7.2), looking NW	1m
7	101	Garage (Site 36b), room G7, line shaft (item 7.2), looking NW	1m
7	102	Garage (Site 36b), room G7, lever on N wall [19], looking N	0.50m
7	103	Garage (Site 36b), room G7, striking mechanism on N wall [19], looking N	-
7	104	Garage (Site 36b), room G7, striking mechanism on N wall [19], looking N	-
7	105	Garage (Site 36b), room G7, N wall [19], looking NE	-
7	106	Garage (Site 36b), room G7, doorway in N wall [19], looking N	1m
7	107	Garage (Site 36b), room G7, N wall [19] & cartwheel (item 7.1), looking NW	1m
7	108	Garage (Site 36b), room G7, S wall [21], looking SW	1m
7	109	Garage (Site 36b), room G7, S wall [21], looking SE	1m
7	110	Mill (Site 36a), room G4, looking NE	1m
7	111	Mill (Site 36a), room G4, clamping device (item 4.7), looking SE	-
7	112	Mill (Site 36a), room G4, clamping device (item 4.7), looking SE	-
7	113	Kiln range (Site 36c), doorway to G6 [18], looking E	1m
7	114	Garage (Site 36b), room G5, steps to blocked passage, looking N	1m
7	115	Garage (Site 36b), room G5, steps to blocked passage, looking N	1m
7	116	Kiln range (Site 36c), room G6, doorway in W wall [22], looking W	1m
7	117	Kiln range (Site 36c), room G6, mark on door in W wall [22], looking W	0.50m
7	118	Kiln range (Site 36c), room G6, W wall [22], looking W	1m
7	119	Kiln range (Site 36c), room G6, floor slabs in NW part, looking NW	1m
7	120	Kiln range (Site 36c), room G6, floor slabs in NW part, looking NW	1m
7	121	Kiln range (Site 36c), room G6, W end of N wall [23] & clay tiles (item 6.1), looking NW	1m
7	122	Kiln range (Site 36c), room G6, clay tiles (item 6.1), looking W	0.50m
7	123	Kiln range (Site 36c), room G6, clay tiles (item 6.1), looking W	0.50m
7	124	Kiln range (Site 36c), room G6, clay tiles (item 6.1), looking W	0.50m
7	125	Kiln range (Site 36c), room G6, W end of S wall [25], looking S	1m
7	126	Kiln range (Site 36c), room G6, E end of S wall [25], looking SE	1m
7	127	Kiln range (Site 36c), room G6, W face of kiln [26], looking E	1m
7	128	Kiln range (Site 36c), room G6, E end of N wall [23], looking NE	1m
7	129	Kiln range (Site 36c), room G6, W face of kiln [26], looking E	1m
7	130	Kiln range (Site 36c), room G6, stoking hole and grate to kiln [26], looking E	0.50m
7	131	Kiln range (Site 36c), room G6, stoking hole and grate to kiln [26], looking E	0.50m
7	132	Kiln range (Site 36c), room G6, interior of kiln, looking NE	-
7	133	Kiln range (Site 36c), room G6, ceiling over interior of kiln, looking NE	-
7	134	Kiln range (Site 36c), room G6, E part of S wall [25], looking SE	1m
7	136	Kiln range (Site 36c), room G6, passage and S part of E wall [24], looking E	1m
7	137	Kiln range (Site 36c), room G6, passage and E end of S wall [25], looking S	1m
7	139	Kiln range (Site 36c), room G6, passage and E end of N wall [23], looking N	1m
7	142	Barn (Site 36d), room G8, W part, looking N	1m
7	143	Barn (Site 36d), room G8, W wall, W part, looking W	1m
7	144	Barn (Site 36d), room G8, W wall, W part, looking NW	-
7	145	Barn (Site 36d), room G8, N wall, W part, looking N	-
7	146	Barn (Site 36d), room G8, graffiti on W end of S wall, looking S	-
7	147	Barn (Site 36d), room G8, graffiti on W end of S wall, looking S	-
7	148	Barn (Site 36d), room G9, W part, looking N	-
7	149	Barn (Site 36d), room G9, partition, looking NE	-
7	150	Barn (Site 36d), room G9, partition, looking NE	-
7	151	Barn (Site 36d), room 1F14, typical roof truss, looking NE	-
7	152	Barn (Site 36d), room 1F14, central bay, N wall, looking N	-
7	153	Barn (Site 36d), room 1F14, W end, S wall, looking SW	-
7	154	Barn (Site 36d), room 1F14, W wall, looking W	-
7	155	Barn (Site 36d), room 1F14, W wall, looking NW	-
7	156	Barn (Site 36d), room 1F14, N wall, looking NE	-
7	157	Barn (Site 36d), room 1F14, E wall, looking E	-
7	158	Barn (Site 36d), room 1F14, E end of S wall, looking SE	-
7	159	Barn (Site 36d), room G9, E part, looking N	1m
7	160	Barn (Site 36d), room G9, E part, looking N	1m
7	161	Barn (Site 36d), room G9, recesses in S end of E wall, E part, looking E	0.50m
7	162	Barn (Site 36d), room G9, E wall, N part, looking N	1m
7	163	Barn (Site 36d), room G9, E part, looking N	1m

7	164	Barn (Site 36d), room G9, E part, looking N	-
7	166	Mill (Site 36a), room G1, waterwheel hub and bearing, looking E	0.50m
7	167	Mill (Site 36a), room G1, waterwheel hub and bearing, looking E	0.50m
7	168	Mill (Site 36a), room G1, waterwheel, looking S	-
7	169	Mill (Site 36a), room G1, buckets to waterwheel, looking S	-
7	170	Mill (Site 36a), room G1, buckets and shrouds to waterwheel, looking SE	-
7	171	Mill (Site 36a), room G1, waterwheel, looking S	-
7	172	Mill (Site 36a), room G1, hubs and spokes to waterwheel, looking SE	-
7	173	Mill (Site 36a), room G1, hubs, spokes and bearing to waterwheel, looking SE	-
7	174	Mill (Site 36a), room G1, waterwheel, looking N	-
7	177	Mill (Site 36a), room G1, waterwheel, looking N	-
7	178	Mill (Site 36a), room G1, tailrace to waterwheel, looking SE	-
7	179	Mill (Site 36a), room G1, scar to E wall, looking E	-
7	180	Mill (Site 36a), room G1, tailrace to waterwheel, looking SE	-
7	842	Mill (Site 36a), N elevation [3] of lean-to, looking S	1m
7	843	Mill (Site 36a), E elevation of lean-to, looking W	1m
7	844	Mill (Site 36a), E elevation of lean-to and N mill elevation [3], looking SW	1m
7	845	Mill (Site 36a), W elevation of lean-to, looking E	1m
7	846	Mill (Site 36a), W elevation of lean-to, looking E	1m
7	847	Mill (Site 36a), W end of N elevation [3], looking SE	1m
7	861	Mill (Site 36a), room 2F15, W wall [12], frames (item 15.3), looking W	1m
7	863	Mill (Site 36a), room 2F15, W wall [12], frames (item 15.3), looking S	1m
7	865	Mill (Site 36a), room 2F15, W wall [12], frames (item 15.3), looking W	0.50m
7	866	Mill (Site 36a), room 2F15, N wall [13], looking NE	1m
7	867	Mill (Site 36a), room 2F15, N wall [13], looking NW	1m
7	868	Mill (Site 36a), room 2F15, N wall [13], hay-rake blanks (item 15.4), looking N	1m
7	869	Mill (Site 36a), room 2F15, steps down to 1F, looking S	0.50m
7	870	Mill (Site 36a), room 2F15, E wall [14] & saw blades (item 15.6), looking N	1m
7	871	Mill (Site 36a), room 2F15, E wall [14] & saw blades (item 15.6), looking S	1m
7	872	Mill (Site 36a), room 2F15, doorway in E wall [14], looking E	1m
7	873	Mill (Site 36a), room 2F15, S wall [11], E end, looking SE	1m
7	874	Mill (Site 36a), room 2F15, S wall [11], loading door, looking S	1m
7	875	Garage (Site 36b), roof and wall rising behind, looking E	-
7	876	Garage (Site 36b), roof and wall rising behind, looking NE	-
7	877	Garage (Site 36b), S external elevation [10] and roof, looking E	-
7	879	Mill (Site 36a), room 2F15, grooved disc and other features at S end of central ceiling bay, looking S	-
7	880	Mill (Site 36a), room 2F15, W end of S wall [11], looking SW	1m
7	881	Mill (Site 36a), room 2F15, typical roof truss, looking E	-
7	882	Mill (Site 36a), room 2F15, inscription to central roof truss, looking SW	-
7	883	Mill (Site 36a), room 2F15, inscription to central roof truss, looking SW	-
7	884	Mill (Site 36a), room 2F15, typical chute cover in W central bay, looking SE	0.50m
7	886	Mill (Site 36a), doors to sack hoist trap, E central bay, 2F15, looking E	0.50m
7	887	Mill (Site 36a), room 2F15, window at E end of S wall [11], looking S	0.50m
7	888	Mill (Site 36a), room 2F16, S wall [11] of 'domestic' range, looking S	1m
7	889	Mill (Site 36a), room 2F16, door at S end of W wall [16], looking W	1m
7	890	Mill (Site 36a), room 2F16, detail of lock block on door at S end of W wall [16], looking W	-
7	891	Mill (Site 36a), room 2F16, detail of lock block on door at S end of W wall [16], looking W	0.50m
7	892	Mill (Site 36a), room 2F16, N wall [13], looking N	1m
7	893	Mill (Site 36a), room 2F16, W wall [16], looking SW	1m
7	894	Mill (Site 36a), room 2F16, E wall [15], looking NE	1m
7	895	Kiln range (Site 36c), room 1F13, E wall [24], looking E	1m
7	897	Kiln range (Site 36c), room 1F13, blocked opening in E wall [24], looking E	1m
7	898	Kiln range (Site 36c), room 1F13, S wall [25], looking SW	1m
7	900	Kiln range (Site 36c), room 1F13, W wall [22], looking W	1m
7	903	Kiln range (Site 36c), room 1F13, N wall [23], looking NW	1m
7	905	Kiln range (Site 36c), room 1F13, flagstones to floor, looking W	0.50m
7	907	Garage (Site 36b), room 1F12, doorway at E end of N wall [19], looking N	1m
7	908	Garage (Site 36b), room 1F12, E wall [20], looking E	1m
7	909	Garage (Site 36b), room 1F12, N wall [19], looking N	1m
7	910	Garage (Site 36b), room 1F12, machine etc (item 12.12), looking N	1m
7	914	Garage (Site 36b), room 1F12, machine etc (items 12.12-12.13), looking NW	0.50m

7	915	Garage (Site 36b), room 1F12, surface of 'bench' structure, looking W	0.50m
7	916	Garage (Site 36b), room 1F12 , 'bench' structure, looking N	0.50m
7	917	Garage (Site 36b), room 1F12, striking mechanism through opening, looking N	0.50m
7	918	Garage (Site 36b), room 1F12, wall lever etc (items 12.7 & 12.11), looking N	0.50m
7	919	Garage (Site 36b), room 1F12, wall lever etc (items 12.7 & 12.11), looking N	0.50m
7	920	Garage (Site 36b), room 1F12, wall lever etc (items 12.7 & 12.11), looking W	0.50m
7	921	Garage (Site 36b), room 1F12, pulley with wooden casing on line shaft, looking NW	-
7	924	Garage (Site 36b), room 1F12, pulley with wooden casing on line shaft, looking E	-
7	925	Garage (Site 36b), room 1F12, pulley with wooden casing on line shaft, looking NE	-
7	929	Garage (Site 36b), room 1F12, box etc (item 12.8), looking N	1m
7	930	Mill (Site 36a), room 1F11, drilling machine in 'domestic' range, looking N	0.50m
7	932	Mill (Site 36a), room 1F11, drilling machine in 'domestic' range, looking N	0.50m
7	933	Mill (Site 36a), room 1F11, drilling machine in 'domestic' range, looking N	0.50m
7	934	Mill (Site 36a), room 1F11, drilling machine in 'domestic' range, looking N	1m
7	935	Garage (Site 36b), room 1F12, S wall [21] & bandsaw blade (item 12.16), looking S	1m
7	936	Garage (Site 36b), room 1F12, S wall [21] & bandsaw blade (item 12.16), looking SW	1m
7	937	Garage (Site 36b), room 1F12, W wall [17], looking SW	-
7	938	Garage (Site 36b), room 1F12, bench (item 12.18), looking SE	0.50m
7	940	Garage (Site 36b), room 1F12, bench (item 12.18), looking SE	0.50m
7	941	Garage (Site 36b), room 1F12, NW area & lathe etc (item 12.2), looking N	1m
7	944	Garage (Site 36b), room 1F12, lathe etc (item 12.2), looking N	0.50m
7	945	Garage (Site 36b), room 1F12, striking mechanism over NW area, looking N	-
7	946	Garage (Site 36b), room 1F12, striking mechanism over NW area, looking N	-
7	947	Garage (Site 36b), room 1F12, shaft (item 12.6), looking NE	0.50m
7	948	Garage (Site 36b), room 1F12, line shaft over NW area, looking N	-
7	950	Garage (Site 36b), room 1F12, lathe (item 12.2), looking N	0.50m
7	951	Garage (Site 36b), room 1F12, lathe (item 12.2), looking N	0.50m
7	952	Garage (Site 36b), room 1F12, lathe etc (items 12.2-12.3), looking N	0.50m
7	953	Garage (Site 36b), room 1F12, line shaft over NW area, looking N	-
7	954	Mill (Site 36a), room 1F11, lathe, looking NW	0.50m
7	955	Garage (Site 36b), room 1F12, misc wooden items (item 12.5), looking W	0.50m
7	957	Garage (Site 36b), room 1F12, timber section etc (item 12.4), looking NW	0.50m
7	958	Garage (Site 36b), room 1F12, bearing and grooved pulley, interior of timber section, looking NW	-
7	959	Mill (Site 36a), room 1F11, lathe, looking NW	0.50m
7	960	Mill (Site 36a), room 1F11, lathe, looking NE	-
7	961	Mill (Site 36a), room 1F11, lathe, looking NE	1m
7	963	Mill (Site 36a), room 1F11, lathe, looking NE	1m
7	965	Mill (Site 36a), room 1F11, shelving (item 11.4), looking S	0.50m
7	966	Mill (Site 36a), room 1F11, lathe, looking NE	0.50m
7	967	Garage (Site 36b), room 1F12, line shaft etc	-
7	968	Mill (Site 36a), room 1F11, graffiti on W wall [16], looking W	-
7	969	Mill (Site 36a), room 1F11, graffiti on W wall [16], looking W	-
7	970	Mill (Site 36a), room 1F11, graffiti on W wall [16], looking W	-
7	971	Mill (Site 36a), room 1F11, drilling machine and pulley (item 11.2), looking NE	0.50m
7	972	Mill (Site 36a), room 1F11, window at N end of E wall [15], looking NE	0.50m
7	973	Mill (Site 36a), room 1F11, bearing bracket, looking NE	-
7	974	Mill (Site 36a), room 1F11, hay-rake blanks (item 11.3), looking NE	0.50m
7	975	Mill (Site 36a), room 1F11, hay-rake blanks (item 11.3), looking N	0.50m
7	978	Mill (Site 36a), room 1F10, sluice control at E end of S wall [11], looking S	0.50m
7	980	Mill (Site 36a), room 1F10, S wall [11], looking S	1m
7	981	Mill (Site 36a), room 1F10, door in S wall [11], looking S	1m
7	982	Mill (Site 36a), room 1F10, W end of S wall [11], looking S	1m
7	983	Mill (Site 36a), room 1F10, W end of S wall [11], looking S	1m
7	984	Mill (Site 36a), room 1F10, W wall [12], looking SW	1m
7	986	Mill (Site 36a), room 1F10, recess in W wall [12], looking W	0.50m
7	987	Mill (Site 36a), room 1F10, W wall [12], looking W	1m
7	989	Mill (Site 36a), room 1F10, W wall [12], looking NW	1m
7	990	Mill (Site 36a), room 1F10, W wall [12], looking SW	1m
7	991	Mill (Site 36a), room G1, launder within wheelhouse, looking N	-
7	992	Mill (Site 36a), room G1, launder within wheelhouse, looking S	-

7	993	Mill (Site 36a), room G1, launder within wheelhouse, looking S	-
7	994	Mill (Site 36a), room 1F10, implements etc (item 10.2), looking SW	1m
7	995	Mill (Site 36a), room 1F10 W end of N wall [13], looking N	1m
7	996	Mill (Site 36a), room 1F10, typical chute in W ceiling bay, looking NW	-
7	997	Mill (Site 36a), room 1F10, N wall [13], looking NE	1m
7	999	Mill (Site 36a), room 1F10, spur gears, pulleys etc (item 10.3), looking N	1m
8	745	Mill (Site 36a), S external elevation [1], looking N	1m
8	746	Mill (Site 36a), semi-circular projection to S external elevation [1], looking N	1m
8	749	Mill (Site 36a), N external elevation [3], looking S	1m
8	750	Mill (Site 36a), N external elevation [3], looking S	1m
8	751	Mill (Site 36a), E end of N external elevation [3], looking S	1m
8	845	Mill (Site 36a), room G2, former tin covering W end of line shaft in S wall [11], looking E	-
8	846	Mill (Site 36a), room G2, typical two-part ceramic three cable holder, S side of room, looking S	-
8	847	Garage (Site 36b), room G7, light fitting and typical two-part ceramic two cable holder, looking E	-
8	848	Mill (Site 36a), room G7, typical two-part ceramic two cable holder to S side of room, looking S	-
8	850	Mill (Site 36a), room 1F10, bakelite and wooden switch to S jamb of doorway at S end of E wall [14], looking SE	-
8	851	Mill (Site 36a), room 1F10, bakelite and wooden switch to S jamb of doorway at S end of E wall [14], looking S	-
8	852	Mill (Site 36a), room 1F11, pencilled graffiti on S wall [11], looking S	-
8	853	Mill (Site 36a), room 1F10, pencilled graffiti on S wall [11], looking S	-
8	854	Mill (Site 36a), room 1F10, pencilled graffiti on S wall [11], looking S	-
8	855	Mill (Site 36a), room 1F10, pencilled graffiti on S wall [11], looking S	-
8	856	Mill (Site 36a), room 1F10, pencilled graffiti on S wall [11], looking S	-
8	857	Mill (Site 36a), room 2F15, pencilled graffiti on E wall [14], looking E	-
8	858	Mill (Site 36a), room 2F15, ceramic pipes, N end of E wall [14], looking NE	-
8	859	Mill (Site 36a), room 2F15, pencilled graffiti on S wall [11], looking S	-
8	860	Mill (Site 36a), room 2F15, pencilled graffiti on S wall [11], looking S	-
8	861	Mill (Site 36a), room 2F15, pencilled graffiti on S wall [11], looking S	-
8	862	Mill (Site 36a), room G2, inner face of doorway in S wall [11], looking S	1m
8	864	Barn (Site 36d), S elevation [8], looking N	-
9	033	Mill (Site 36a), W end of N elevation [3], looking SW	1m

d) Other buildings

Film	*Frame*	*Subject*	*Scale*
3	715	Poultry house (Site 33) from above, looking S	-
3	717	Poultry house (Site 33), N elevation, looking S	1m
3	718	Poultry house (Site 33), N elevation of central cell, looking SW	1m
3	719	Poultry house (Site 33), N elevation, looking W	1m
3	720	Poultry house (Site 33), W elevation, looking SE	1m
3	721	Poultry house (Site 33), E elevation, looking NW	1m
3	722	Poultry house (Site 33), S elevation, looking N	1m
3	723	Poultry house (Site 33), S elevation of central cell, looking N	1m
3	724	Poultry house (Site 33), doorway in S elevation of central cell, looking N	1m
3	725	Poultry house (Site 33), doorway in S elevation of E cell, looking N	1m
3	726	Poultry house (Site 33), doorway in S elevation of W cell, looking N	1m
3	727	Poultry house (Site 33), wall to SW, looking E	1m
3	728	Poultry house (Site 33), interior of W cell, looking N	-
3	730	Poultry house (Site 33), interior of W cell, looking W	1m
3	731	Poultry house (Site 33), interior of central cell, looking SW	1m
3	732	Poultry house (Site 33), interior of central cell, looking E	1m
3	733	Poultry house (Site 33), interior of E cell, looking N	1m
3	735	Poultry house (Site 33), loft over central cell, looking SW	-
3	736	Poultry house (Site 33), loft over central cell, looking SE	-
6	751	Power house (Site 32), recess to NE corner, looking NE	1m
6	754	Power house (Site 32), internal E wall, looking E	1m

6	756	Power house (Site 32), recess over window in E wall, looking E	-
6	757	Power house (Site 32), former cable route to E wall over doorway, looking E	-
6	758	Power house (Site 32), isolator over doorway in E wall, looking E	-
6	759	Power house (Site 32), inside of doorway to E elevation, looking E	1m
6	760	Power house (Site 32), E end of N wall, looking N	1m
6	761	Power house (Site 32), large concrete base to E end, looking N	1m
6	762	Power house (Site 32), large concrete base to E end, looking N	1m
6	765	Power house (Site 32), concrete base and threaded bolts to E end, looking E	1m
6	769	Power house (Site 32), retaining wall to NE, looking N	1m
6	773	Power house (Site 32), N wall, W end, looking NW	1m
6	774	Power house (Site 32), circular base to NW corner, looking W	1m
6	776	Power house (Site 32), S return of W wall, looking NW	1m
6	777	Power house (Site 32), opening in S return of W wall, looking NW	-
6	778	Power house (Site 32), W wall, looking W	1m
6	779	Power house (Site 32), W end of S wall, looking SW	1m
6	780	Power house (Site 32), S wall, looking S	1m
6	781	Power house (Site 32), E end of S wall, looking SE	1m
6	782	Power house (Site 32), E end of S wall, looking S	1m
6	783	Power house (Site 32), bakelite clips to S wall, looking S	-
6	784	Power house (Site 32), remains of operating instructions to W wall, looking W	-
6	785	Power house (Site 32), remains of operating instructions to W wall, looking W	-
6	791	Power house (Site 32), roof trusses, looking NE	-
6	792	Power house (Site 32), W external elevation, looking E	1m
6	798	Power house (Site 32), culvert beneath W end of floor, looking N	-
6	800	Power house (Site 32), looking NW	1m
6	801	Power house (Site 32), looking N	1m
6	803	Power house (Site 32), retaining wall to N bank of Mill Gill to the N, looking N	-
6	804	Power house (Site 32) and sluice (Site 29a), looking NE	1m
6	805	Power house (Site 32) and sluice (Site 29a), looking NE	1m
6	806	Churn stand, looking NW	1m
6	807	Churn stand, looking NE	1m
6	808	Cheese press, looking S	1m
6	809	Cheese press, press section, looking S	1m
6	810	Cheese press, stone weight, looking S	1m
6	811	Cheese press, press section, looking S	1m
8	780	Power house (Site 32), W window, S elevation, looking S	0.50m
8	781	Power house (Site 32), typical metal-framed window in S elevation, looking S	0.50m
8	782	Power house (Site 32), internal E wall, looking E	1m
8	784	Power house (Site 32), internal W wall, looking W	1m
8	785	Power house (Site 32), N part of internal W wall, looking NW	1m
8	787	Power house (Site 32), W return of internal W wall, looking W	1m
8	789	Power house (Site 32), impression left by turbine at SW corner, looking W	1m
8	791	Power house (Site 32), S part of internal W wall, looking W	1m
8	792	Power house (Site 32), concrete bases NW part of floor, looking NE	1m
8	794	Power house (Site 32), concrete bases NW part of floor, looking NE	1m
8	796	Power house (Site 32), concrete base, looking W	1m
8	797	Power house (Site 32), concrete base to SE part, looking E	1m
8	798	Power house (Site 32), half-truss over W end, looking W	-
8	799	Power house (Site 32), light fitting to soffit of E truss	-
8	800	Power house (Site 32), light fittings to soffit of central truss	-
8	801	Power house (Site 32), 3-phase and neutral supply wiring to W of concrete base, looking E	0.50m
8	802	Power house (Site 32), 3-phase and neutral supply wiring to W of concrete base, looking E	0.50m
8	803	Power house (Site 32), fitting to external E gable, looking S	-
8	805	Power house (Site 32), interior face of doorway in E wall, looking E	1m
8	806	Power house (Site 32), cable clips to internal E wall, looking E	-
8	807	Power house (Site 32), door to external E gable, looking W	1m
8	808	Power house (Site 32), external E gable, looking W	1m
8	809	Power house (Site 32), external E gable, looking W	1m
8	811	Power house (Site 32), approach trackway, looking W	1m
8	812	Power house (Site 32), former switch position, S internal wall, looking S	-
8	813	Power house (Site 32), fireplace to W internal wall, looking W	-

8	814	Power house (Site 32), light fittings to lintel of W window, S internal wall, looking S	-
8	815	Building (Site 31), S elevation, looking N	1m
8	816	Building (Site 31), E gable, looking W	1m
8	818	Building (Site 31), N elevation & W gable, looking SE	1m
8	820	Building (Site 31), fireplace to W internal wall, looking W	1m
9	005	Building (Site 31) after restoration, looking N	-
9	006	Building (Site 31), E gable, looking N	-
9	007	Building (Site 31), internal fireplace after restoration, looking N	-
9	008	Building (Site 31) after restoration, looking SE	-
9	034	Power house (Site 32), central recess in N wall, looking N	1m
9	035	Power house (Site 32), roof structure at NE corner, looking NE	-


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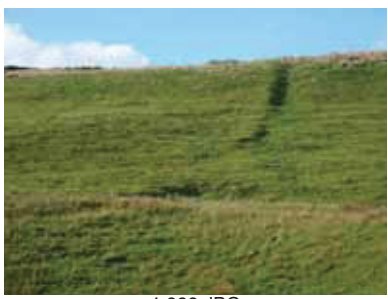
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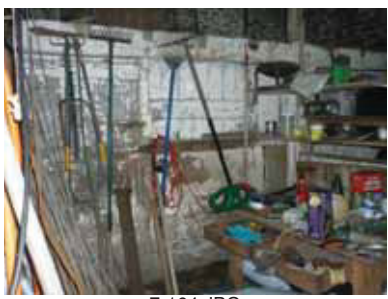
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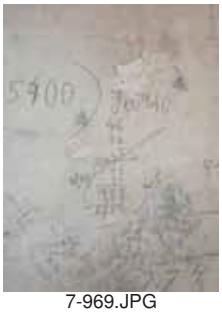
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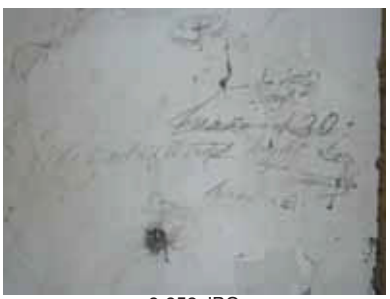
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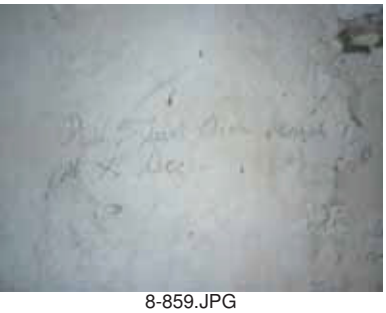
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APPENDIX 4
CONDITION SURVEY AND RECOMMENDATIONS FOR REPAIR

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WEST MILL
ASKRIGG

CONDITION REPORT
AND
RECOMMENDED REPARIS

By
Peter Gaze Pace

Prepared on behalf of
Ed Dennison Archaeological Services Ltd
(EDAS Ltd)

For
Natural England and Prof. David Blake

June – July 2012

West Mill
Addle Street, Askrigg, North Yorkshire DL8 3HR

PGP/kct/10/2012

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Askrigg, North Yorkshire DL8 3HR

1. PRELIMINARIES

This report has been prepared by Peter G. Pace accredited conservation Architect on behalf of Ed Dennison Archaeological Services Ltd., to form part of the overall Historical and Archaeological Report on the buildings.

The inspection has been visual, with no areas opened up.

The Architect has over 28 years of experience working with historic buildings including, Country Houses (Castle Howard, Nostell Priory, Bramham Park), Castles (Sheriff Hutton, Harewood), Churches (150 in four Dioceses), and vernacular buildings (Barns, Follies, Ruins), with Natural England, and the National Trust.

The following Report uses survey drawings by EDAS Ltd, with notes added on repairs.

The Report is not a specification but will serve as a basis for further detailed schedules of repairs.

2. SUMMARY

The buildings in the main complex are relatively sound, though movement fractures and eroded joints to walls need attention in order to prevent more serious deterioration taking place. Improvement to rainwater goods, and woodborer treatment to interior timbers are also common needs.

More major work is needed to, the Power House and the Dove House, where new roofs are required.

Priority

A - High (1 – 3 years)
B - Medium (3 – 5 years)
C - Low (5 – 20 years)

Ideally combine A + B for most efficient use of scaffolding

WEST MILL – ASKRIGG

3. CONDITION REPORT AND RECOMMENDED REPAIRS

EXTERIOR: **Cost/Priority**

3.1 THE MILL - Exterior elevations – reference drawing No. 2

- *South Elevation – 1*
  Numerous movement fractures – not excessive but requiring grouting and some bonding across in wall thickness, with in-situ concrete bonder and stainless steel reinforcing bars. Where cement repairs have been undertaken, these are unlikely to be properly grouted up and should be cut out and re-grouted with lime mortar. Many open joints to the south west corner require deep pointing using hydraulic lime NHL 3.5 and grit sand (1 : 2½). Repair stone slates to eaves of rounded half turret section of wall. £ 3,500 A

- *West Elevation – 2*
  Extensive open joints to gable and in lower middle to repoint. At wall base a bulge to the south of the doorway is in need of external skin rebuilding and tying into core. £ 4,000 A

- *North Elevation – 3*
  The lower areas around the Launder entry requires open joints repointing.

  A large area to the first floor wall has numerous isolated open joints, and although of a lower urgency, ideally should be combined with work on the lower area. £ 3,000 A

Include pointing to the side elevations to the small extension lean-to building G3 with small rebuild to verge. £ 1,500 A

- *East Elevation – 4*
  The chimney top is unstable and needs rebuilding. Whilst accessible, the less urgent pointing to open joints in the gable should be included. £ 1,000 A

3.2 THE LAUNDER - Reference drawing No. 3.

- Minor erosion to concrete capping of stone piers/support wall – make good to reduce water entry/frost damage.

- The launder channel is in zinc. The base is concrete over zinc, inserted later to reduce leakage. Unfortunately it still leaks. Ideally re-line with fibreglass or rubberised compound or asphalt.

- Later ferrous metal trays were added to give support, these are rusting badly at the ends and may be becoming weak. Investigation is needed and possible reinforcing with galvanised plates. £ 3,500 B

3.3 GARAGE - Reference drawing No. 4

3.3 GARAGE – Continued **Cost/Priority**

- *East elevation – 9*
  Numerous vertical fractures only lightly repaired with just a surface application of cement mortar. Rake out and deep fill. Set up bonders to tie across the fractures. Work from both inside and external faces together. £ 3,500 A

- *South Elevation – 10*
  Open joints to the wall at east end and above wooden lintels, to repoint. £ 1,200 A

3.4 KILN RANGE - Reference drawing No. 4

- *North Elevation – 5*
  Area of wall in lower centre is bulging. This wall has been constructed in phases, but movement is more than differing standards of construction. Take down outer skin and rebuild tying back into core. £ 2,500 A

  Replace corrugated PVC skylight over the area with a metal framed conservation roof light. £ 1,500 C

3.5 BARN - Reference drawing No. 5

3.5 BARN – Continued **Cost/Priority**

- *North Elevation – 6*
  Approximately half of the wall has open joints in need of repointing. £ 2,500 A

- *East Elevation – 7*
  Repoint open joints to south west corner and part of north east corner. Grout vertical fractures and fit bonders across. £ 2,500 A

- *South Elevation*
  Repoint the whole of the elevation which has open joints. Investigate slight movement to south east corner where thrust forces are apparent. £ 4,000 A

3.6 GENERAL ITEMS

- *Roofs*
  All roofs to the above buildings are in stone slate and in reasonable condition. Oak pegs are evident. One area of the roof over the garage has been recently relaid (without underfelt). No apparent need for repairs. Remaining life of this roof is difficult to determine.

- *Rainwater goods*
  Rainwater goods to the Mill, Garage, Kiln Range and Barn – gullies and fall pipes are in PVC. Recommend changing to 150mm wide half round cast iron gutters set on galvanised rise and fall drive-in brackets and 75mm cast iron rainwater pipes set on oak or lead pipe bobbins. Drains to be investigated. At least one rainwater pipe requires gulley (for access to) the north side of the Barn. Paint with primer, undercoat and two finishing coats of gloss. Colour: Stone BS 10 B 21. £ 7,500 A

3.7 DOVE HOUSE (South of Barn) – Reference drawing No. 4.

- *Roof*
  The stone slate roof is much distorted. Need to strip/repair rotted roof timber and re-cover with existing slates. £ 5,000 A

3.7 DOVE HOUSE (South of Barn) - Continued **Cost/Priority**

- *Elevations*
  Main factures and general movement evident. Some areas of wall are loose. There are open joints to the end of the gable walls. Need to tie fractures together and repoint open areas. £ 9,000 A

3.8 THE POWER HOUSE Built 1910 - Greatly extended 1930
(To be read in conjunction with Drawing No. 9)

- *Roof*
  Composite timber trusses and asbestos cement sheeting (recently collapsed). Was the asbestos cement sheeting (1950's?) or is this 1930's original? Underside was painted presumably to reflect the light. Plain concrete tiles used at the end – as later repairs? All asbestos sheets are now broken following collapse of trusses.

  The roof structure was a lightweight construction of softwood king post trusses with composite tie beams and purlins spanning between. No evidence of rafters. This roof may be a 1950's replacement but there is no evidence of more robust timbers and stone slates as would be traditionally used in the dales.

  A new roof is required to protect the wall tops and interior of the building.

  A lightweight roofing system of metal trusses, purlins, and steel profiled sheet with PVC coating (colour dark stone), would be appropriate as a 'modern' intervention

  New roof - £20,000 B

- *Walls*
  coursed rubble stone (limestone – local) fair condition. Much rich cement pointing, some ribbon style. Does not appear to be causing undue problems. Possibly contains lime as well as Portland cement. Built into the hillside.

A section of the wall top in the north east corner recess has collapsed due to rotted lintel and rotted wall plate. Similarly rotted lintels to the recess in the north wall below T3 truss and upper section of wall to rebuild.

Stonework repairs £4,500 A

Damp is not excessive considering half of the building is set into the hillside.

- *Windows*
  Mostly metal framed. Rusting and most glazed panels are broken. The tall west window is in timber and may have been re-used from the west wall of the original 1910 building.

  Ideally, the windows require extensive overhaul but the roof repair is more important.

- *Doors* – minor overhaul.

- *Floors* – stone and concrete – rough but not a concern.

INTERIOR: **Cost/Priority**

3.9 THE MILL - Interior elevations – reference drawing No. 6

- *Elevation – 11*
  Investigate movement to window opening arch bearings, possibly pin/tie the factures and replaster. £ 1,500 B

- *Elevation – 13*
  Investigate fracture on top floor north wall, possibly fit ties or just grout. £ 550 B

  Investigate loose stones below window and possibly re-set. £ 500 B

  Overhaul main water wheel:

  Specialist advice £ 500 A
  Repairs to paddles, axle mounting, and spokes £ 1,500 B

- *Elevation 12*
  Investigate fracture as part of work to Elevation 11 above.

3.10 KILN RANGE - Reference drawing No. 7 **Cost/Priority**

- *West Elevation – 26*
  Consolidate brick vault to the area west of the kiln by slate wedging and grouting. Most of the few dropped bricks should be capable of being re-set into their original positions. £ 1,000 A

- *East Wall – 24*
  Grout the fracture above the central recess and at the junction of the east and south walls. £ 500 A

- *West Wall – Elevation – 18*
  Build up loose and unsupported brickwork in the centre of the wall adjacent to the opening. £ 150 A

- *South Wall – Elevation – 19*
  Investigate fracture, carry out minor grouting. £ 450 B

3.11 GARAGE – Reference drawing No. 8

- *East Wall – Elevation – 20*

  Grout and tie the fractures in conjunction with work to the extension elevation, drawing No. 4.

  £ included with exterior work

3.12 GENERAL

- *Floors*
  Take up rotted boarding, caused by roof leaks before the roof was recently re-laid, in area IF12 as marking on drawing No. 1. £ 1,500 A

- *Woodwork/Joinery to Roofs, Floors, Doors and Machinery*
  All exhibit some wood boring beetle attack, some more extensive than others. No signs of recent activity, but treatment is advised throughout the Mill Kiln Range, garage and Barn using bat friendly chemicals (water based). £ 5,000 A

- *Electrical Installation*

  The wiring and fittings are old and not up to current standards. A simple very basic new installation to provide sufficient light for general access and power sockets is advised. £ 3,500 B

WEST MILL – ASKRIGG

CONDITION REPORT AND RECOMMENDED REPAIRS

4.	**COST SUMMARY**			**PRIORITY**
4.1	*Exterior – Mill*			
	South elevation - 1	£ 3,500		
	West elevation - 2	£ 4,000		
	North elevation - 3	£ 4,500		
	East elevation - 4	£ 1,000		
		£13,000	£ 13,000	A
4.2	*Exterior – The Launder*		£ 3,500	B
4.3	*Exterior – Garage*			
	East elevation – 9	£ 3,500		
	South elevation - 10	£ 1,200		
		£ 4,700	£ 4,700	A
4.4	*Exterior – Kiln Range*			
	North elevation		£ 2,500	B
	Roof Light		£ 1,500	C
4.5	*Exterior – Barn*			
	North elevation - 6	£ 2,500		
	East elevation - 7	£ 2,500		
	South elevation - 8	£ 4,000		
		£ 9,000	£ 9,000	A
4.6	*Exterior – General Items*			
	Rainwater Goods		£ 7,500	A
4.7	*Dove House*			
	Roof	£ 5,000		
	Elevations	£ 9,000		
		£ 14,000	£ 14,000	A
4.8	*The Power House*			
	New roof		£ 20,000	B
	Stonework repairs		£ 4,500	A
Sub-total carried over the next page			£ 80,200	

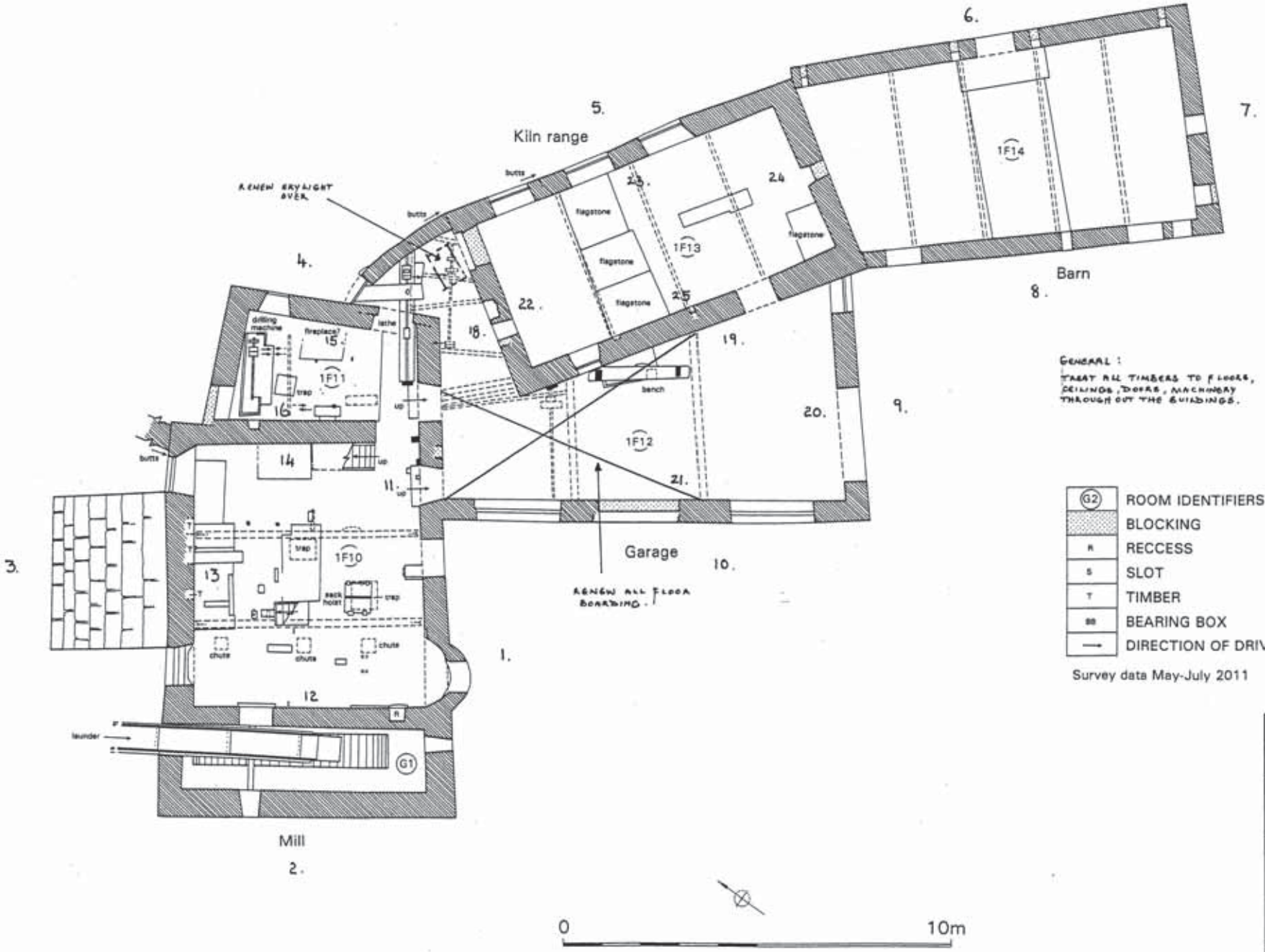
Sub-total brought forward from previous page		£ 80,200		
4.9 *Interior – The Mill*				
Elevation 11	£ 1,500			
Elevation -13	£ 1,050			
	£ 2,550	£ 2,550		B
Elevation 13		£ 2,000		A
4.10 *Interior – Kiln Range*				
Elevation 26 + 24	£ 1,500			
Elevation 18	£ 150			
	£ 1,650	£ 1,650		A
Elevation 19		£ 450		B
4.11 *Interior – Garage* – included with exterior works		£ -		
4.10 *Internal –General Items*				
Floors – Area IF12		£ 1,500		A
Woodworm – treatment to all areas		£ 5,000		A
Electrical Installation – Basic		£ 3,500		B
Total		£ 96,850		
Add – Fees for supervisory oversight of contract work (Architect) – say		£ 2,500		
Add – Recording (Archaeologist)		£ 3,500		
		£102,850		
Add – Contingency @ 10%		£ 10,285		
		£ 113,135		
Add – VAT @ 20%		£ 22,627		
Overall Total		**£ 135,762**		

CONDITION REPORT AND RECOMMENDED REPAIRS

5. PHASE I – PRIORITY A BREAKDOWN

4.1	*Exterior – Mill*			
	South elevation	£ 3,500		
	West elevation	£ 4,000		
	North elevation	£ 4,500		
	East elevation	£ 1,000		
		£13,000	£ 13,000	A
4.3	*Exterior – Garage*			
	East elevation	£ 3,500		
	South elevation	£ 1,200		
		£ 4,700	£ 4,700	A
4.5	*Exterior – Barn*			
	North elevation	£ 2,500		
	East elevation	£ 2,500		
	South elevation	£ 4,000		
		£ 9,000	£ 9,000	A
4.6	*Exterior – General Items*			
	Rainwater Goods		£ 7,500	A
4.7	*Dove House*			
	Roof	£ 3,500		
	Elevations	£ 9,000		
		£ 14,000	£ 14,000	A
4.8	*The Power House*			
	Stonework repairs		£ 4,500	A
4.9	*Interior – The Mill*			
	Elevation 13		£ 2,000	A
4.10	*Interior – Kiln Range*			
	Elevation 26 + 24	£ 1,500		
	Elevation 18	£ 150		
		£ 1,650	£ 1,650	A
4.10	*Internal –General Items*			
	Floors – Area IF12		£ 1,500	A
	Woodworm – treatment to all areas		£ 5,000	A
Costs			£ 62,850	
Add – Fees – Supervising Architect			1,300	
	- Recording		3,000	
			£ 67,150	
Add – Contingency @ 10%			6,715	
			£ 73,865	
Add – VAT @20%			14,773	
			£ 88,638	

6. Drawings



WEST MILL
ASKRIGG

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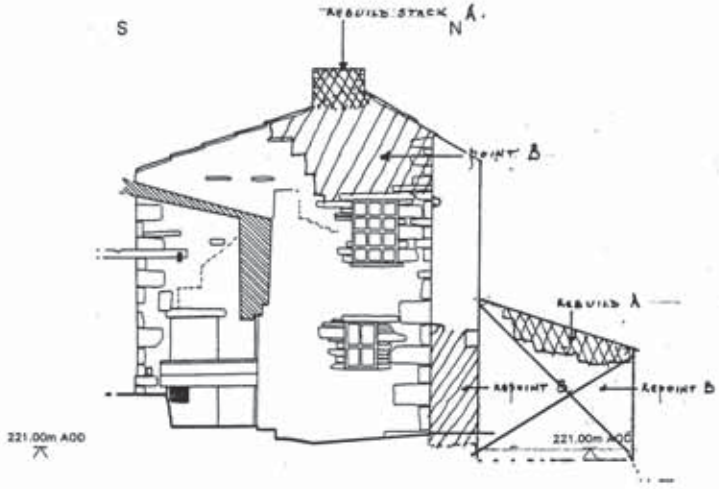
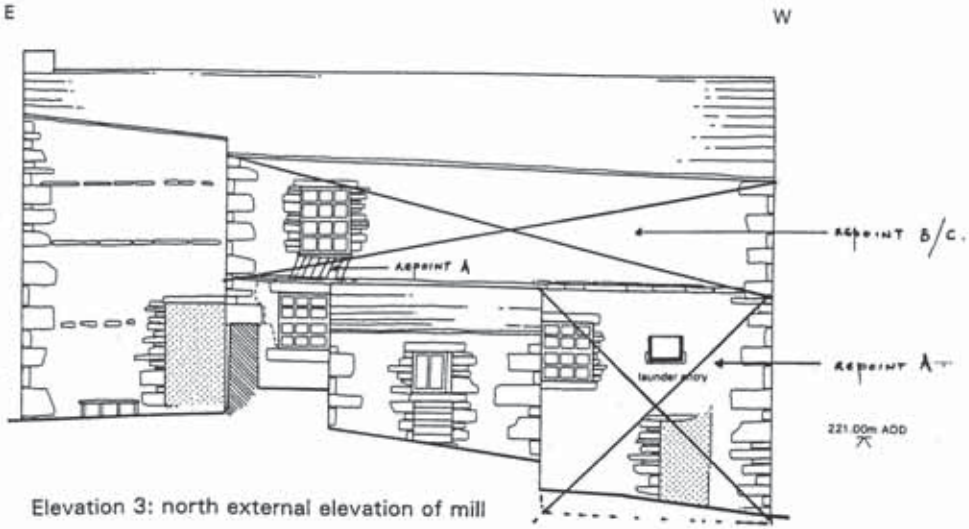
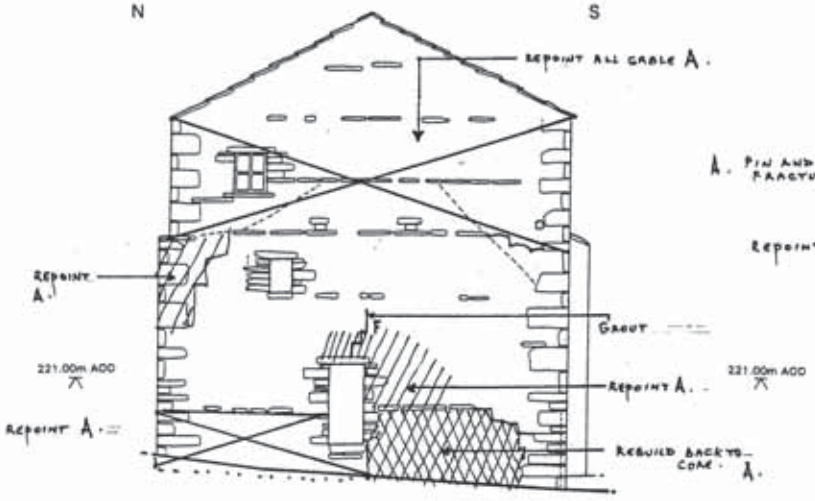
MILL COMPLEX 1ST FL.
PROPOSED REPAIRS
JULY 12 1:100 DWG. 1.



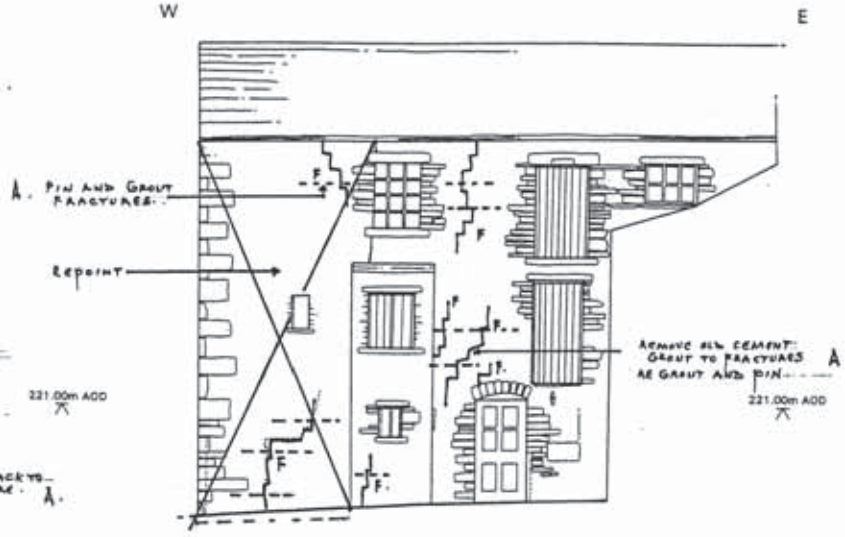
Elevation 4: east external elevation of mill



Elevation 3: north external elevation of mill



Elevation 2: west external elevation of mill



Elevation 1: south external elevation of mill

Key:-

Repair

- Repoint small areas
- Repoint large areas
- Rebuild
- F. Grout fracture
- Tie/pin across fracture

Priority

A - High (1 – 3 years)
B - Medium (3 – 5 years)
C - Low (5 – 20 years)
Ideally combine A . B for most efficient use of scaffolding

- BLOCKING
- R RECCESS
- T TIMBER

Rainwater goods omitted

Survey data May-July 2011

GENERAL -
REPLACE PVC GUTTERS ON GALV. ATF BRACKETS + RWPS WITH CAST IRON THROUGHOUT ON GALV ATF B.
WINDOW - S.W. STAINED IN REASONABLE CONDITION.

0 10m

WEST MILL
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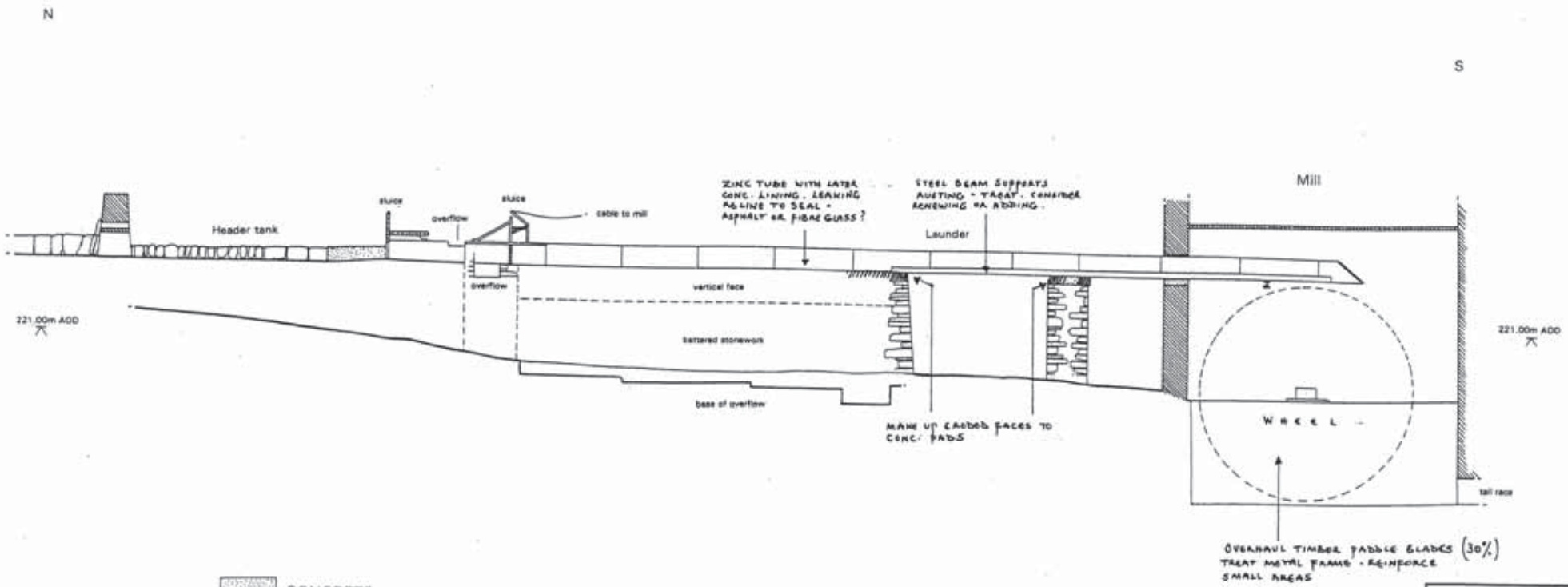
MILL - EXTERNAL ELEVATIONS

PROPOSED REPAIRS

JULY 12. 1:100 dwg. 2



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MILL - WATER SUPPLY
PROPOSED REPAIRS
JULY 12 1:100 dwg. 3.

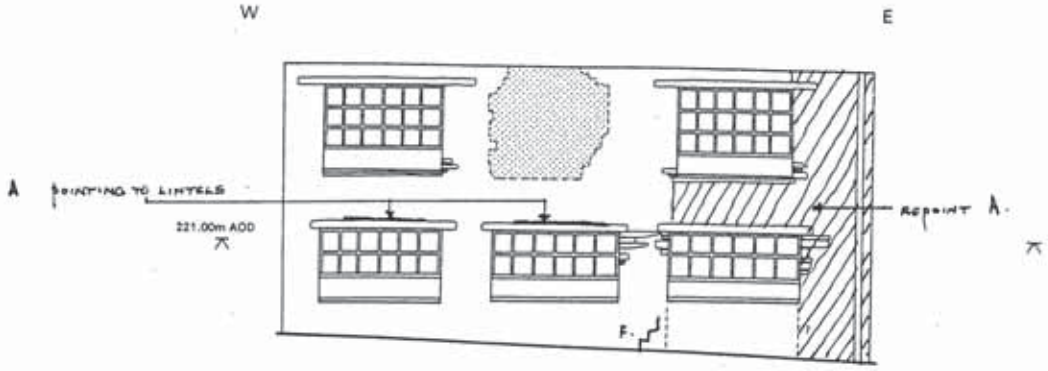
Key:-

Repair

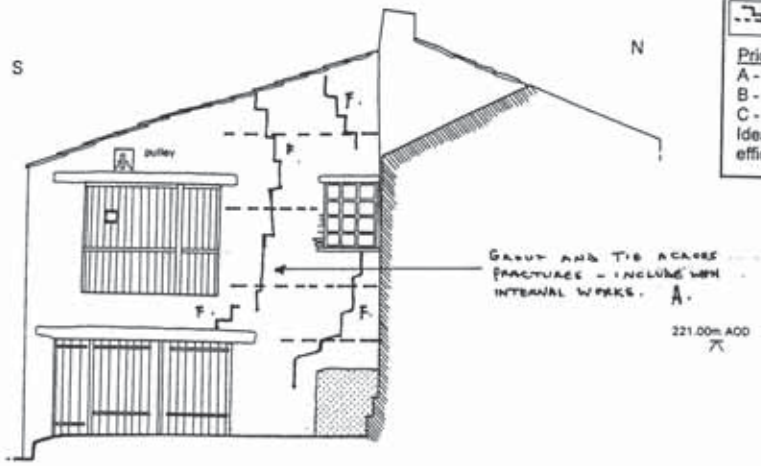
- Repoint small areas
- Repoint large areas
- Rebuild
- Grout fracture
- Tie/pin across fracture

Priority

A - High (1 – 3 years)
B - Medium (3 – 5 years)
C - Low (5 – 20 years)
Ideally combine A + B for most efficient use of scaffolding



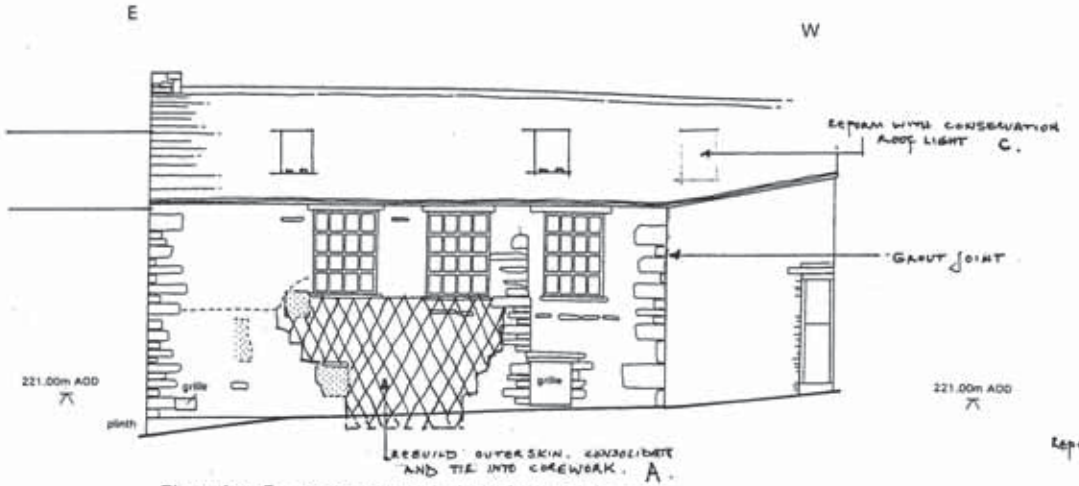
Elevation 10: south external wall of garage



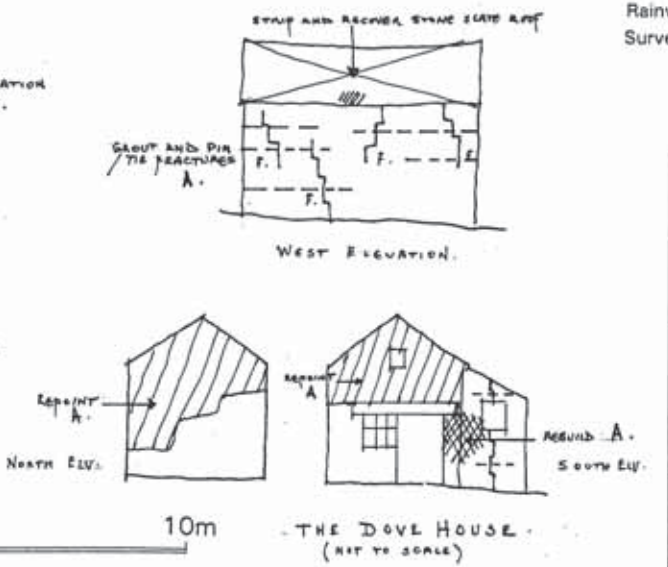
Elevation 9: east external elevation of garage

BLOCKING
R RECCESS
T TIMBER

Rainwater goods omitted
Survey data May-July 2011



Elevation 5: north external elevation of kiln range



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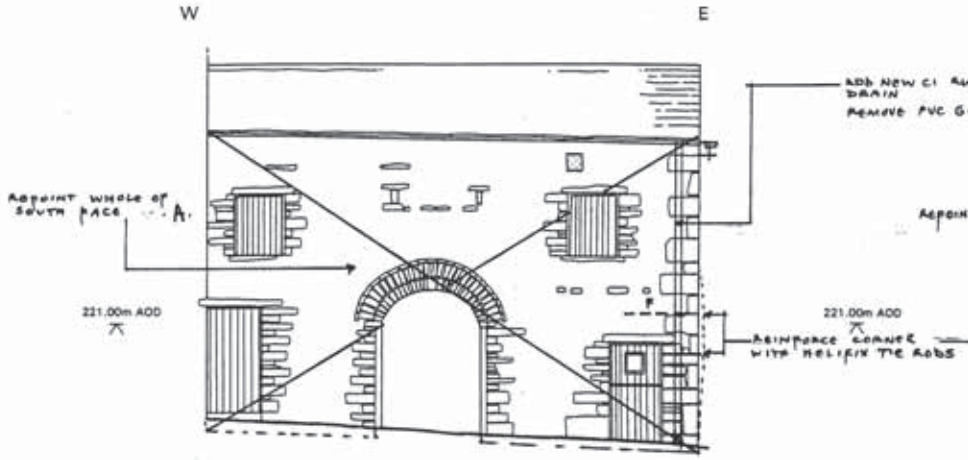
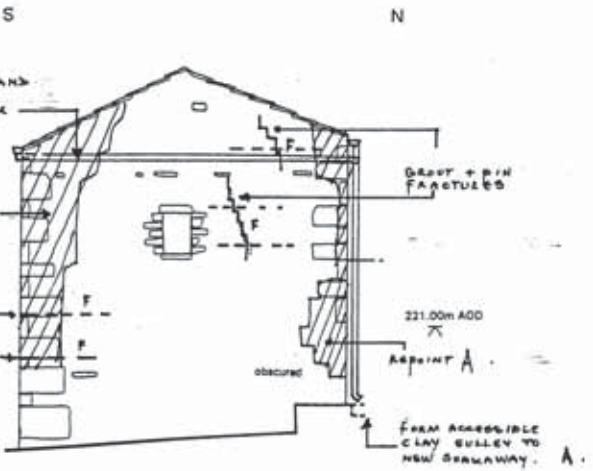
GARAGE + KILN RANGE AND DOVE HOUSE

PROPOSED REPAIRS

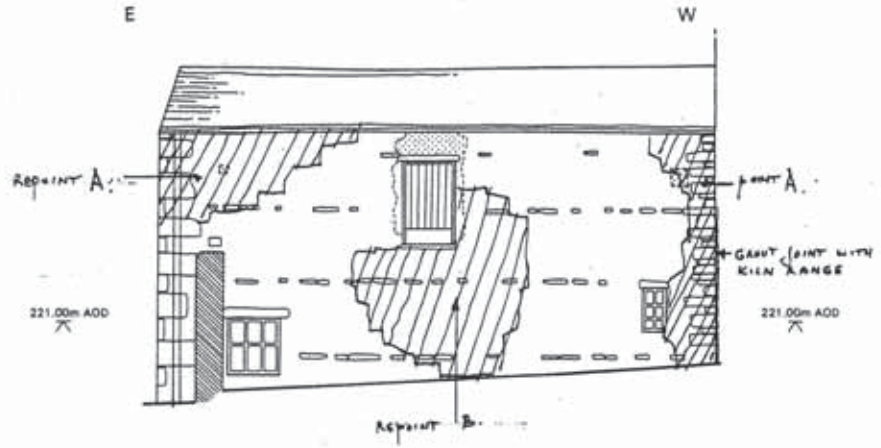
JULY 12 1:100 DWG. 4.



Elevation 8: south external wall of barn



Elevation 7: east external wall of barn



Elevation 6: north external wall of barn

GENERAL - RWG's. REPLACE PVC GUTTERS AND RWPS WITH C.I. GUTTERS ON GALVANISED PAINTED A+F. BRACKETS. RWPS ON OAK RUBBER. ON LEAD BOBBINS. A.

BLOCKING
R RECCESS
T TIMBER

Rainwater goods omitted
Survey data May-July 2011

0 10m

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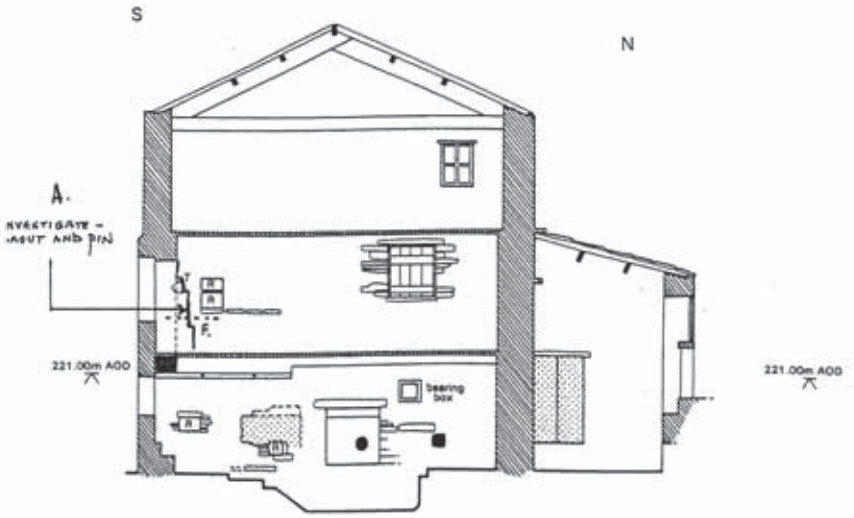
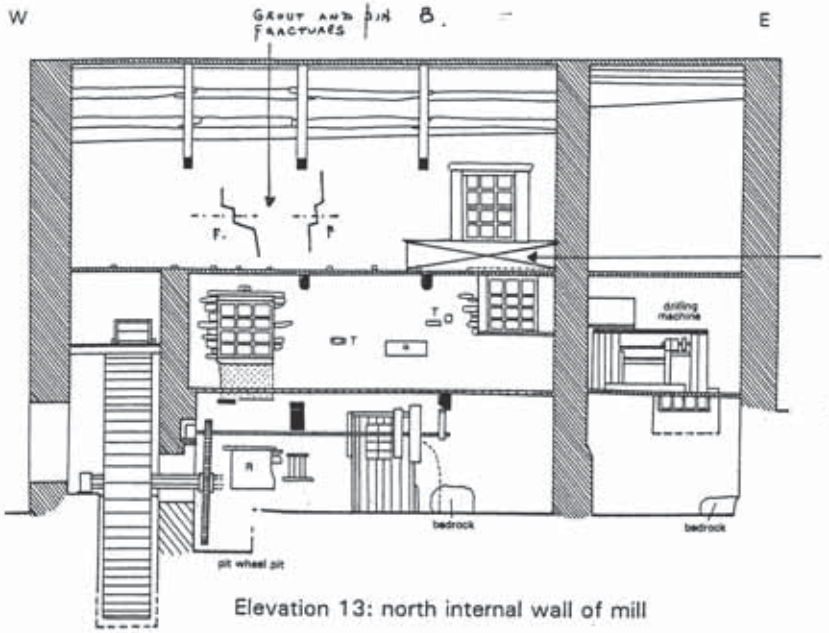
BARN - EXT. ELEVATION
PROPOSED REPAIRS
JULY 12 1:100 dwg. 5.



Elevation 12: west internal wall of mill



Elevation 13: north internal wall of mill

Key:-

Repair

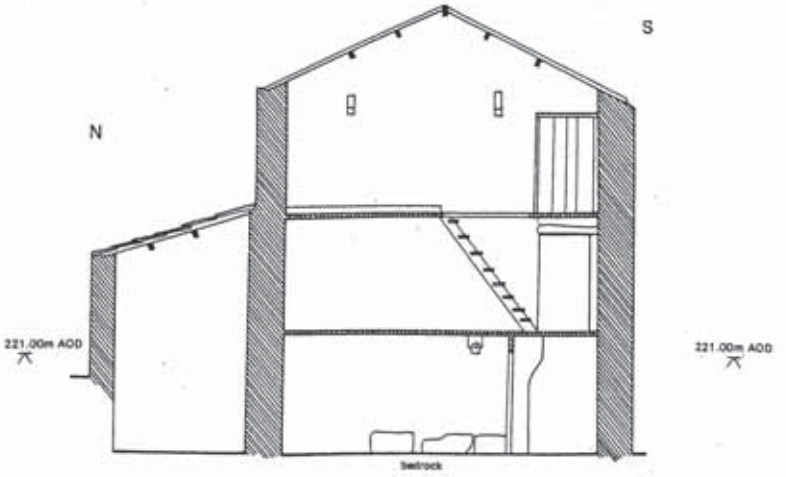
- Repoint small areas
- Repoint large areas
- Rebuild
- Grout fracture
- Tie/pin across fracture

Priority

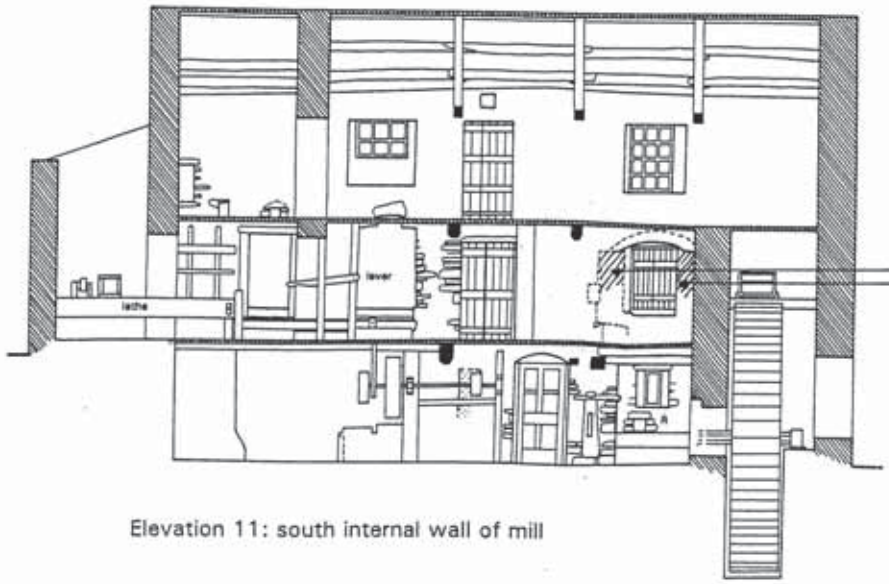
A - High (1 – 3 years)
B - Medium (3 – 5 years)
C - Low (5 – 20 years)
Ideally combine A + B for most efficient use of scaffolding

GENERAL -

- ALL TIMBERS TO ROOF, FLOORS, DOORS, FITTINGS - TREAT FOR WOOD BORER ATTACK. A.
- TEST INTERNAL ELECTRICS A.



Elevation 14: east internal wall of mill



Elevation 11: south internal wall of mill

BLOCKING
R RECCESS
T TIMBER

Survey data May-July 2011

0 10m

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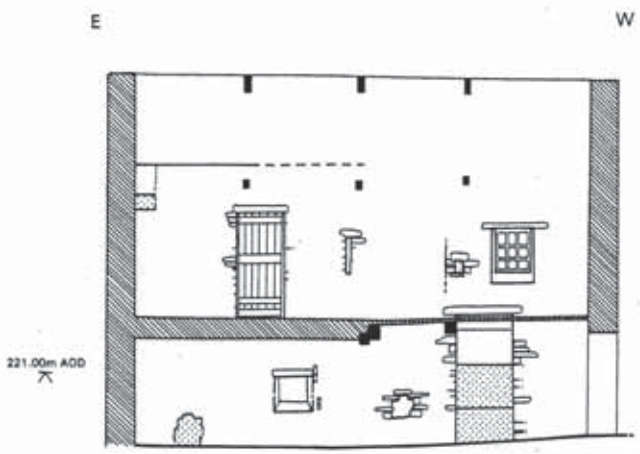
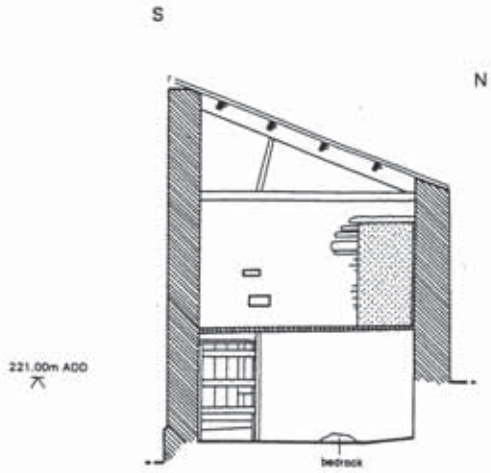
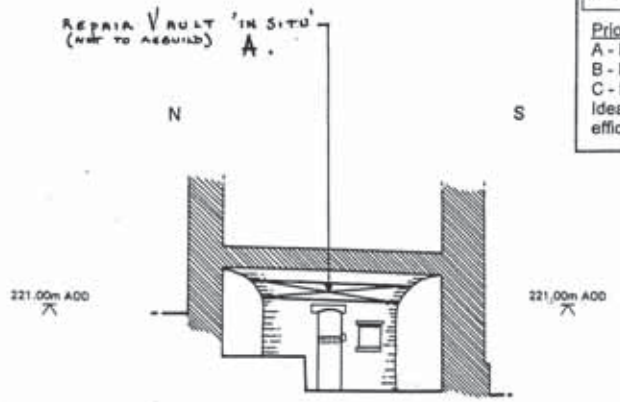
MILL - INTERNAL ELEVATIONS
PROPOSED REPAIRS
July 12 1:100 dwg. 6.



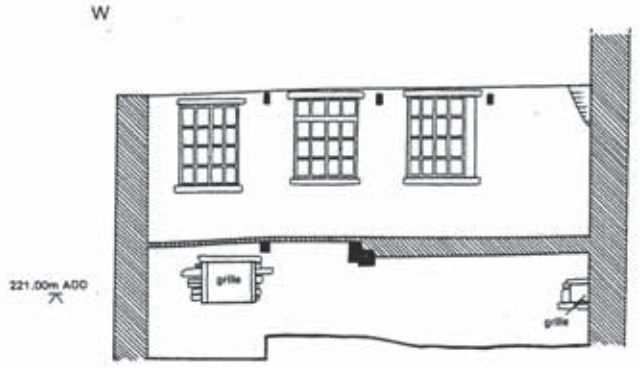
Elevation 25: south internal wall of kiln range



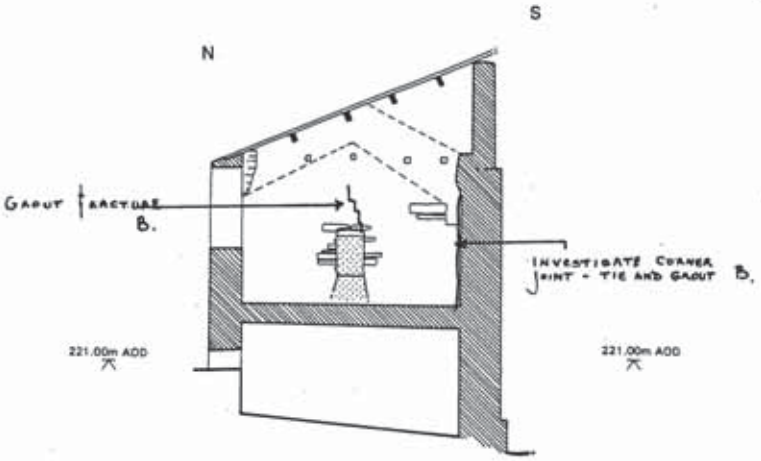
Elevation 22: west internal wall of kiln range



Elevation 26: west side of kiln



Elevation 23: north internal wall of kiln range



Elevation 24: east internal wall of kiln range

0 10m

Key:-

Repair

- Repoint small areas
- Repoint large areas
- Rebuild
- Grout fracture
- Tie/pin across fracture

Priority

A - High (1 – 3 years)
B - Medium (3 – 5 years)
C - Low (5 – 20 years)
Ideally combine A + B for most efficient use of scaffolding

BLOCKING
R RECCESS
T TIMBER

Survey data May-July 2011

WEST MILL
ASKRIGG

Ed Dennison Archaeological Services Ltd
18 Spring Dale Way, Beverley
East Yorkshire HU17 8NU

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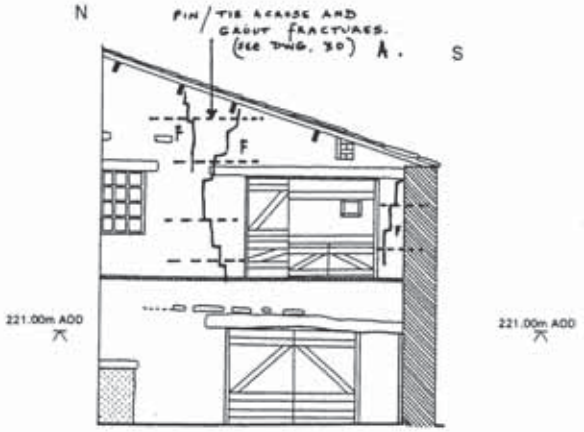
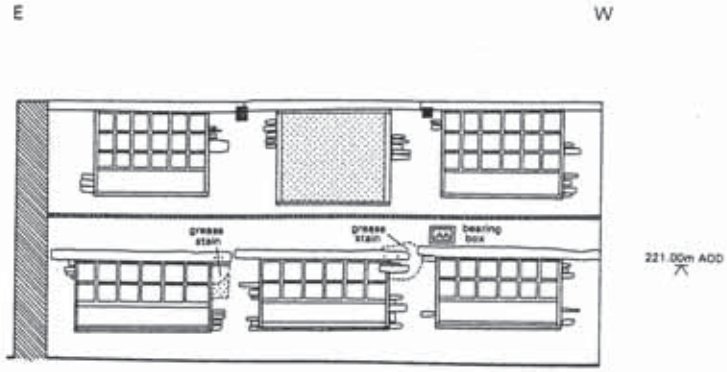
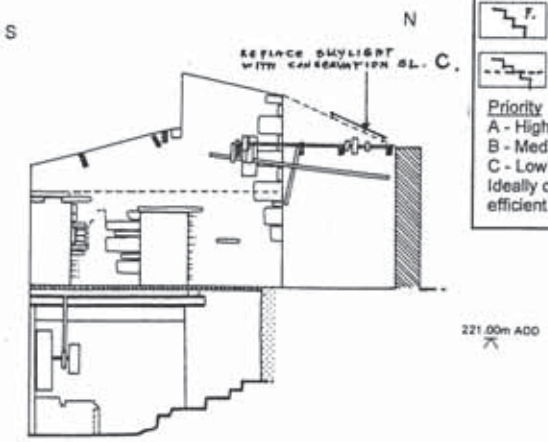
KILN RANGE
PROPOSED REPAIRS
JULY 12 1:100 dwg. 7.



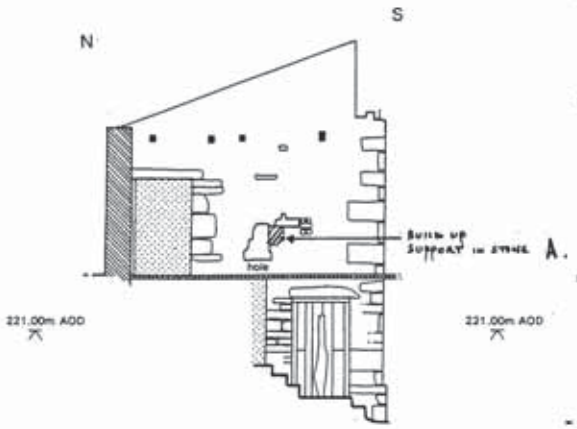
Elevation 20: east internal wall of garage



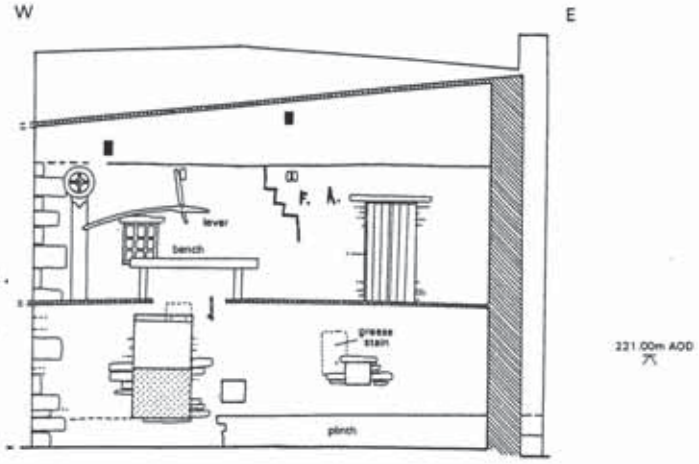
Elevation 21: south internal wall of garage



Elevation 17: west internal wall of garage



Elevation 18: west external wall of kiln range



Elevation 19: south external wall of kiln range
AND N. WALL OF GARAGE.

Key:-

Repair

- Repoint small areas
- Repoint large areas
- Rebuild
- Grout fracture (F.)
- Tie/pin across fracture

Priority

A - High (1 – 3 years)
B - Medium (3 – 5 years)
C - Low (5 – 20 years)
Ideally combine A + B for most efficient use of scaffolding

- BLOCKING
- R RECCESS
- T TIMBER

Rainwater goods omitted
Survey data May-July 2011

0 10m

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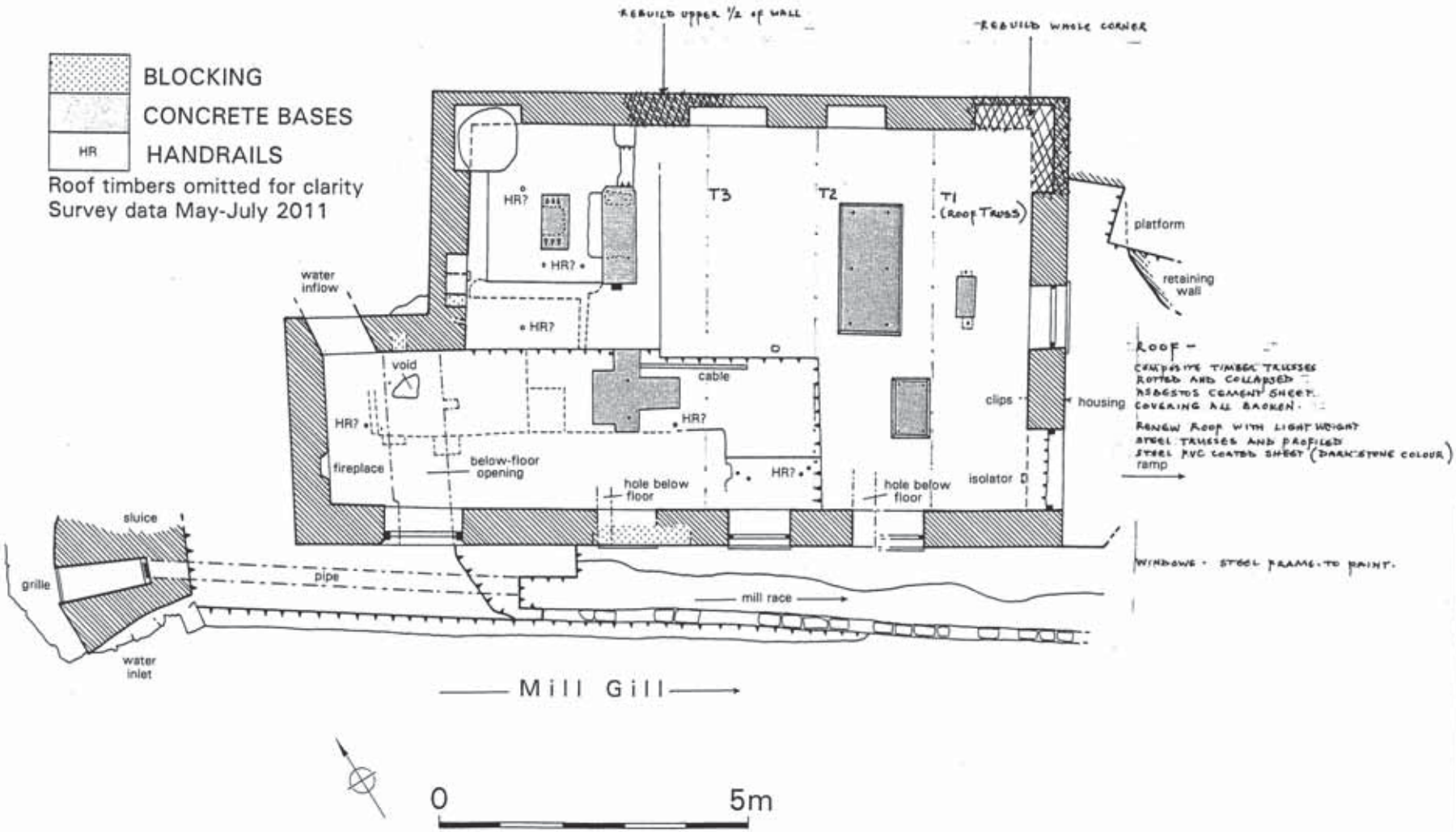
GARAGE + KILN RANGE
PROPOSED REPAIRS
JULY 12 1:100 dwg. 8



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THE POWER HOUSE

PROPOSED REPAIRS

JULY 12 1:100 dwg. 9

APPENDIX 5
LISTED BUILDING DESCRIPTION

APPENDIX 5: LISTED BUILDING DESCRIPTION

IoE Number: 323047
Location: WEST MILL, MILL LANE, ASKRIGG, RICHMONDSHIRE, NORTH YORKSHIRE
Photographer: Mr David H. Brown
Date Photographed: 04 August 2005
Date listed: 09 July 1986
Date of last amendment: 09 July 1986
Grade II

ASKRIGG MILL LANE SD 99 SW 19/25

Watermill. Early-mid C19. Rubble, stone slate roof. 3 storeys, one first- floor opening, L-shaped plan. Gable end elevation: slab quoins, projecting through-stones. Ground floor: doorway to wheel-chamber. Interior: overshot waterwheel with timber spokes, buckets and sole plate, iron hubs and shrouds. Iron pitwheel. Some of wooden framework for iron-grinding mechanism. Metal shafting for belt-drives. Corn-drying kiln in ground floor of wing. Waterwheel formerly fed by zinc elevated pentrough supported on rubble piers. Formerly a corn mill (3 mill-stones in or near building), latterly a saw mill, specialising in the manufacture of hay rakes. In 1908 the corn miller, William Burton, built an electricity-generating plant at Mill Gill Falls, the source of West Mill's water, which supplied electric light to the village until 1948. Hartley M and Ingilby J, Yorkshire Village (1979), p 195.

EDAS note: incorrect photograph.

APPENDIX 6
EDAS SURVEY METHODOLOGY

APPENDIX 6: EDAS SURVEY METHODOLOGY

The recording work at West Mill, which involved topographical survey, measured survey drawings, photography and written descriptions, produced a combination of Level 1, 2 or 3 survey records, as defined by English Heritage (2006, 13-14; 2007, 20-24).

Documentary Research and Collation

No documentary research, other than an assessment of such existing information as was known to the owners and the YDNPA, was required as part of the project. However, in view of the historic significance of the mill structure and surrounding earthworks, and the potentially important results arising from both the architectural and archaeological surveys, it was considered that some documentary research would be beneficial, particularly given that one of the aims of the project was to provide information for display and interpretation purposes.

The following sources and repositories of information were therefore consulted:

- Extensive collection of material held by Professor and Mrs Blake of Mill Gill House, covering the period c.1720 to c.1955;
- Maps and documents held in West Yorkshire Archives (Leeds office - WYL);
- Maps and documents held in North Yorkshire County Archives (Northallerton - NYCRO).

A full list of all sources consulted as part of the project is given in the main report's bibliography (Chapter 9). In addition to the above, local people with specific knowledge of West Mill were consulted during the course of the fieldwork, and earlier local oral history research which had been written up but not formally published was also drawn upon.

Archaeological Earthwork Survey

Topographical Survey

A Level 3 topographical survey of the main part of the West Mill holding, and subsequently also the area to the west of Leas House, was undertaken at a scale of 1:500. The north-west end of the West Mill survey area comprises densely vegetated, near vertical, slopes, and was unsuitable for either machine or traditional taped survey. It proved difficult to inspect this area closely, even through a less-detailed walkover survey, due to the slippery ground surface and adjacent near-vertical drops into Mill Gill - observations therefore had to be made distantly, where possible.

The majority of the West Mill and Leas House survey areas were recorded using EDM total station equipment. These were both divorced surveys, but sufficient information was gathered to allow the two survey areas to be readily located onto Ordnance Survey map bases through the use of surviving structures, fences, walls, water courses, trackways and other topographical features. The surveys recorded the ground level position of all structures, wall remnants and revetments, earthworks, water courses, leats, paths, stone and rubble scatters, ironwork, fences, hedges and other boundary features, and any other features considered to be of archaeological or historic interest. In addition, sufficient measurements were taken to allow the relative heights of different parts of the water supply system for the mill and power house in both survey areas to be compared, so that calculations could be made regarding the fall between them. The existing walled boundaries of the survey area were inspected, but only for features which were relevant to the mill complex (e.g. culverts or boundary stones); other items of wall furniture (e.g. sheep creeps, butt joints etc) were noted on the field drawings and photographed (where appropriate), but were not described in detail. The walled boundaries themselves were not recorded or classified.

The topographical survey was integrated into the Ordnance Survey national grid by using Civilcad survey software to align the recorded boundaries, structures etc to those feature's coordinates on a best fit basis. Heights AOD were obtained by reference to the nearest OS benchmark, located on Askrigg church. Survey points were taken from fixed survey stations on a closed traverse around and through the survey areas; the locations, descriptions and values of the Bench Marks and control points are stated in the final survey data.

On completion of the EDM survey, the field data was processed and plotted using CivilCad and AutoCad software. The data was then independently re-checked in the field as a separate operation. Any amendments or additions were surveyed by hand measurement; given that an electronic data set was not one of the final outcomes of the project, amendments or additions were not digitised back into the electronic survey data.

The resulting topographical surveys were drawn by hand at a scale of 1:500 and are presented as interpretative hachure plans using conventions analogous to those used by English Heritage (1999; 2002; 2007). Natural slopes are differentiated from man-made banks and scarps again using English Heritage conventions. Larger scale plans, at 1:10,000 and 1:2,500 scale, were used to put the survey areas into context.

The EDM total station survey work at West Mill took place in January and February 2011, with the hand-enhancement being undertaken in April 2011. The EDM total station work at Leas House took place in March 2011 and the hand enhancement in May 2011.

Photography

Although not every identified component or part of the two survey areas was photographed, some photographs were taken to illustrate general views of the buildings and earthworks, specific well-preserved elements and details of specific parts etc. More general photographs were also taken showing the landscape context of the survey areas. The colour photographs were produced using a digital camera with 10 megapixel resolution. English Heritage photographic guidelines were followed (English Heritage 2007, 14) and each photograph was normally provided with a scale. All photographs were clearly numbered and labelled with the subject, orientation, date taken and photographer's name, and were cross-referenced to digital files. A selection of colour digital photographs were printed to illustrate the archive report; all of the photographs were printed to a size of 6” x 4” for the site archive which also contains the digital files.

A photographic register detailing the location, direction and subject of each shot accompanies the photographic record, together with thumbnails of all photographs.

A total of 176 photographs were taken, on 1st and 7th April 2011, 10th May 2011, 20th July 2011, 8th March 2012 and 18th May 2012.

Written Accounts

Sufficient written observations were made in the field to produce a detailed written account of the two survey areas and their constituent parts. These descriptions include a preliminary interpretation of extant remains (e.g. dimensions, plan, form, function, date, sequence of development), locational information, mention of relevant documentary, cartographic or other evidence, and management details such as an assessment of current condition and threats.

Architectural Recording

A Level 3 analytical record of the West Mill complex, including detailed plans and elevations (internal and external) at 1:50 and other appropriate scales, was required. All drawings were produced according to the guidelines established by English Heritage (2006, 8-10 & 19-21), and were keyed into the general topographical survey. Each room or discrete internal space also required the preparation of a Room Record Sheet.

Drawn Record: Plans

An accurate footprint of the mill complex (external and internal as far as was practicable) at a scale of 1:50 was captured using the EDM total station equipment, and this was used as the basis for the floor plans, which were constructed using traditional and electronic hand-held measuring techniques. Ground, first and second floor plans of the mill complex were constructed at a scale of 1:50. These recorded all significant detail such as openings (blocked or unblocked), inserted doorways, fittings, recesses, joist sockets etc, as well as the location of fixed machinery, the position of pipework, line shafts, power runs and associated wear marks etc. The location of other historic features such as

wear patterns on timber or stone floors, Baltic shipping and/or carpenters marks, graffiti and daub marks relating to historic and contemporary use of the mill, pre-National Electricity Board electrical fittings, and the location of reused structural timbers were also recorded.

The ground floor plan comprised two elements; a floor plan showing the details of the flagstone floors, former machine positions, evidence for former fittings etc, and a ceiling plan showing reflected details of beams, timbers, hooks, trapdoors, other mill machinery etc. Final inked drawings were then produced by hand to publication standard, and are presented as reduced versions of the full sized field drawings using conventions established by English Heritage (2006, 18-37).

Drawn Record: External and Internal Elevations

All external elevations of all parts of the mill complex were drawn at a scale of 1:50, with the exception of the east and west external elevations of the lean-to on the north side of the mill complex, as these contained no structural information that was not recorded internally. The elevation drawings were produced mainly using traditional and electronic hand-held measuring techniques, although a reflectorless EDM was used to assist with the production of those external elevations where access was difficult. Typically, the elevations show all significant architectural and structural features such as constructional detail, modifications and differences in fabric, and the stones or dressings around openings and at corners. The elevations also depict all architectural details, such as windows, doors, fireplaces, jambs, sills, string courses and lintels, and the stonework immediately surrounding a feature, although stone-by-stone elevation drawings were not required. The elevation drawings were marked with a common datum reduced to levels tied into an Ordnance Survey bench mark.

The majority of the internal elevations of the mill building, and the building to its immediate south-east, were also drawn at a scale of 1:50, using the same techniques and recording the same level of detail as noted above for the external elevations. The internal elevations of the wheelhouse at the west end of the mill could not be drawn due to problems of safe access, and the north and south internal elevations of the lean-to on the north side of the mill were not drawn as they contained no further information to that which had been recorded externally. The internal elevations of the barn range of the complex were also not drawn, partly because they did not contain significant structural information that was not visible externally, and partly due to concerns about the condition of the barn's first floor.

Rather than showing the internal elevations of each discrete space separately, and in order to aid interpretation of the building complex, those elevations which were vertically aligned (for example, the north internal elevation of the mill at ground, first and second floor level) were shown in relation to one another, essentially forming a number of sections through the building. In some cases, there was an overlap between internal and external elevations; for example, the former south external elevation of the mill is partly obscured externally by later additions to the complex, but remains visible as an internal elevation.

Drawn Record: Details

The project brief included for detailed drawings of other features within the mill complex at appropriate scales, but did not require detailed constructional drawings of the waterwheel. The elevations of the internal wooden frame adjacent to the pit-wheel on the ground floor of the mill, constructed from substantial timbers which bear evidence for alteration, the former presence of fixtures and fittings, and possible re-use, were recorded at a scale of 1:20.

Photography

General photographic recording of the mill complex and its significant parts, together with close-up photography of significant details, was undertaken. The guidelines produced by English Heritage (2006, 10-12) were followed and each photograph was normally provided with a scale (subject to access) and artificial lighting was used where necessary. The colour photographs were produced using a digital camera with 10 megapixel resolution. All photographs were clearly numbered and labelled with the subject, orientation, date taken and photographer's name, and were cross referenced to film and negative numbers or digital files; photographs were also be cross referenced to room record sheets.

A selection of colour digital photographs were printed to illustrate the archive report; all of the photographs were printed to a size of 6" x 4" for the site archive which also contains the digital files. A photographic register detailing the location, direction and subject of each shot accompanies the photographic record, together with thumbnails of all photographs.

A total of 459 photographs were taken, on 20th October 2010, 1st and 7th April 2011, 30th June 2011, 14th and 20th July 2011, 9th March 2012, and 18th May 2012.

Written Record

The principal written record for the mill complex were room record sheets. A separate room record sheet was completed for each room or discrete space within each building in the mill complex, using a *pro forma* used by EDAS on previous building recording projects. The room record sheets also included details of fixed machinery (marked on the 1:50 floor plans) and loose items of historic interest. The location of the latter was not marked on the plans, but their location within the room was described and a digital photograph taken, which was tied into the drawn and written record. Sufficient notes were also taken in the field in order for a detailed description of the mill complex to be prepared, in combination with the drawn and photographic records.

In order that urgent re-roofing could be carried out to part of the mill complex, an initial recording visit took place on the 20th October 2010 to make notes and photograph those parts that were to be affected. The bulk of the building recording work was undertaken between May and July 2011, together with the surveys of the associated structures. The photographic and descriptive record was produced at intervals in October 2010, between April and July 2011, and in March 2012.

Other Building Recording

Elevated Pentrough, Sluices and Header Tank

A Level 2 descriptive record was required of the elevated pentrough, sluices and header tank to the north of the mill complex, but to include elevations as well as plans. A plan at a scale of 1:50 was therefore made of these elements, using the methodology described for the mill complex above, and was tied into the general topographical survey. In addition, an elevation of one side of the elevated pentrough was made at a scale of 1:50, showing the stone piers and the individual zinc plates forming the pentrough's sides. The drawn record was supplemented by a general and detailed photographic,and written record, as detailed for the mill complex above.

The Power House

A Level descriptive 2 survey was required of the power house. A ground floor plan was produced of the building at a scale of 1:50, showing adjacent features to the south including a leat and sluice; the plan was tied into the general topographical survey. The drawn record was supplemented by a general and detailed photographic survey and written record, as detailed for the mill complex above.

The Poultry House

A Level 2 descriptive survey was required of the poultry house. A ground floor plan was produced of the building at a scale of 1:50, and this was supplemented by a general and detailed photographic survey and written record, as detailed for the mill complex above.

The Cheese Press

A Level 3 analytical record was required of the cheese press. Plans at an upper, central and lower level, together with a vertical elevation, were produced at a scale of 1:20. The drawn record was supplemented by a general and detailed photographic survey and written record, as detailed for the mill complex above.

The Churn Stand

A Level 1 visual record was required of the churn stand. The churn stand was photographed and a brief written description made.

As with the mill complex, the bulk of this recording work took place between April and May 2011.

References

English Heritage 1999 *Recording Archaeological Field Monuments: a Descriptive Specification*

English Heritage 2002 *With Alidade and Tape: Graphical and Plane Table Survey of Archaeological Earthworks*

English Heritage 2006 *Understanding Historic Buildings: A Guide to Good Recording Practice*

English Heritage 2007 *Understanding the Archaeology of Landscapes: A Guide to Good Recording Practice*

APPENDIX 7
YDNPA PROJECT BRIEF

WEST MILL

Askrigg, North Yorkshire

SD94349118

ARCHAEOLOGICAL PROJECT BRIEF

1 SUMMARY

1.1 A programme of work at West Mill, a listed corn mill, later used as a saw mill together with an associated hydro-electric power station is required by Natural England as part of a Higher Level Environmental Stewardship special project to safeguard and enhance the integrity of the complex. It is to provide a detailed record of the complex and to inform the development of detailed consolidation and restoration specifications and interpretation. West Mill is located to the west of the village of Askrigg in the Yorkshire Dales National Park.

1.2 A costed method and resource statement is required, detailing how the work will be carried out.

Mill complex looking west. 2010

2 INTRODUCTION

2.1 The West Mill complex is described in the statutory list as of early nineteenth century date but there are indications inside the main mill building that it is considerably earlier. It originated as a corn mill and is unusual in that it contains an integral corn drying kiln. The building was later extended and converted into a saw mill, specializing in the production of hay rakes. The holding also includes the mill's water supply system, an early twentieth century power station and a stone quarry.

2.2 The mill complex has been in the ownership of the current owners for some 25 years. It has benefited from regular maintenance but is now needing more intensive works to ensure its long term survival and enable controlled public access.

It is likely that this work will include roof repairs including the repair and replacement of defective roof timbers and works to the water supply. A programme of archaeological work is required to inform and record the conservation process. This should include a condition survey (for the main mill building complex only) to assist in budgeting.

3 STATUTORY STATUS

3.1 West Mill is a grade II listed building and lies within the Askrigg Conservation Area in the Yorkshire Dales National Park.

4 LOCATION

4.1 West Mill (YDNPA HER MYD34289) is located on the east bank of Mill Gill, some 500m north west of the centre of the former market town of Askrigg in Wensleydale, North Yorkshire. It is the northernmost of three mills on Mill Gill beck, the others being a c.1785 cotton mill, later a flax mill and now converted to a house (MYD32964) and Low Mill (now rebuilt as an outdoor centre (MYD29205). The water supply for West Mill was taken off Mill Gill at a now largely breached dam at SD93959138, later modified by the installation of a hydro-electric power station and subsequent repair works with reservoir storage in a 100m long mill pond at SD94219130. The positions of these features are shown on the attached Ordnance Survey map extract.

5 PRESENT LAND USE

5.1 Various parts of the main mill building are in low key use as a garden store, woodshed, garage and workshop. The hydro-electric power station is gutted and partially roofless. The mill race runs through grasslands effectively managed as an informal nature reserve and chicken run. An unusual stone and wood chicken house stands beside the mill race. The northern part of the holding, which contains an abandoned stone quarry, is mature woodland. A public footpath runs across the southern part of the site.

6 OWNERSHIP

6.1 The mill and reservoir are privately owned. The prospective contractors are required to indemnify the owners against any loss, damage or claims which may be made as a result of their entering the complex for survey purposes and accept liability for any personal injury loss or damage sustained due to the state of the complex whether occasioned by negligence or otherwise.

7 ACCESS AND SERVICES

7.1 Vehicular access is along a private drive extending from Mill Lane. A public footpath runs adjacent to the mill but access to the interior of the mill for the purposes of inspection for quotation purposes, and for subsequent survey, is by arrangement with the owners: Mr and Mrs Blake, West Mill, Askrigg, North Yorkshire. 01696 650364.

7.2 There is limited electric lighting within the mill.

8 ARCHAEOLOGICAL INTEREST

8.1 The mill is described in the statutory list as “Watermill. Early-mid C19. Rubble, stone slate roof. 3 storeys, one first floor opening, L-shaped plan. Gable end elevation: slab quoins, projecting through-stones. Ground floor: doorway to wheel-chamber. Interior: overshot waterwheel with timber spokes, buckets and sole plate, iron hubs and shrouds. Iron pitwheel. Some of wooden framework for iron-grinding mechanism. Metal shafting for belt-drives. Corn-drying kiln in ground floor of wing. Waterwheel formerly fed by zinc elevated pentrough supported on rubble piers. Formerly a corn mill (3 mill-stones in or near building), latterly a saw mill, specialising in the manufacture of hay rakes. In 1908 the corn miller, William Burton, built an electricity-generating plant at Mill Gill Falls, the source of West Mill's water, which supplied electric light to the village until 1948. Hartley M and Ingilby J, Yorkshire Village (1979), p 195.” (DoE 1986, 19/25)

8.2 There are, however, some indications inside the mill that parts are considerably, possibly several centuries, older than the list description suggests while the plan of the mill is rather more complex, . Essentially the mill consists of three conjoined buildings of various dates with linking sections. The main mill building is of three storeys, the attached southernmost barn or coach house two storeys. In total there are some 15 rooms/spaces. A simpler L-shaped building is shown on the 1st edition 6” map where it is labeled as a corn mill. The 1st edition 25” map shows the present building configuration which is labeled as “West Saw Mill”. The 2nd edition 25” map appears to show an extension on the west side of the complex, south of the main mill building, possibly the collapsed stone and tin roofed structure cleared by the present owners. In addition to the overshot wheel, much machinery and equipment, including a drill for rake heads and stacks of wooden hay rake blanks, survive inside the building although not necessarily in their original locations.

8.3 Hay (2000) notes that William Handley Burton established a hay-rake manufacturing business in West Mill in 1887. The turbine house is believed to have been erected in 1909 and electricity was supplied to Askrigg Parish Council in 1910 and to have continued in use until the introduction of the National Grid to the area in 1949.

Mill building looking south east. 1997

Mill building looking northwest. 1997

Corn drying kiln. 2010

9 AIM OF WORK

9.1 The aims of the project are to:

i produce a new measured survey to provide a basis for the preparation

of detailed consolidation specifications;

ii provide a condition survey, with ball park costings, for conservation work to the main mill building and the overhead mill race;

iii identify archaeological and historical features and assess their conservation importance;

iv identify timbers potentially suitable for a programme of dendrochronological analysis;

v provide a detailed, pre-intervention record of the site complex;

vi provide information for display and interpretation purposes

vii produce an report and archive;

viii produce text and illustration for an article in an appropriate journal such as the Industrial Archaeology Review;

ix provide recommendations on the need for any further work, including urgent conservation works, works necessary to enable the water wheel to turn, sluice management etc.

9.2 A costed method and resource statement is required. Budgetary constraints and the extent and complexity of the site mean that this work is required at a variety of levels.

9.3 The work needs to be phased, starting with a detailed survey of the mill building and supply of condition survey information. Some urgent roofing works to the mill are planned for late 2010 and initial study should help inform this activity.

9.4 It is recommended that contractors make a preliminary visual inspection of the complex to familiarise themselves with the extent of the archaeological remains, site conditions and the scope of the work. Access to the interior of the mill will be by arrangement with the owners.

10 SCOPE OF WORK

10.1 The attention of prospective contractors is drawn to *Metric Survey Specification For English Heritage* (Bryan and Blake 2000) which sets out model survey specifications and Understanding Historic Buildings (English Heritage 2006).

10.2 Building survey

10.2.1 The Contractor should carefully examine all parts of each building prior to the commencement of the drawn and photographic recording, in order to identify all features relevant to its original use and to obtain an overview of the development of the building and of the site as a whole. As part of this exercise, the archaeologist on site should produce written observations (e.g. on phasing; on building function) sufficient to permit the preparation of a report on the structure. This process should include the completion of a Room Data Sheet or similar structured recording pro-forma for each room or discrete internal space. The crucial requirements are that each room should be examined individually, that the results of that examination

should be noted in a systematic fashion, and that these objective observations should be used to inform an analytical interpretation of the overall development and operation of the site.

10.2.2 Drawings can be based on rectified photographs or laser scanning where appropriate. All architectural detail, including windows, doors, fireplaces, jambs, cills, string courses and lintels, the stonework immediately surrounding a feature, glazing bars, roof and chimney outline, any significant visible cracks in fabric, quoin stones and individual voussoirs above window openings, rainwater goods, outline of brickwork, plaster and images upon fabric etc is to be recorded but stone by stone drawings are not required. Drawings should also record the location of fixed machinery together with the position of pipework, line shafts, power runs and associated wear marks etc and the location of such features as wear patterns on timber floors, Baltic shipping and/or carpenters marks, graffiti and daub marks relating to historic and contemporary use of the mill, pre National Electricity Board electrical fittings and the location of reused structural timbers.

10.2.3 Main Mill Building complex. A level 3 survey including detailed plans and elevations, internal and external, at 1:50 and other appropriate scales, accurate to +/- 10mm of the mill building and individual structures and features, including the leat and header tank.

10.2.4 Turbine house. A Level 2 survey including floor plan.

Turbine house interior. 2010

10.2.5 Water management features such as the sluices and overhead mill race: Level 2 survey including plans and elevations

Sluice above overhead mill race. 2010

10.2.6 Chicken house: Level 2 survey.

Chicken house. 2010

10.2.7 Two features outside the main survey area also requiring recording. These are a cheese press, immediately adjacent to the house, where a Level 3 survey is required and a churn stand beside the entrance drive where a Level 1 record is required.

10.2.8 In accordance with national guidelines, drawings executed on site should be made either on polyester-based film (minimum thickness 150 microns) with polymer-bonded leads of an appropriate thickness and density, or on acid-free or rag paper. If finished drawings are generated by means of CAD or a similar proven graphics package, recorders should ensure that the software employed is sufficiently advanced to provide different line-weight (point-size); this feature should then be used to articulate the depth of the drawings. What is required as an end product of the survey are well-modelled and clear drawings; ambiguous flat-line drawings should be avoided. Drawing conventions and information panels incorporating title, drawing number, keys, credits, date etc should conform to English Heritage guidelines as laid out in English Heritage 2006, *Understanding Historic Buildings – a guide to good recording practice,* and *With Alidade and Tape* (English Heritage 2002) Line thicknesses and point sizes should be chosen to allow for ease of duplication and reduction.

10.2.9 No use should be made of CAD methods for the generation of repetitive architectural features or detail.

10.3 Topographic survey

10.3.1 1:1000 survey of the main part (4ha) of the holding to pick up the detail of the mill race, trackways, quarry etc. For visibility purposes and to avoid damage to the orchids and other plants growing in the wetland this should be carried out in winter. The dam however will need to be recorded during a period of low stream flow.

10.4 Photographic records

10.4.1 In addition to any rectified photography which may be used for data capture (4.7 in Bryan and Blake 2000) general photographic recording of the site and significant parts, together with close up photography of significant detail is required. The general photographic guidelines given in *Understanding historic buildings: a guide to good recording practice* (English Heritage 2006) should be followed. Each photograph should normally be provided with a scale and the use of an identifier is recommended for detailed views.

10.4.2 Digital imagery, rather than conventional film photography, is acceptable for the photographic recording although medium resolution images between (2mb and 5mb) are required as a minimum. Unedited images should be archived, preferably as tiff files, as well as processed images. A full image catalogue is required as part of the archive.

10.5 Documentary Research

10.5.1 Documentary research, other than an assessment of such existing information as is known to the owners and the YDNPA, is not included in this Project Brief. Digital copies of the 1st edition OS 6" maps and the 1st and 2nd edition OS 25" maps will be provided by the Yorkshire Dales National Park Authority. This exercise is intended to inform the archaeological recording by providing background information with regard to function and phasing. It is not intended to be a formal desk-based assessment.

11 PRODUCT

11.1 Report

11.1.1 Drawings and details of the main mill structure together with an interim report, highlighting details of particular conservation significance or concern and incorporating information from the condition survey is required by 7 January 2011.

11.1.2 A minimum of six bound copies of an illustrated and typed final report should be provided, (including two for Natural England and one for the YDNPA HER). Two digital copies of the final report should also be supplied in pdf format. A draft version of the final report should be submitted and discussed with the Senior Historic Environment Officer of the Yorkshire Dales National Park Authority and the owners, and any amendments incorporated, before delivery of the final report.

11.1.3 The report should assemble and summarise the available evidence for the monument in an ordered form, synthesise the data, comment on the quality and reliability of the evidence and how it might need to be supplemented by further work. It should include a contents list, acknowledgements, executive summary, background to the site, survey methodology and procedures, an account of the overall form and development of the site and of the evidence supporting interpretation (including any specialist contributions), preliminary conclusions, a summary gazetteer of site components incorporating a description, interpretation, form, condition, measurements and illustrative material as appropriate, a list of the archive contents and bibliography. It should also contain a copy of the brief and the approved method statement as well as an indication of any departure from the project design. Copies of appropriate archive drawings and photographs should be incorporated.

11.1.4 A summary of the results should be prepared for publication in an appropriate journal such as the *Industrial Archaeological Review* and agreed with the YDNPA and Natural England. A presentation at a historic environment day school in the Yorkshire Dales may be required. The final report may be made available as a download on a YDNPA web site.

11.2 Digital Data

11.2.1 Any CAD files are to be provided in an AutoCAd.DWG format including any sheet formats used to provide rectified photography.

11.2.2 In addition to the detail provided in Bryan and Blake 2000, contractor's attention is drawn to *The Presentation of Historic Building Survey in CAD* (Andrews et al nd) for advice on output presentation.

11.3 Archive

11.3.1 The Contractor shall be expected to properly order and index the full archive record (paper, magnetic and plastic media) for the project in line with the standards set by the National Archaeological Record and to deposit the archive with the Yorkshire Dales National Park Authority. The archive should consist of the following:

Copies of relevant documentary material arranged to date sequence:
- Bibliographic sources
- Cartographic sources
- Pictorial sources

Survey control information:
- Diagram showing traverses and control network

List of coordinates of control points and traverse stations
Digital survey data
Set of Field and Final Ink Drawings:
Photographs:
Written accounts/pro formae gazetteers:
Site components
Individual contexts
Structured catalogues and indices:
Documentary material
Field and final ink drawings
Project Management Records

12 METHODOLOGY

12.1 It is the responsibility of the Contractor to select the most appropriate survey methodology and equipment to provide the required product. A detailed costed method and resource statement is required of the Contractor to be accepted in writing before work commences. This should include details of:

the proposed survey and recording methodologies to be adopted, including:
data retention and archiving policy
proposed lighting, electrical and access equipment
method and equipment proposed for providing survey control and accuracy including type of survey markers
proposed output devices, resolution and media
proposed image platforms, scanning equipment and input/output resolutions etc;
the relevant experience of the organisation, key personnel and any sub-contractors;
manpower resources to be applied to the survey;
a breakdown of costs;
the proposed timetable and milestones for completion of fieldwork and submission of interim report, report and archive;
a risk assessment
evidence of compliance with the Health and Safety at Work Act 1974.

12.2 Particular attention should be paid to ensure that the aims and objectives of the project are directly informed by the methodologies employed and that the project team displays the appropriate levels of expertise to carry out the work, particularly with regard to the molinological and structural condition aspects of the project. The Contractor, the Contractor's staff and any sub-contractors will be expected to comply with relevant Codes of Practice of the Institute for Archaeologists.

13 COPYRIGHT

13.1 Copyright, and all other intellectual property rights, in relation to the Project will pass to the Owners on payment of the final invoice with the Yorkshire Dales National Park Authority and Natural England and their successors in title being granted a full and unrestricted license to use the report and other material relating to the project in connection with their statutory duties.

14 HEALTH AND SAFETY

14.1 Prospective Contractors on site will naturally operate with due regard for Health and Safety regulations. Prior to the commencement of any work on site (and preferably prior to submission of the tender) the Contractor may wish to carry out a Risk Assessment in accordance with the Health and Safety at Work Regulations. Natural England and the Yorkshire Dales National Park Authority and their officers cannot be held responsible for any accidents or injuries which may occur to outside contractors engaged to undertake this survey while attempting to conform to this specification.

14.2 The attention of prospective contractors is drawn to English Heritage's Fire Safety Instruction no 3 (Appendix 1.2 of Bryan and Blake 2000) regarding the use of temporary lighting in historic structures. Contractors will be expected to comply with this advice. Copies of this instruction and further advice on Health and Safety issues is available on request from the English Heritage Health and Safety Advisor (0207 7973 3000)

15 MONITORING

15.1 Monitoring of the fieldwork will be carried out by the historic environment staff of the Yorkshire Dales National Park Authority and Natural England. The Contractor is to arrange a meeting with the YDNPA's Senior Historic Environment Officer prior to commencement of fieldwork.

16 REFERENCES

Andrews, D., Blake, B., Fradgeley N., Lunnon S., and Roberts P., nd, *The Presentation of Historic Building Survey in CAD,* English Heritage.
Bryan P and Blake B, 2000, *Metric Specification for English Heritage,* English Heritage.
DoE, 1986, District of Richmondshire 32nd list of Buildings of Special Architectural or Historic Interest.
English Heritage ,2002, *With alidade and tape: Graphical and plane table survey of archaeological earthworks.*
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Hay T, T., 2000, Hydroelectricity Generation on the Yorkshire Dales, *The Cleveland Industrial Archaeologist* **26**, 35-53.

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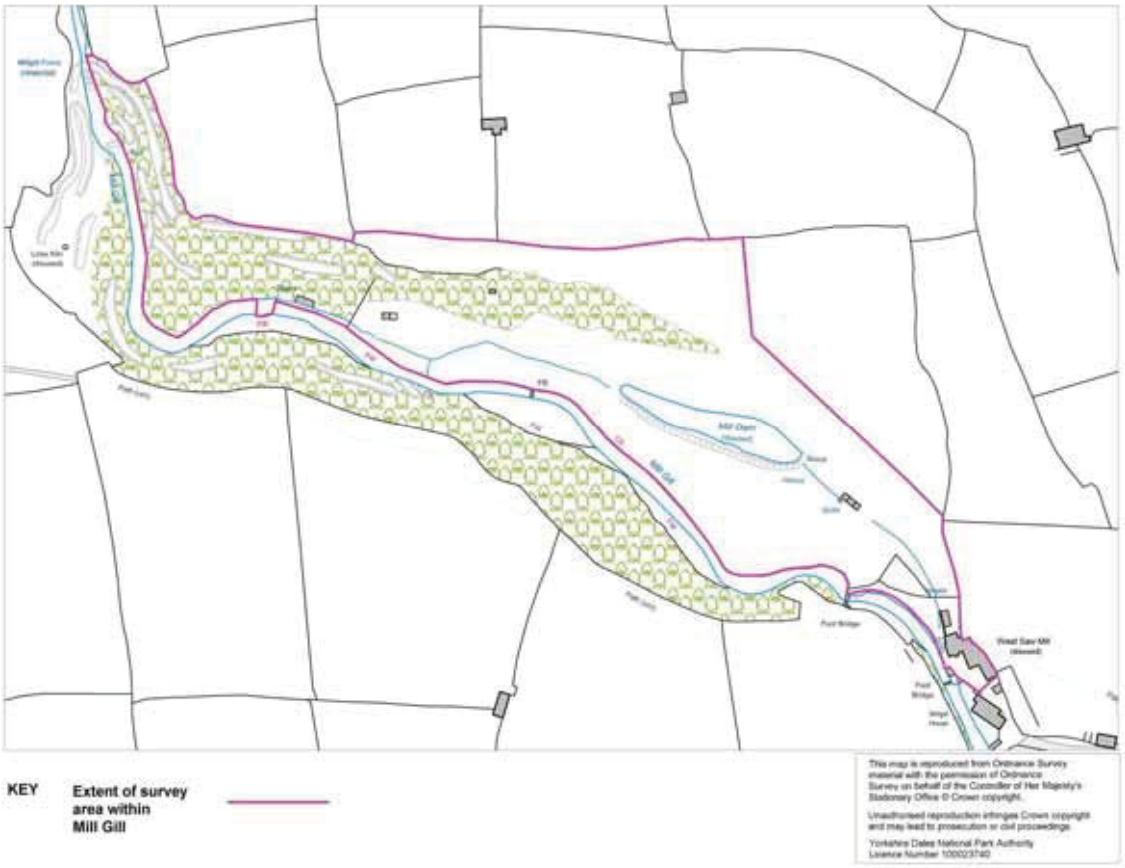
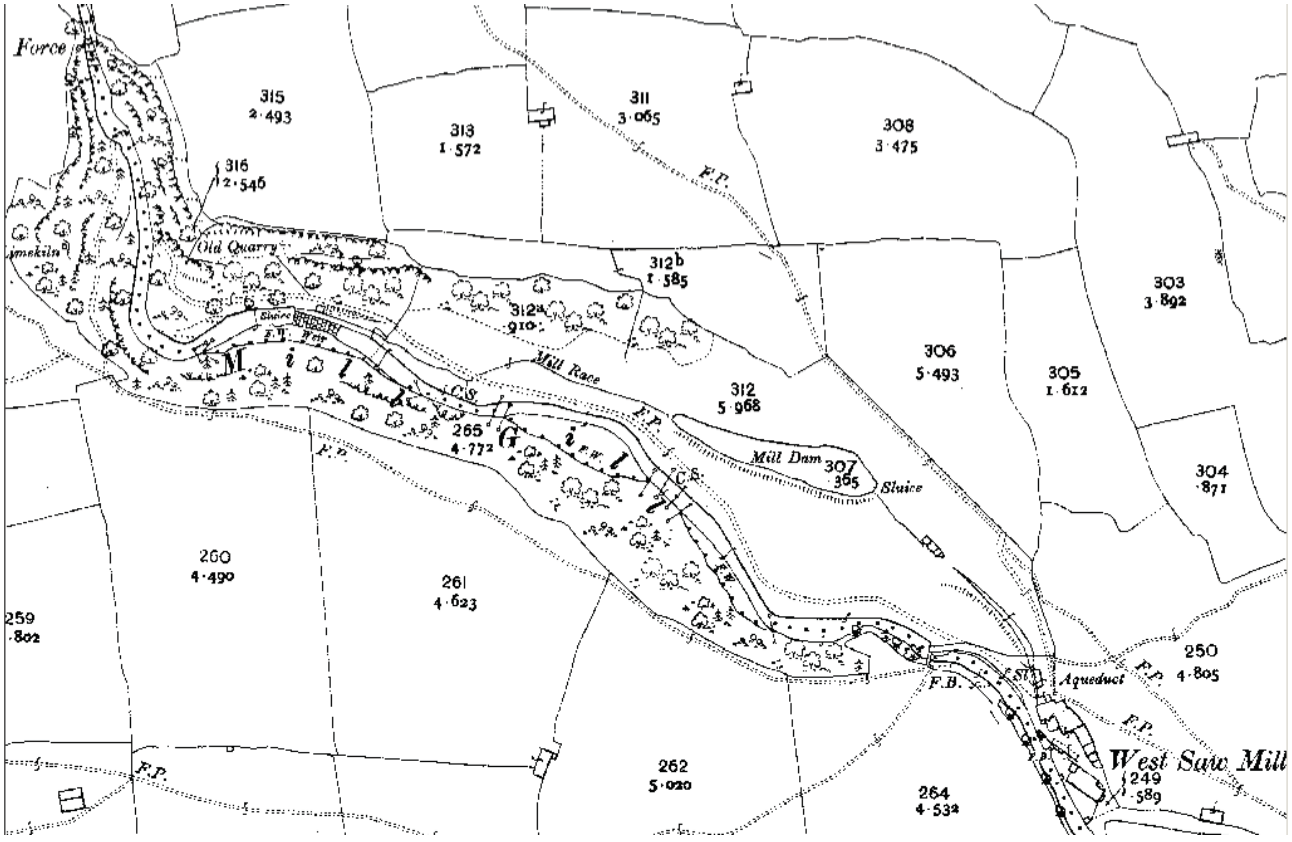
17/8/2010





2nd edition 25”map extract (not to standard scale)

APPENDIX 8
EDAS METHODS STATEMENT

APPENDIX 8: EDAS METHODS STATEMENT

ARCHAEOLOGICAL BUILDING RECORDING AND SURVEY, WEST MILL, ASKRIGG, NORTH YORKSHIRE

Introduction

A programme of archaeological building recording and survey work is required at West Mill, Askrigg, North Yorkshire (NGR SD94349118), as part of a Higher Level Environmental Stewardship special project to safeguard and enhance the integrity of the complex. In essence, this work involves a topographical survey, a Level 3 analytical record (as defined by English Heritage) of the mill complex, as well as a Level 1 basic visual record and Level 2 descriptive record of associated structures.

This methods statement sets out the work that Ed Dennison Archaeological Services Ltd (EDAS) consider is required, following guidance produced by an Archaeological Project Brief produced by the Yorkshire Dales National Park Authority (dated August 2010). This statement has been prepared by EDAS following a visit to the mill complex on 17th September 2010, and after further discussions and clarifications with the Senior Historic Environment Officer for the YDNPA.

Background Information

Site Location and Description

West Mill comprises a complex of conjoined buildings of different periods, occupying a position on the east bank of Mill Gill, some 500m to the west of the centre of the former market town of Askrigg in Wensleydale, North Yorkshire (SD 94349118). The survey area, as defined by the YDNPA brief, is bounded by Mill Gill beck to the south and west, and by enclosed pasture to the north and east; a public footpath runs through the southern edge of the survey area. The eastern half of the survey area is relatively level, with the exception of a steep south-facing scarp rising to the boundary with the pasture to the north. The western half is formed largely by a very steep and heavily vegetated south-facing scarp, which becomes almost vertical as it nears Mill Gill Force at the north-west end of the survey area; due to dense vegetation and the steepness of the slope, access into this area is difficult. All parts of the mill complex were accessible at the time of the site visit, with the majority of the building's interiors being relatively clear of debris. There are large amounts of stored material in some parts of the mill complex however, at least some of which relate to its historic usage, but it is not judged that any of these would prove an obstacle to detailed structural survey.

The West Mill complex essentially comprises three conjoined buildings of different periods, together with lesser attached structures, all predominantly stone built. The mill, at the northern end of the complex, is of three storeys, and there is a two storey range attached to the east end of the mill's south elevation; together, the two form an approximate L-shape in plan. The attached structure has a corn-drying kiln to the ground floor, while a later two storey extension with a single pitch roof and large windows has been added to the west side. At the south end of the attached structure, there is a two storey barn / coach house. All parts of the complex retain *in situ* and *ex situ* historic machinery. The wheelhouse of the mill retains an overshot waterwheel, whilst within the mill and attached range there is the pit-wheel, an adjacent wooden frame, line-shafting, hay-rake machinery and wooden hay-rake blanks, and early electrical supply equipment. In addition, there is much evidence on both the flagstone and board floors relating to the position of machinery and how materials were transported around the mill, in the form of sockets, traps, areas of wear and fixings, as well as historic graffiti relating to the occupants of the complex and the activities within.

To the north and north-west of the mill complex there is a zinc elevated pentrough supported on stone piers, sluices, a header tank, headrace, culverts and a 100m long mill pond. Further away are the remains of a turbine house built in 1908, with associated sluices and watercourses, along with extensive quarrying on the steeply sloping ground here. There are also a number of smaller structures within the survey area that are required to be recorded, namely a churn stand, cheese press and chicken house.

West Mill is a Grade II Listed Building (IOE ref 323047), first listed on 9th July 1986, and it lies within the Askrigg Conservation Area. The complex is also listed on the YDNPA's Historic Environment Record (site MYD 34289).

Archaeological Interest

Askrigg is surrounded by, and forms part of, a complex and well-preserved historic landscape, parts of which have been surveyed in detail (Moorhouse 2003), including areas close to the north and east of the survey area. The West Mill complex is the northernmost of three mills located on Mill Gill beck, the others being a c.1785 cotton mill and Low Mill, both of which have subsequently been converted to other uses.

As yet, it is not known exactly when the West Mill complex originated, but the possibility that it lies on or near to the site of a medieval mill should not be discounted. The Listed Building description gives the mill as being of early 19th century date, but internally there are indications that parts of the complex are considerably earlier, perhaps several centuries earlier. The mill complex appears as a corn mill on mid 19th century maps, but by the late 19th century it is named 'West Saw Mill'. The miller, William Burton, established a hay-rake manufacturing business in West Mill in 1887; the machinery was bought from Prospect Mill at Hawes, and was initially driven by water power. The complex underwent further modifications in c.1908, when Burton built an electricity-generating plant near Mill Gill Force. This supplied electricity to Askrigg Parish Council between c.1910 until c.1949, when the National Grid was introduced into the area (Hartley & Ingilby 1979, 195; Hartley & Ingilby 1981, 132; Hay 2000). The hay-rake manufacturing machinery was also converted to run on electricity in 1908, and this continued into the 1930s. At this date, Ernest Burton and his father were producing between 5,000 to 12,000 rakes a year, which were transported as far afield as Beverley and Newcastle. West Mill was disused by the late 1960s (Hartley & Ingilby 1981, 132).

Aims of the Project

The aims of the project (as set out in the project brief) are:

- to produce a new measured survey to provide a basis for the preparation of detailed consolidation specifications;
- to provide a condition survey, with 'ball-park' costings, for conservation work to the main mill building and the overhead mill race;
- to identify archaeological and historical features and assess their conservation importance;
- to identify timbers potentially suitable for a programme of dendrochronological analysis;
- to provide a detailed, pre-intervention record of the site complex;
- to provide information for display and interpretation purposes;
- to produce a project report and archive;
- to produce text and illustrations for an article in an appropriate journal such as the *Industrial Archaeology Review*;
- to provide recommendations on the need for any further work, including urgent conservation works, that might be necessary to enable the water wheel to turn, sluice management etc.

Survey Methodologies

The survey work will equate to a Level 1, 2 or 3 survey, as defined by English Heritage (2006 & 2007*)*, and as required by the project brief. The survey work will include photographs, measured survey drawings and written descriptions.

Documentary Research and Collation

No documentary research, other than an assessment of such existing information as is known to the owners and the YDNPA, is required as part of the survey work. Information relating to the survey area and the mill complex, including 1st and 2nd edition Ordnance Survey maps, will therefore be obtained from the YDNPA. It is also expected that the YDNPA will be able to provide modern Ordnance Survey base maps.

In view of the historic significance of the mill structure, and the potentially important results arising from the archaeological survey, it is considered that some limited documentary research would be beneficial to the project, particularly given that one of the aims of the project is to provide information for display and interpretation purposes. This documentary research could be confined to immediately available sources, such as published material (e.g. Hartley and Ingilby) or original material held by the Dales Countryside Museum, the Yorkshire Archaeological Society and the North Yorkshire Record Office for example. Census data available via the internet would also be useful in identifying the names that can be seen burnt or stamped into timbers, doors and other fittings around the complex. This documentary work could be undertaken by EDAS if required, subject to additional funds being available (see fee proposal).

Archaeological Topographic Survey

1) Site survey

A Level 3 topographical survey of the main part of the holding (c. 4 hectares) is required, as defined by the figure accompanying the project brief. As has been noted above, the western third of the survey area comprises densely vegetated woodland on a very steep slope, and this area is considered to be unsuitable by EDAS for machine or taped survey. The site visit established that there is former quarrying in this area, together with some small ruined stone structures in the bend of the Mill Gill beck west of the turbine house, together with trackways and associated features. Between the turbine house and the mill pond, the majority of the survey area is relatively level, with the remains of water courses and some slight terracing. The vegetation cover is much less dense here, although even during the winter it may conceal subtle or denuded earthworks. To the north of this area, there is a steep south-facing slope, and above this, another area of rough grass running as far as the drystone wall which forms the boundary of the survey area. Here, terracing and scarps are visible which appear to be contiguous with the field system extending northwards beyond the survey area. The eastern third of the survey area contains the mill pond and the West Mill complex itself.

It is therefore proposed that the eastern and central parts of the survey area are surveyed at a scale of 1:1000 (or 1:500 if the density of archaeological earthworks requires it) using EDM total station equipment. This will be a divorced survey, but sufficient information will be gathered to allow the survey area to be readily located onto an Ordnance Survey map base through the use of surviving structures, fences, walls, water courses, trackways and other topographical features. The survey will record the position at ground level of all structures, wall remnants and revetments, earthworks, water courses, leats, paths, stone and rubble scatters, ironwork, fences, hedges and other boundary features, and any other features considered to be of archaeological or historic interest. The topographical survey will pay particular attention to those structures required to be recorded as part of the building survey (see Building Recording below). The southern limit of the survey area will be taken to be the top of the break of slope which descends to the Mill Gill beck (apart from that area where a former weir is included), although where it is safe to do so, the north side of the beck will be inspected for emerging culverts or other features which may aid the interpretation of the mill complex.

The remaining western parts of the survey area, where possible, will be surveyed using traditional hand-held taped survey, using a 1:1,000/1:500 scale Ordnance Survey map base and measuring off features shown on this base such as field walls or ruined buildings. However, this area will only be suitable for a detailed walkover survey, and the nature of the ground means that it will only be possible to approximately locate any identified features.

The existing walled boundaries of the survey area will also be inspected, but only for features which might be relevant to the mill complex (e.g. culverts or boundary stones); items of usual wall furniture (e.g. sheep creeps, butt joints etc) will be noted on the field drawings and photographed, but will not be included in the site gazetteer. The walled boundaries themselves will not be recorded or classified.

The topographical survey will be integrated into the Ordnance Survey national grid by using Civilcad survey software to align the recorded boundaries, structures etc to those feature's coordinates on a best fit basis. Heights AOD will be obtained by reference to the nearest OS benchmark (if available); given the nature of the remains, contours will not be plotted across the site. A temporary bench mark could be established and left on site using a ground marker approved by the YDNPA if required. Survey points would be taken from fixed survey stations on a closed traverse around and through the site; the locations, descriptions and values of the Bench Marks and control points would be stated in the final survey data.

On completion of the EDM survey, the field data would be processed and plotted using CivilCad and AutoCad software. The data would then be independently re-checked on site in a separate operation. Any amendments or additions would be surveyed by hand measurement, and the results digitised back into the electronic survey data.

The resulting site survey will be produced at a scale of 1:1,000 (or 1:500 where appropriate) and presented as an interpretative hachure plan using conventions analogous to those used by English Heritage (1999a; 2002, 14; 2007, 31-35). Natural slopes would be differentiated from man-made banks and scarps using English Heritage conventions. It is envisaged that the final survey drawings will comprise a single A1 sheet. It should be noted that the final product arising from the topographical survey will be a wet-ink hand-drawn hachure plan, although AutoCad (or equivalent) electronic data could also be provided if required. Larger scale plans, at 1:10,000 and 1:2,500 scale, will be used to put the survey area into context (OS map bases to be provided by the YDNPA).

2) Photographs

Although not every identified site or component will be photographed, some photographs will be taken to illustrate specific well-preserved sites, details of specific sites and/or areas of erosion etc. More general photographs will also be taken showing the landscape context of the area and of specific sites.

The colour photographs will be produced using a digital camera with 10 megapixel resolution. English Heritage photographic guidelines will be followed (English Heritage 2007, 14) and each photograph will normally be provided with a scale, and an identifier where required. All photographs will be clearly numbered and labelled with the subject, orientation, date taken and photographer's name, and will be cross-referenced to a photographic register and digital files etc. Only a selection of colour digital prints will be printed at 6" x 4" size, with a resolution of at least 300dpi, to illustrate the archive report; the majority of photographs will remain as digital archive files.

3) Written accounts

Each identified individual site or component identified by the topographical survey within the survey area will be given a unique identifier number, and a detailed written description provided based on notes taken in the field. Pro forma site record sheets compiled from an Access database will be used (see attached appendix) and key words used by the National Monuments Record (English Heritage 1999b) or the YDNPA HER will be adopted. The individual components of the mill complex will also have general gazetteer entries, although the internal spaces will also have a series of room record sheets (see below).

The description of the site will include a preliminary interpretation of extant remains (e.g. dimensions, plan, form, function, date, sequence of development), locational information (including ten figure grid references obtained from the topographical survey, OS map bases or hand-held GPS systems), and mention of relevant documentary, cartographic or other evidence, and management details such as an assessment of current condition and threats.

Building Recording of the West Mill Complex

1) Drawn record

A Level 3 analytical record of the West Mill complex, including detailed plans and elevations (internal and external) at 1:50 and other appropriate scales, is required. All drawings will be produced according to the guidelines established by English Heritage (2006, 8-10 & 19-21), and will be keyed into the general topographical survey. Each room or discrete internal space also requires the preparation of a Room Record Sheet (see attached appendix).

As has been noted, the mill complex comprises three main conjoined buildings of different periods, with smaller attached structures. There are approximately 13 discrete external elevations, and 12 discrete internal spaces of differing sizes. Some of these (such as the room containing the corn-drying kiln) have more than four internal elevations, and if all internal elevations of all rooms were to be drawn, a total of c.56 elevations would need to be recorded. In addition, previous recording undertaken by EDAS on other corn mills (e.g. Richardson 1996) has shown that on the ground floor, the need to show fixtures and former machinery positions in the floor *and* those in the ceiling above sensibly and clearly requires the production of

both a floor plan and a reflected ceiling truss / timber plan. The following methodology is therefore proposed.

Plans

An accurate footprint of the mill complex (external and internal as far as is practicable) at a scale of 1:50 will be captured using the EDM total station, and this will be used as the basis for the floor plans, which will be constructed using traditional and electronic hand-held measuring techniques. Ground, first and second floor plans of the complex will be constructed at a scale of 1:50. These will show all significant detail such as openings (blocked or unblocked), inserted doorways, fittings, joist sockets etc, as well as the location of fixed machinery, the position of pipework, line shafts, power runs and associated wear marks etc, and the location of other historic features such as wear patterns on timber floors, Baltic shipping and/or carpenters marks, graffiti and daub marks relating to historic and contemporary use of the mill, pre-National Electricity Board electrical fittings, and the location of reused structural timbers. The ground floor plan will comprise two elements; one floor plan showing the details of the flagstone floors, former machine positions, evidence for former fittings etc, and another ceiling plan showing reflected details of beams, timbers, hooks, trapdoors, other mill machinery etc.

Elevations

Of the c.56 discrete internal elevations noted above, site inspection revealed that not all include significant structural information; for example, the internal elevations of the barn / coach house contain little architectural information that cannot be seen externally. It is therefore proposed that only those internal elevations deemed to contain significant structural information will be drawn; it is estimated that this will reduce the number of discrete elevations to be recorded down to c.24, which will result in a considerable cost saving. Furthermore, rather than showing the elevations of each discrete space separately and in order to aid interpretation of the building complex, those elevations which are vertically aligned (for example, the north internal elevation of the mill at ground, first and second floor level) will be shown in relation to one another, essentially forming a number of sections through the building. This will also have the advantage in the condition survey of being able to indicate the position of features such as cracks and other relevant features which extend over several floors. In some cases, there will be an overlap between internal and external elevations; for example, the former south external elevation of the mill is partly obscured externally by later additions to the complex, but remains visible as an internal elevation. Those internal elevations which are not being drawn will be recorded using digital photography (see below), both by taking photographs at right angles to the elevation (subject to access and site constraints) and an oblique angles.

All elevation drawings will be produced using traditional and electronic hand-held measuring techniques. Although the YDNPA brief suggests that rectified photography and/or laser scanning would be acceptable, it is considered by EDAS that these techniques would not result in any significant cost-savings, given the size of the internal elevations and the requirement to produce drawn records and to interpret the results. In some cases, it would be impossible to get far enough away from the elevation to take square on rectified photographs, and some parts of some elevations are currently hidden by vegetation (e.g. a large rambling rose on the south elevation of the mill), stored equipment and other material, which would need to be removed for complete rectified photographs. However, a reflectorless EDM may be used to assist with the production of external elevation drawings, for example by providing a wire-frame of survey points which can then be enhanced by hand measurement.

All the external elevations will be drawn; the one exception would be the external elevations of the later two storey extension (currently used as a garage) on the west side of the building attached to the mill. As this appears to be a relatively simple structure with little historic phasing, it will be recorded using digital photography, both by taking photographs at right angles to the elevation (subject to access and site constraints) and at oblique angles.

All drawn elevations will be produced at a scale of 1:50. Typically, they will show all significant architectural and structural features such as construction detail, modifications and differences in fabric and the stones ("quoins") or dressings around openings and at corners. The elevations will also depict all architectural details, such as windows, doors, fireplaces, jambs, cills, string courses and lintels, the stonework immediately surrounding a feature, glazing bars, roof and chimney outline, any significant visible cracks in fabric, quoin stones and individual voussoirs above window openings, rainwater goods, outline of brickwork areas and areas of plaster. Stone-by-stone drawings are not required. The elevation drawings will also be

marked with a common datum reduced to levels tied into an Ordnance Survey or temporary site bench mark.

Details

The project brief includes for detailed drawings of other features at appropriate scales. It is not proposed at this stage to produce detailed constructional drawings of the waterwheel. However, the wooden frame adjacent to the pit-wheel on the ground floor of the mill is constructed from substantial timbers which bear evidence for alteration, the former presence of fixtures and fittings, and possible re-use. The owners of the mill believe that there may be structural evidence here for an earlier layout, in which case the frame might form part of the hurst frame for an earlier mill (as well as the existing mill), or could perhaps have been re-used from an earlier structure. The timbers making up the frame will therefore be recorded at a larger scale, either 1:20 or 1:10, including evidence for the former presence of fittings, schemes of alteration, joint types or re-use.

2) Digital photographic survey

General photographic recording of the mill complex and its significant parts, together with close-up photography of significant details, will be undertaken. The guidelines produced by English Heritage (2006, 10-12) will be followed and each photograph will normally be provided with a scale where appropriate and artificial lighting will also be used where necessary.

The colour photographs will be produced using a digital camera with 10 megapixel resolution. All photographs will be clearly numbered and labelled with the subject, orientation, date taken and photographer's name, and will be cross referenced to film and negative numbers or digital files; photographs will also be cross referenced to site gazetteer sheets and room record sheets. Only a selection of colour digital prints will be printed at 6" x 4" size, with a resolution of at least 300dpi, to illustrate the archive report; the majority of photographs will remain as digital archive files. It is envisaged that artificial lighting will not be required, apart from normal camera flash, although free-standing lights powered by electricity and/or a generator may be used if necessary; if this is the case, due care and attention will be paid to heath and safety issues when lighting historic structures, e.g. Bryan & Blake 2000, Appendix 1.2).

A photographic register detailing the location, direction and subject of each shot will accompany the photographic record. Copies of the drawn floor plans of the mill complex will be used to identify each shot, and the position and direction of each photograph will be marked on these plans.

An external photographic record will be made of all elevations of the building (subject to access), from vantage points as close to right angles to the elevation as is possible within the constraints of the site. All visible elements of each elevation will be recorded photographically, and it is accepted that this may require photographs from a number of vantage points. A more general external photographic record will also be made which includes a number of oblique general views of the buildings from all sides, showing the complex as a whole in its setting.

The internal coverage will aim to produce a record of all significant spaces and details. General views will be taken of the principal spaces and circulation areas from a sufficient number of vantage points to adequately record the form, general appearance and manner of construction of each area photographed.

In addition to the above, detailed record shots will be made of all features of archaeological and architectural interest identified by the preceding drawn survey. Typically, items of interest would include:

- Original fenestration and blocked openings;
- All original structural elements, roof structures / trusses (subject to access);
- Original doors and window frames and any associated shutters or other fittings;
- Elements relating to original power and lighting arrangements, e.g. light fittings, machinery;
- Decorative or other elements indicating any hierarchy of use or differential functions within the building;
- Evidence for phasing, and for historical additions or alterations to the building relevant to its original and subsequent use;
- Any significant changes in construction material - this is intended to include significant changes in stone / brick type and size.

Elements for which multiple examples exist (e.g. roof trusses, columns, window frames, light fittings etc) will be recorded by means of a representative sample. Detailed photographs will be taken at medium-to-close

range and be framed in such a way so as to ensure that the element being photographed clearly constitutes the principal feature of the photograph.

A detailed photographic record will also be made of all external and internal elevations of the above structures, both at right angles to the elevation (within the constraints of the site) as well as from other vantage points to include oblique general views of the structures and showing them in their setting. Close-up photographs will also be taken of significant detail (see above list), as appropriate. The photographs will be used to show not only the structures' present appearance but also to record the evidence on which the analysis of their historic development is based.

3) Written Record

The principal written record for the mill complex will be the room record sheets, although each individual structure will also have a site gazetteer entry. A separate room record sheet will be completed for each room or discrete space within each building in the mill complex, using a pro forma used by EDAS on previous building recording projects (see appended example). The room data sheets will also include details of fixed machinery (marked on the 1:50 floor plans) and loose items of historic interest. The location of the latter will not be marked on the plans, but their location within the room will be described and a digital photograph taken, which will be tied into the drawn and written record. It is important that a record is made of such loose items, as some may have originated from elsewhere within the mill building, or from further afield. Consultation will be undertaken with the owners to try to establish which loose items are relatively recent introductions.

Sufficient notes will also be taken on site in order for a detailed description of the mill complex to be prepared, in combination with the drawn and photographic records.

Other Building Recording

1) Elevated pentrough, sluices and header tank

A Level 2 descriptive record is required of the elevated pentrough, sluices and header tank to the north of the mill complex, to include elevations in addition to plans. A plan at a scale of 1:50 will be made of these elements, using the methodology described for the mill complex above. This plan will be tied into the general site topographical survey. In addition, a drawing of one side of the elevated pentrough will be made at a scale of 1:50, showing the stone piers and the individual zinc plates forming the pentrough's sides but not the manner in which they are joined. The drawn record will be supplemented by a general and detailed photographic, and written record (site gazetteer), as detailed for the mill complex above.

2) The Turbine House

A Level descriptive 2 survey is required of the turbine house. A ground floor plan will be produced of the building at a scale of 1:50, showing adjacent features to the south including a leat and sluice. This plan will be tied into the general site topographical survey. The drawn record will be supplemented by a general and detailed photographic survey, and written record (including site gazetteer entry), as detailed for the mill complex above. At the time of the site visit, there was some debris within the turbine house where parts of the roof had fallen in, but this was not considered to be obsuring any significant internal detail.

3) Hen house

A Level 2 descriptive survey is required of the hen house. A ground floor plan will be produced of the building at a scale of 1:50, and this will be supplemented by a general and detailed photographic survey, and written record (including site gazetteer entry), as detailed for the mill complex above.

4) Cheese press

A Level 3 analytical record is required of the cheese press. Plans at an upper and lower level, together with a vertical section, will be produced at a scale of either 1:10 or 1:20. The drawn record will be supplemented by a general and detailed photographic survey, and written record (including site gazetteer entry), as detailed for the mill complex above.

5) Churn Stand

A Level 1 visual record is required of the churn stand. The churn stand will be photographed and a brief written description made (including site gazetteer entry).

Survey Products

A number of separate products are required to be produced as part of this project.

Archaeological Survey Report

An EDAS archive archaeological survey report for the site will be produced, based on the results of the topographical survey and building recording, and the structured gazetteers of identified numbered components and room descriptions. The report will be a standard A4 typed and bound document, which will assemble and summarise the available evidence for the survey area and site in an ordered form, synthesise the data, comment on the quality and reliability of the evidence, and how it might need to be supplemented by further work, for example additional desk-based research, structural survey, dendrochronological analysis, urgent conservation work etc.

It is expected that the report will include (as appropriate):

- a contents list;
- acknowledgements;
- a non-technical executive summary;
- site code/EDAS project number;
- dates of fieldwork visits;
- national grid reference and address;
- overall site plan;
- statutory designations;
- a brief account of the project plan, research objectives, survey methodology, procedures and equipment used;
- details of the historical and archaeological background to the site;
- an account of the overall form and development of the mill complex and of the evidence supporting any interpretation;
- preliminary conclusions, including an assessment of the importance of the findings in relation to the other remains on the site and in the region as a whole;
- a brief condition survey of the mill complex, together with outline costs for conservation work to the main mill building and overhead mill race;
- preliminary recommendations on the need for any further work, for example additional desk-based research, structural survey, dendrochronological analysis, urgent conservation work etc, with an emphasis on any works necessary to enable the water wheel to turn, sluice management etc;
- preliminary recommendations for public interpretation;
- a bibliography and list of sources consulted;
- selected colour digital images (to include the main elevations), at no less than 6” by 4”;
- selected figures e.g. historic maps and plans, reduced to A4 or A3 size;
- final survey drawings, reduced to A4 or A3 size.

The survey report will also contain various appendices, including the structured gazetteer of sites/components and room record sheets, photographic registers and catalogues, and a copy of this Methods Statement, together with the details of any departures from that design.

The YDNPA project brief requires the production of an initial interim report highlighting details of particular conservation significance or concern, and incorporating information from the condition survey.

One draft copy of the final report will be made available for discussion with the YDNPA, Natural England and the site owners prior to completion. Six copies of the final approved survey report will then be provided in hard copy format (comb bound reports) to the YDNPA, no later than ten weeks after the end of the on-site work unless otherwise agreed with the YDNPA. A CD containing an electronic copy of the report (as pdf files) and digital copies of the Access databases and photographs (both edited and unedited versions, as jpegs and tiff files) will also be provided (two copies). There is currently no requirement for the data contained in the survey report or site gazetteer to be entered onto the YDNPA HER.

A summary of the results of the archaeological survey will be prepared for publication in *Industrial Archaeological Review* or any other appropriate journal or monograph as agreed with the YDNPA. It is also noted that a presentation at a day school on the historic environment of the Yorkshire Dales may also be required.

EDAS will license Natural England, YDNPA and the site owners for unrestricted use of all survey material, drawings, photographs and other products of the project on payment of final invoices. Information and plans etc resulting from the project (suitably acknowledged) may be used by these organisations for research reports, or any similar publications, and for use in any interpretative or publicity material, as well as being made available through the HER and its derivatives.

Archaeological Survey Archive

A properly ordered and indexed project archive (paper, magnetic and plastic media) will be deposited with the YDNPA at the end of the project. It is expected that the archive will contain the following:

- copies of relevant documentary material, bibliographic, cartographic and pictorial sources, arranged in date sequence;
- survey control information, including a diagram showing traverses and control networks, coordinates of control points and survey stations, and digital survey data;
- field and final ink drawings (any drawn records will be presented as wet ink plots on standard "A" size matt surface stable polyester film sheets);
- written accounts and pro forma gazetteers;
- structured catalogues and indices;
- copies of digital photographs on CD, both processed and unedited images, as jpeg and tiff files;
- project management records;
- electronic copies of all reports, as pdf files.

OASIS Compliance

EDAS subscribe to English Heritage's OASIS (Online Access to Index of Archaeological Investigations) project, and all EDAS projects are fully OASIS compliant. Prior to the start of the fieldwork, an OASIS online record will be initiated and key fields completed on Details, Location and Creators forms. All parts of the OASIS online form will be subsequently completed for submission to English Heritage and the YDNPA HER. This will include an uploaded pdf version of the entire report.

Health and Safety, and Insurance

EDAS will comply with the Health and Safety at Work Act of 1974 while undertaking the project. A full copy of their Health and Safety Policy is available on request.

The site is privately owned and EDAS will indemnify the landowners in respect of their legal liability for physical injury to persons or damage to property arising on site in connection with the survey, to the extent of EDAS's Public Liability Insurance Cover (£5,000,000). A risk assessment will also be produced prior to any site work.

Staffing and Experience

The project will be mostly undertaken by EDAS, who are registered as an archaeological organisation with the Institute for Archaeologists. The project will be managed by Ed Dennison, Director of EDAS.

The archaeological topographical survey and building recording will be undertaken by Ed Dennison and Shaun Richardson of EDAS, assisted by Richard Lamb; Ed Dennison's CV is attached to this documentation. Both have some 20 years experience in non-intrusive earthwork and topographical survey, and they have undertaken numerous walkover and detailed surveys of specific monuments and of areas of historic landscape throughout the Yorkshire Dales. These surveys have included land uses of all types, and in addition to identifying a wide range of archaeological remains, detailed management strategies and recommendations have been proposed. The topographical survey will be undertaken in conjunction with Benchmark Land Surveys of Leeds, who have worked with EDAS on numerous similar projects in the past.

Shaun Richardson will be aided in the building recording by Richard Lamb. Both have extensive experience of the recording and analysis of standing buildings, including post-medieval industrial buildings with surviving

machinery and power transmission. In addition, Richard Lamb has worked for many years on projects involving the restoration, maintenance and operation of historic machinery, including both stationary and locomotive steam engines.

If required by the project, additional expertise on specific aspects of the survey work will be sought from appropriate specialists. These are likely to include Ian Tyers (freelance consulting dendrochronologist), Tony Wood (chartered structural engineer) and Peter Gaze Pace (an English Heritage approved conservation architect). CV's can be provided as necessary.

Programming

The project would be able to be started within three weeks of commission, depending on appropriate access authorisations and weather conditions.

It is envisaged that the site survey work would be phased, starting with a detailed survey of the mill building and supply of the condition survey information. Some urgent roofing works to the mill are planned for late 2010, and the initial study should help to inform this activity. The YDNPA project brief requires an interim report highlighting details of particular conservation significance or concern, and incorporating information from the condition survey, by the beginning of January 2011.

The archaeological topographical survey is best carried out in winter, when vegetation and undergrowth is low. This timescale will also ensure minimal damage to orchids and other growing plants that are known to lie within the wet parts of the survey area.
It is envisaged that the final full draft of the report would be available by April 2011.

The above timescales are all indicative, and could be shortened or expanded if necessary. The precise programme of survey work etc will depend on liaison with the YDNPA, Natural England and the site owners.

Monitoring

It is understood that the fieldwork, and the project as a whole, will be monitored at periodic intervals by the archaeological staff of the YDNPA and Natural England. A preliminary site meeting will be arranged with these bodies at the start of the project to agree methodologies and timescales. There may also be liaison meetings to discuss the draft report before final submission.

Modifications

The programme of work outlined may be modified in accordance with the professional judgement of the staff undertaking the work, insofar as the overall provisions and objectives of this methods statement will not be changed. Any variations in the project will be discussed and agreed in advance with the YDNPA and Natural England.

References

Bryan, P & Blake, B 2000 *Metric Specification for English Heritage*

English Heritage 1999a *Recording Archaeological Field Monuments: A Descriptive Specification*

English Heritage 1999b *National Monuments Record Thesauri*

English Heritage 2002 *With Alidade and Tape: Graphical and Plane Table Survey of Archaeological Earthworks*

English Heritage 2006 *Understanding Historic Buildings: A Guide to Good Recording Practice*

English Heritage 2007 *Understanding the Archaeology of Landscapes: A Guide to Good Recording Practice*

Hartley, M & Ingilby, J 1979 *Yorkshire Village*

Hartley, M & Ingilby, J 1981 *Life and Tradition in the Yorkshire Dales*

Hay, T 2000 'Hydroelectricity Generation in the Yorkshire Dales'. *The Cleveland Industrial Archaeologist* 26, 35-53

Moorhouse, S 2003 'Anatomy of the Yorkshire Dales: Decoding the Medieval Landscape'. In Manby, T G, Moorhouse, S & Ottaway P (eds) *The Archaeology of Yorkshire: An Assessment at the Beginning of the 21st Century*, 293-362

Richardson, S 1996 *Lower Roughwood Mill, Hassall Green, Cheshire: Archaeological Survey* (Barton Howe Warren Blackledge archive report no. sp1082/1)

Ed Dennison, EDAS
24th September 2010