

THE OLD MILL, THE GHYLL, GUNNERSIDE,
MELBECKS, NORTH YORKSHIRE

ARCHAEOLOGICAL RECORDING

Ed Dennison Archaeological Services Ltd
18 Springdale Way
Beverley
East Yorkshire
HU17 8NU

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Report no: 1999/100.R03
Version: Final
Date: November 2011
Author: Shaun Richardson & Ed Dennison

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CONTENTS

EXECUTIVE SUMMARY

1	INTRODUCTION.....	1
2	HISTORICAL BACKGROUND.....	3
3	DESCRIPTION OF THE MILL COMPLEX.....	7
4	DISCUSSION AND CONCLUSIONS.....	13
5	BIBLIOGRAPHY.....	16
6	ACKNOWLEDGEMENTS.....	18

EXECUTIVE SUMMARY

In early 2002, Ed Dennison Archaeological Services (EDAS) undertook a survey of the former water mill complex in Gunnerside, Melbecks, North Yorkshire (NGR SD 9506 9835). The survey comprised a drawn, written and photographic record.

The mill complex stands on the west side of the Gunnerside Beck, at the north end of the suggested primary area of settlement at Gunnerside, in close proximity to a pound or pinfold and also the village smithy. Comparative evidence from Swaledale and other parts of Yorkshire might suggest that the mill was established in the later medieval period. It could have served a small settlement, perhaps grinding oats and other cereals grown in lower and middle Swaledale, with corn being imported from local markets such as at Richmond. Alternatively, the mill might be associated with the growth in population resulting from settlement at Lodge Green in the 16th century. The earliest known reference to a mill at Gunnerside dates from 1635, shortly after Gunnerside was described as a 'town' in local court records, and by which time most townships in lower and middle Swaledale had their own water mill. Although the milling of corn probably increased in the 19th century, the processing of oats would have remained an important part of the mill's business.

The mill building itself was demolished in the mid 20th century, probably to make way for a bus garage, and the oldest surviving features on the site are probably the earthworks for the mill leat or head race, which took water from the Gunnerside Beck several hundred metres to the north of the complex. The oldest standing structure is a much altered two-cell direct-entry house with axial stack, now forming the central part of the west range and probably late 17th or early 18th century in date. It was probably originally fitted with a firehood and had a thatched roof, but was modernised in the late 18th century. It also preserved rare surviving evidence for mid-19th century painted wall decoration.

The west range underwent further additions and expansions during the 19th century, probably linked to the increase in local population due to the expansion of the lead mining industry. This would have resulted in an increased demand for flour for bread and oatmeal for oatcakes. The mill may also have installed machinery such as oat rollers, to produce fodder for the many horses employed locally, as well as a drying kiln for the oats and perhaps even a barley mill. The earliest surviving part of the east range is formed by a single storey stables of late 18th century date. A large warehouse/storage building was built onto its north end in the second half of the 19th century, after which the stables were increased in height.

Documentary evidence suggests that water-powered milling had ceased on site by c.1900. As with the growth of the complex, its decline would have been heavily influenced by the collapse of the local lead mining industry in the late 19th century and the accompanying depopulation. The complex was probably given over to general storage and a flour/grocery business in the early 20th century, followed by use as a bus garage. In the late 20th century, the site appears to have fallen into gradual disuse, before being purchased by the owners, Mr G Staines and Miss A Bacon, in 2000.

1 INTRODUCTION

Background to the Project

- 1.1 In December 2001, Ed Dennison Archaeological Services (EDAS) were asked by Mr Robert White, the then Archaeological Conservation Officer of the Yorkshire Dales National Park Authority (YDNPA), if they could undertake a basic programme of archaeological recording prior to the conversion of Gunnerside Mill and adjacent cottages, at Gunnerside, Melbecks, North Yorkshire.
- 1.2 The request was made following the approval of a planning application, with a watching brief condition and not the Grampian condition recommended by the National Park Authority's Archaeological Conservation Officer. The scope of the recording work was not defined by a formal project design but was determined following discussions between EDAS and the Archaeological Conservation Officer of the YDNPA. The recording was carried out by EDAS at their own expense, and with the consent of the current owners, Mr G Staines and Miss A Bacon.

Site Location and Description

- 1.3 Gunnerside Mill (also known as The Old Mill) is situated in the village of Gunnerside, in upper Swaledale, North Yorkshire (NGR SD 9506 9835) (see figure 1). It is formed by a complex of buildings standing adjacent to the west side of Gunnerside Beck, and it marks the northern edge of occupation of this part of the village (see figure 2 and plate 1). The site is accessed via a track running north from the main east-west road through the village, past the former Literary Institute, smithy and a large house (now two private dwellings). To the north and west of the mill complex, there are steep wooded banks.

Survey Methodology

- 1.4 The archaeological survey was achieved through the production of drawn, written and photographic records.
- 1.5 The drawn record was produced using traditional hand measurement techniques. A plan of the site, including the surrounding earthworks, was prepared at a scale of 1:100. A plan of the east range, together with a drawing of its west elevation, was produced at a scale of 1:50 from measurements and photographs taken on site. Finally, a 1:1 sketch was made of the remains of the painted wall decoration in the west range. The plans and elevation drawings are presented using conventions analogous to those used by the RCHME (RCHME 1996); figures 6 to 8 are reduced versions of the completed elevation drawing and plans. The drawn record was supplemented by a number of 35mm colour photographs. The on-site recording work was undertaken in January-March 2002, when the complex was in the early stages of conversion to residential accommodation.
- 1.6 Sufficient notes were taken on site to be able to prepare a detailed descriptive record of the buildings and adjacent earthworks, and the description forms the basis of this report. Finally, a limited amount of documentary research, restricted to secondary sources and easily available primary sources, was undertaken at the North Yorkshire County Record Office to place the site within its various contexts.
- 1.7 The small project archive arising from the archaeological recording, comprising drawn and photographic elements, has been ordered and indexed according to the

standards set by English Heritages' National Archaeological Record. It was deposited with the YDNPA (site code GMG 02) on completion of the project.

- 1.8 A draft survey report was produced in August 2002, although it was not completed until 2011. In order to maintain the timescale of the original survey work, no new information has been added to this report, for example, a more up-to-date description and assessment of the mill complex.

2 HISTORICAL BACKGROUND

The Settlement

- 2.1 The settlement of Gunnerside is generally thought to have been established in the 10th century, the name Gunnerside stemming from the Norse for a summer pasture or shieling belonging to Gunnar, and IT may have formed part of a larger Norse kingdom of 'Swaldal', centred on the upper part of the dale (Vyner 2001, 14). The site of the shieling may have continued in use during the later medieval period as a *vaccary* or dairy farm (Fleming 1998, 46); Gunnerside was one of 12 *vaccaries* named in an *Inquisition Post Mortem* in 1298, and by the mid 16th century the *vaccary* was owned by Rievaulx Abbey (Vyner 2001, 14). Although some of the *vaccaries* probably had settlements associated with them during the medieval period, the break up of the larger land holdings, particularly after c.1350, and their leasing out as smaller units, lead to the establishment of scattered farms throughout the upper part of the dale by the 16th century (Harrison & Hutton 1984, 216).
- 2.2 Gunnerside formed part of the manor of Swaldal (also known as Reeth or Healaugh) that occupied the area of upper Swaledale. The modern settlement incorporates two formerly separate entities, Gunnerside to the west of the Gunnerside Beck, and Lodge Green to the east. It is generally thought that the primary area of settlement was to the west of the beck, perhaps formed by two rows of house plots fronting the north and south side of a small rectangular green. Lodge Green appears to have developed as a settlement during the 16th century, perhaps initially composed of mine workers. An increase in population may have led to Gunnerside being described as a 'town' in local court records of 1634 (Fleming 1998, 34 & 112-114; Vyner 2001, 14-17).
- 2.3 During the medieval period, the economy of Upper Swaledale was predominantly pastoral, with large stretches of wood pasture including clearings and hedged enclosures, as well as parks for cattle and deer; Gunnersett Park was located in the area now known as Gunnerside Bottoms, whilst Lodge Green formed a common cow pasture (Fleming 1998, 34, 57-58 & 69-71). Medieval arable land was concentrated in middle and lower Swaledale although, as in similar situations in north-east Yorkshire, the crops grown may have been predominantly oats, barley and other cereals rather than wheat (Harrison 2001, 82). Probate inventories of the period c.1660-1710 demonstrate that agriculture remained predominantly pastoral, with wheat being of little importance (Harrison & Hutton 1984, 216-7); as late as the 18th century, mill account books refer to households buying oatmeal on a weekly or monthly basis, with wheatmeal only being purchased when means allowed (Hartley & Ingilby 1981, 39).

The Mill Complex

- 2.4 It is not known at what date a water-powered mill was first established at Gunnerside. At the time of the 1086 Domesday Survey, there may have been only c.92 to 102 mills throughout the whole of Yorkshire, with some 23 in the North Riding. Of the latter, seven belonged to Count Alan of Richmond, and were distributed along the Swale and its tributaries; all were well east of upper Swaledale, the nearest being located Brompton. However, research in north-east Yorkshire has shown that, partly due to population growth, water-driven sites were established in large numbers between 1086 and 1348 (Harrison 2001, 1-4). Watermills appear to have been present in almost all of the townships of middle

and lower Swaledale by the late 16th-early 17th century, and Fleming suggests that many of these were medieval in origin (Fleming 1998, 69-71).

- 2.5 Despite the lack of evidence for cereal growing, there were also mills in upper Swaledale. The earliest known reference to a water-powered corn mill at Gunnerside dates from 1635 (Fieldhouse & Jennings 1978, 150-151; Fleming 1998, 69-71); this was almost certainly sited on or near the site of the present mill complex. The mills in Upper Swaledale may also have been used to grind oats and other locally grown cereals, with corn brought in from markets at Richmond (Vyner 2001, 15).
- 2.6 References to Gunnerside mill after 1635 are scarce, although there is an isolated reference in a newspaper in June 1771: "*We hear from Swaledale, that the water-race belonging to Mr Smith's corn mill at Gunnerside was again repaired on the 12th Inst., which was no sooner perfected than the Black Boys immediately assembled, and destroyed it with their usual Brutality*" (Public Advertiser June 28th 1771). The 'Black Boys' appeared to be a gang of local thugs who seem to have waged an orchestrated campaign against the absentee landowner Mr Smith (of Grey's Inn, London), as in May of the same year they also destroyed the water race at his smelt mill at Raygill near Reeth and threw down several of his hayricks (London Evening Post 2nd May 1771 & Bingley's Journal or Universal Gazette 11th May 1771). Mr Smith took them to court and in July 1771 'his opponents' were ordered to pay him 12 guineas with costs (General Evening Post 23rd July 1771).
- 2.7 The mill is mentioned in the early 19th century trade directories. In 1822 James Alderson appears as the miller (Baines 1822, 487), whilst in 1840 James Peacock is listed as 'corn miller' at Gunnerside (White 1840, 647-649). The 1841 census records that James and Mary Peacock lived at the mill with their six children, as well as James Harrison, aged 40, who is described as a 'Mill Servant' (NYCRO CRONT 1506). The Peacock family were still in occupation when the schedule accompanying the 1843 Melbecks tithe map was drawn up (NYCRO MIC 1797/151-8).
- 2.8 At this date, the complex was formed by two parallel ranges reached by a track running north from the west side of the village along the beck (see figure 3). The west range was the largest and is listed as plot no 69, a 'Dwelling house and cornmill' occupied by Anthony James Peacock and owned by Ralph Milner. It had an irregular ground plan, and essentially consisted of a large L-shaped building with a smaller L-shaped building attached to the south end. The east range was smaller and narrower, with a rectangular plan. A small enclosure (plot no 70) attached to the south end of the west range is described as a 'garden' occupied by Ralph Milner and James Raw, and to the south of this is a pinfold (plot no 71) owned by the proprietors of Gunnerside pasture. The pinfold is angular in plan, with a small building at the north-east corner. The Peacock family were still at the mill in 1851, as the census notes that at this date they were resident with five of their children and one grandchild; the two oldest sons, George and Thomas, have their occupations listed as 'carriers' (NYCRO CRONT 1506).
- 2.9 The site next appears on the 1857 Ordnance Survey 6" map, which names it as 'Gunnerside Mill (Corn)' (see figure 4). A head race (marked as 'Mill Race') is clearly shown, leaving the Gunnerside Beck several hundred metres north of the mill and then running south, following the contours on the west side of the beck. At its south end, it curves around to the east to enter the complex between two extensions on the west side of the west range. The west range also appears to

have been extended to the north since 1843 but the east range remains much as before.

- 2.10 James Peacock ('miller', now aged 61) and his family were still living at the mill in 1861 (TNA RG 9/3672) but he died soon after, when his son-in-law James Percival took over. James Percival subsequently died of typhoid fever in 1870, leaving his wife (James Peacock's daughter) Mary Ann Percival in charge (www.percivalbros.com/lodge.html). In the 1871 census she is described as a 'grocer and miller', and she was living at the mill with her two daughters and two sons (TNA RG10/4872). She was still resident in 1881, but now described as 'grocer and farmer' (TNA RG11/4877), while in the 1889 trade directory she is listed as a 'grocer, miller (water) & farmer'; her eldest son Lodge Percival was also a 'flour dealer', although by now he was at a different address in Lodge Green (Kelly & Co 1889, 144). Lodge Percival took on the running of the family grocery store at the bottom of High Green, although in 1891 he was described as a 'grocers assistant'; at this time, Mary Ann ('grocer and flour dealer') was still at the mill, together with her daughter's family headed by William Calvert and their numerous children (www.dalesgenealogy.com/census/feetham_91.html).
- 2.11 The mill complex appears on an enlarged portion of a late 19th century photograph (Mr G Staines, *pers. comm.*); the photograph must date from after 1877, as the Literary Institute appears in the foreground, but is unlikely to be much later than c.1900. The scale of enlargement has made some of the mill buildings difficult to pick out (see figure 9). However, the east range is clearly visible, with a large pair of doors in an arched opening at the south gable. The west range cannot be seen, although the building set at a right angle to its south end can be made out, and is apparently of two parts. Above, and to the north, there is another long east-west orientated building, with a dormer opening in the south elevation and set at a higher level than the surrounding parts of the complex. The Calvert family of Gunnerside apparently also hold a photograph of the interior of the mill, showing some of the machinery *in situ* (Mr G Staines, *pers. comm.*), but this could not be consulted for the present survey. The Ordnance Survey 1895 6" map shows the mill complex much as it was in 1857, although the northernmost of the western extensions to the west range has now gone.
- 2.12 There is some evidence to suggest that milling, or at least water-powered milling, had ceased on the site by c.1900. No millers are listed in the village in 1897, although three individuals given as 'flour dealers and farmers' (including Lodge Percival) remained in Lodge Green (Kelly & Co 1897, 171-172). In 1901, Mary Ann Percival was aged 69 and 'living on own means' and, although the family still owned the mill complex, it is not clear whether she was actually living there although it is likely (www.dalesgenealogy.com/census/melbecks_01.html). By 1911, Lodge Percival was a 'grocer and provision merchant' and he lived with his large family separate from Mary Ann Percival who was now described as a 'retired grocer'; no millers are noted in the census of that year (www.dalesgenealogy.com/census/melbecks11.html). Lodge Percival's shop in High Green became known as the 'Big Shop', to differentiate it from the adjacent 'Little Shop' which was run by his son, William Percival and his wife Lizzie (www.percivalbros.com/lodge.html).
- 2.13 The site appears as 'Gunnerside Mill' on the 1912 Ordnance Survey 25" map but the head race is no longer shown (see figure 5). There had clearly been some changes since 1857. The east range is shown as comprising two separate parts, the northern longer and wider than the southern, with a further small cell on the south end. One of the two projections on the west side of the west range had been

demolished. The pinfold to the south of the site is marked as a 'Pound' and appears more rounded in plan than on earlier maps. As in 1897, contemporary trade directories list no millers in Gunnerside, although one farmer and flour dealer is given, whilst Lodge Percival appears as a grocer (Kelly & Co 1913, 186). Mary Ann Percival, who had been associated with the mill for nearly 50 years, died in 1916 aged 84 (www.percivalbros.com/lodge.html).

- 2.14 By the 1920s, the Percivals of Gunnerside were well established as local farmers, hay and livestock dealers, carters, carriers and grocers, and all three of Lodge Percival's sons were employed in the business. In a natural expansion, a motor-bus company was formed and 'Percival Brothers' soon became a well respected and popular coach company. The family still owned the mill complex, which was also used as a garage, and in 1930 they started to generate electricity for lighting in the village using a Lister 5hp engine at the mill (www.percivalbros.com/lodge.html); it was only in the early 1950s that the National Grid reached Gunnerside (the site is not listed by Hay (2000)). The family also kept pigs at the mill, as part of their grocery business.
- 2.15 Lodge Percival retired from business in February 1938, and died in 1948. The company was 'Percival Brothers (Coaches) Ltd' by this time, and the family had at least a dozen motor-buses as well as a hire car and two motor lorries, and they had motor garages in Barnard Castle, Richmond and Gunnerside, the latter at the mill (www.percivalbros.com/percival.html). Declining profits meant that the company was wound up in May 1971, and the site was subsequently purchased by Mr G Staines and Miss A Bacon in 2000.

3 DESCRIPTION OF THE MILL COMPLEX

Introduction

- 3.1 For the purposes of the following description, the surviving buildings are described below in a logical circulation around the site. In the following text, reference should be made to the reduced survey drawings and illustrative photographs.

The Outlying Structures (see figure 6)

- 3.2 As stated above, the site is approached from the south via a track running off the north side of the main valley road, past the Post Office, the Old Smithy museum and several private dwellings. Immediately before reaching the mill itself, the track is flanked by two structures, a pound or pinfold to the west and a large culvert to the east. The former is sub-circular in plan and of irregular construction, with battered drystone rubble walls up to 0.80m thick and 1.4m high. Access to the interior, which is now filled with flower beds, is via an entrance in the south-east side, although there appears to be another blocked entrance in the south side. A 'Pound' with a similar plan form is marked here on the Ordnance Survey 1912 25" map but earlier maps show it to be far more angular in plan, with a small building at the north-east corner; the schedule accompanying the 1843 tithe map notes the feature as a 'pinfold', owned by the proprietors of Gunnerside Pastures (NYCRO MIC 1797/151-8) (see figures 3 to 5).
- 3.3 In contrast to the pinfold, the culvert on the east side of the track does not appear on any of the historic maps consulted for this report. It is set within a short section of retaining wall and is built of substantial rubble voussoirs, c.1m wide and 0.75m high. The culvert, which takes the form of a broad barrel vault, curves around quite sharply to the north-west and can be traced for at least 5.5m from the entrance (see plate 2). It is almost certainly associated with the operation of the mill complex and may well be a bypass culvert.
- 3.4 The entrance to the mill complex itself is through a gateway in the south boundary wall, now marked with a pair of modern tall steel gates. These open out into an enclosed yard, surrounded by high walls on the east, west and south sides. The east wall forms the remains of a stone-built open-sided lean-to structure with a corrugated iron roof, probably of mid 20th century date, and butting the south end of the east range; this is shown in this position in 1912. The south wall is probably of a similar date and also forms part of a former building. It is built of coursed squared sandstone panels between steel stanchions; each panel contains a pair of windows with lintels of either wood or timber covered in sheet metal. The west wall of the yard retains the bank behind and also appears to be of relatively recent construction. It is of coursed squared sandstone rubble and at its base contains a single feature, a small culvert-like blocked opening with a concrete lintel.
- 3.5 The yard was floored with concrete at the time of the survey. Approximately half way across the yard, there is a line of disturbance in the concrete set at a right angle to the western retaining wall. This disturbance appears to mark the south side of the wider section of the west range depicted on maps between 1843 and 1912. This building can just be discerned on the late 19th century photograph of Gunnerside village, where it appears to consist of two separate elements; the western element may survive as a set of ruined foundations (see below). The position of this east-west aligned structure in relation to the other buildings of the mill complex (see below) strongly suggest that it was the mill itself, which was demolished in the mid 20th century. This theory is supported by the former

existence of a linear pit (now infilled) positioned against the south gable of the west range (Mr G Staines, *pers. comm*). This may well have been the mill's wheel pit; the presumed tailrace which emerges from beneath the east range (see below) appears to be aligned on this area.

- 3.6 Beyond the yard, the surviving buildings are split into two ranges to the east and west of a central passageway. Scarring in the concrete floor of the yard and on the west elevation of the east range indicates that the passageway was once covered and could also be sealed by a sliding shutter or barrier; this arrangement may have been in place for some time, as the late 19th century photograph appears to show a roof between the former mill building and the east range.

The West Range (see figure 6)

- 3.7 The west range is formed of two distinct parts, although these have undergone considerably more alteration than the east range discussed below.

North end

- 3.8 The building forming the north end of the west range was apparently not present in 1843 (NYCRO MIC 1797/151-8), although a building of a differing plan form is shown in the same position as the existing structure on the Ordnance Survey 1857 6" map (see figures 3 and 4). The surviving building is rectangular in plan and set at a slight angle to the central and south part of the range, which it clearly butts. It is of two storeys, built of squared coursed local stone, with larger stones used for quoins, and the pitched roof is covered with diminishing courses of stone slates. There is a pair of ground floor doorways in the east elevation; a shallow stone plinth or step is visible at the base of the east elevation between the doorways. The north gable has a first floor doorway, flanked by a course of projecting through stones. At the base of the north gable, there are the remains of a flight of external steps formerly leading to the first floor doorway, together with further ruined structures to the west and north, apparently the remains of field walls. There is a small opening at ground floor level in the west elevation, together with two courses of projecting through stones.

- 3.9 Internally, the only access to the ground floor is through the doorways in the east elevation. Each doorway leads into a small cell or room; the angle of the partition wall between the two rooms suggests that it is a later insertion. The ground floor interior preserves evidence of various phases of wall plaster and whitewash but contains no other features of interest. The only access to the first floor is via the doorway in the north gable. The first floor is floored with north-south aligned boards (average width 0.15m) and is crossed by two roof trusses. Both trusses are of principal rafter form, each principal supporting a pair of butt purlins with keyed through-tenons; a substantial plank acts as a tie-beam in each truss, and is apparently bolted to the north face of the principals.

Central and south end

- 3.10 The central and southern parts of the west range have undergone much alteration/rebuilding during their lifetime. The 1843 tithe map depicts the west range with a similar plan form to that now existing, although it appears to return to the west at the southern end, and is described as 'Dwelling house and corn mill' in the accompanying schedule (NYCRO MIC 1797/151-8); the western return is visible on a late 19th century photograph and appears to be set at a higher level than the other parts of the mill complex (see figures 3 and 9). By 1857, the

Ordnance Survey 6" map indicates that the west range had been extended both to the north and west, although some demolition of the western extensions had taken place by 1912 (see figures 4 and 5).

- 3.11 The existing structure is rectangular in plan, of two storeys with a pitched roof and a short central ridge stack. It is built of coursed squared local stone and is roofed with diminishing courses of stone slates. A shallow stone plinth or step is visible at the base of the northern half of the east elevation, terminating at a doorway at its north end. The doorway is of plain appearance with a flat stone lintel. To the south, there is a small ground floor window retaining a 16-pane timber casement, with a smaller opening over, also retaining parts of a timber window frame. Further to the south, there is another ground floor window with a concrete lintel and part of a metal frame, flanked by straight joints of differing heights; above, and slightly offset to the north, there is a blocked rectangular opening of the same size as the window retaining the 16-pane frame. The south end of the central elevation is dominated by two tall openings, both with massive wooden lintels (see plate 4).
- 3.12 The south gable appears to have been either partly rebuilt or at least re-faced to eaves level, presumably after the demolition of the adjacent mill building. There is a sloping scar left by a lean-to roof at eaves level, and set slightly higher, the remains of metal flashing from another roof line (see plate 4). The west elevation is largely blank, with the exception of a low level blocked opening at the north end, and a straight joint to the south of centre.
- 3.13 Internally, the south end of the building, accessed via the tall doorways in the east elevation, was used for timber storage at the time of the survey, although it appeared to contain few features of interest. It is floored with concrete, although there are traces of a flagstone floor in places. The northern of the doorways retains a plank and batten door at one end of a timber-partition, used to create a separate storage area. From here, a doorway at the east end of a further timber-partition leads through into another storage area. Three roof trusses cross this part of the building, each of principal rafter form with a large plank acting as a tie-beam bolted to the north face of the principals. Each principal supports a pair of butt-purlins with keyed through-tenons.
- 3.14 The doorway at the north end of the east elevation leads into a square room, which was filled with furniture at the time of survey. However, several features of interest are visible. The remains of a flagstone floor are visible in several places, and the room preserves evidence of several phases of plaster and whitewash. In the centre of the south wall, there is a projecting chimney breast containing a recess that once housed a large range; the ceiling joists to the immediate north of the chimney-breast have wrought-iron hooks suspended from them. To the east of the chimney-breast, there is a blocked doorway with a re-used timber as a lintel. The interior of the doorway retained whitewashed wall plaster, with evidence for former shelving being fitted here, indicating that it had been used as a storage cupboard. Scarring on the plaster/whitewash of the north wall show that a flight of wooden stairs once gave access to the first floor from the north-west corner of the room.
- 3.15 The north wall also retains evidence of painted decoration to the plasterwork. The decoration is very faded and only partly complete but appears to be carried out in parallel reddish-brown double lines forming a repeating pattern (see figure 7). The lower part of the pattern is formed by courses of rectangles, resembling brickwork, separated by narrower 'blank' courses, whilst above, just below the existing ceiling level, there is a course of paired octagonal shapes, flanked by vertical lines. Each of the octagonal shapes appears to contain a central motif, although the form of

these is incomplete. Finally, the painted decoration respects the former line of the staircase to the west.

- 3.16 Although the stairs have been removed, the first floor of this part of the west range could be viewed by standing on a piece of furniture. It is floored with north-south aligned boards (average width 0.25m) and is crossed by a single roof truss of principal rafter construction with a raised collar jointed to the principals using halved lap joints. Each principal supports a pair of staggered butt purlins. The south wall retains a plain but well proportioned chimney-piece, with well-dressed jambs with moulded impostes supporting the lintel (see plate 5). The chimneypiece is built onto the front of a larger, cruder opening, with much soot staining above. To the west, there is a staggered joint running from floor to roof level, sloping upwards from west to east. On the east side of the joint, there are a number of very large pieces of stone; these, together with the batter of the staggered joint, are suggestive of an earlier structure here that was incorporated into the later building.

The East Range (see figure 8)

- 3.17 The east range is also formed from two distinct buildings, of which the southern is clearly the earlier, although this too is of at least two phases.

South end

- 3.18 The smaller south building is rectangular in plan (slightly narrower than the adjacent north part) and is of two storeys with a pitched roof; it was originally of a single storey only (see below). It is built of coursed squared local stone with larger stones used as quoins at the corners and roofed with diminishing courses of stone slates. There are blocked ground floor doorways at either end of the west elevation, flanking a pair of blocked window openings (see plate 6). The northern of the two doorways, which is blocked with recessed breeze blocks rather than flush stone, has interrupted jambs and a substantial lintel of well dressed milled stone. The heads of the jambs are decorated with four petalled flowers in shallow relief set within a square panel (see figure 8), whilst the thin stones interrupting the jambs are partly vermiculated. The southern doorway is of similar construction but without any decoration. There is a single blocked loading door at first floor level in the west elevation. The south gable retains a tall central opening, with an arched head of roughly dressed voussoirs (now partly obscured by a later lean-to, but visible on a late 19th century photograph of the site).

- 3.19 The east elevation is largely blank but does contain a single ground floor window opening with a metal frame. A culvert, assumed to be the tailrace of the mill's wheelpit, emerges at the base of the north end of the east elevation as a c.1m tall structure with an arched head (see plate 8). The tail race runs to the north-west for a distance of c.5m where it has been deliberately blocked. A low stone rubble wall runs east from the culvert towards the beck, and has been used to form part of the footings for the northern part of the range above; a line is marked here on the Ordnance Survey 1857 6" map, indicating that the stone-lined drain may once have continued to the beck. Further to the south, there is an angular earthwork platform partly overlain by the south building which also appears to contain angular rubble footings. It may represent the remains of an earlier building or perhaps artificial levelling upon which to erect the existing structure.

- 3.20 The interior of the building is now accessed either from inside the building to the north or through the arched opening in the south gable. It is floored with concrete, although a small area of cobble and flagstone flooring survives at the north end,

adjacent to a recently inserted breeze-block partition. The first floor extends across the northern half of the ground floor only, and was not accessible at the time of the survey. However, the lower original roof line of the building is clearly visible in the internal north wall, with a small window at the apex. There are a several large wooden racks of uncertain function at first floor level. Four roof trusses are visible internally, each of principal rafter construction, with a large board acting as a tie-beam bolted to the principals' feet (see plate 3). Each principal supports two pairs of staggered butt purlins with keyed through-tenons.

North end

- 3.21 The larger, northern building of the east range is also rectangular in plan and of two storeys with a pitched roof. It is built of coursed squared local stone, roofed with diminishing courses of stone slates and clearly post-dates the south part of the range. In the west elevation, there is a large doorway to the south of centre with a broad arched head of dressed voussoirs with a central keystone (see plate 7). The doorway retains a pair of plank and batten doors with long wrought-iron strap hinges supported on cast-iron pintles. At ground floor level, the central doorway is flanked by a window and narrower doorway to the north, and a further doorway to the south. At first floor level, there is another window at the north end of the elevation, with a loading door at the south end. To the south of the loading door, quoins are visible above first floor level, marking a straight joint between this part of the east range and that to the south. The upper part of the straight joint is obscured by a sloping line of cement, indicating the roof line of a lean-to structure formerly present here. The quoins at first floor level can only be explained by the south gable of the building originally being free standing i.e. built to two storeys whilst the adjacent southern building remained a single storey only, and then a first floor being added to the latter at a later date.
- 3.22 A flight of stone steps against the north gable lead up to a first floor doorway. In addition, a high stone retaining wall fronting the beck curves around to the north-west from the north-east corner of the building. The east elevation of the building is very regular in appearance, being divided into four bays, each containing a window at ground and first floor levels (see plate 8).
- 3.23 Internally, the ground floor is accessed via the doorways in the west elevation, and is divided into four bays of differing widths. The ground floor is floored with concrete; the second bay from the north end also retains the remains of a concrete machine base. A ceiling trap is visible over the east end of the third bay from the north, and in the south-east corner of the floor, a steeply inclined flight of wooden steps leads up to the first floor. A doorway at the west end of the south wall gives access to the upper level of the building to the south. Although the doorway is a later insertion, it retains an earlier door that may have been re-used from elsewhere on site. The door is of board and batten construction; the four boards used in the door are very substantial, and the whole is supported on round-ended wrought-iron strap hinges. The first floor was largely empty at the time of the survey, and is floored with east-west aligned boards (average width 0.15m). It is crossed by five roof trusses of principal rafter form, with large planks acting as tie-beams bolted to the north faces of the principals. Each principal supports a pair of staggered butt purlins with keyed through-tenons.

Water Supply (see figure 6)

- 3.24 The 'Mill Race' supplying the mill complex is clearly marked on the Ordnance Survey 1857 6" map, leaving the Gunnerside Beck several hundred metres to the

north and then following the 800ft contour close to the beck before curving around to the mill. It does not appear on the Ordnance Survey 1912 25" map, although a short section of surviving retaining wall (see below) is shown.

- 3.25 The alignment of the head race is visible as a linear depression following the contours to the north of the mill complex. Its route has been disturbed by landslips and for much of its length it passes through dense undergrowth. The junction with the beck was not located, although it is possible that the fragmentary remains of a weir and sluice may survive here.
- 3.26 The head race is first clearly visible c.25m north of the mill complex, as a linear depression 2m wide and c.0.5m deep. The east side is defined by a c.1m high bank containing much rubble, whilst the west side is formed by the base of the steep natural slope to the west. Some 12m to the north of the mill complex, the earthwork has traces of collapsed walls on either side but it then becomes much less well defined, curving around to the south-east as a broad shallow depression c.3m wide. Running parallel to it on its west side is a spread bank, containing a short section of revetment wall, c.1m high and built of mixed angular sandstone rubble/river cobbles. The shallow depression terminates at a short section of exposed east-west aligned culvert, 2.30m long and 0.70m wide, with a flagstone roof; the depth could not be gauged. A late 19th century photograph of the site suggests that this culvert was originally contained within a building, although there is little surviving evidence for one here.
- 3.27 Adjacent to the south side of the culvert, there is a small ruined rectangular structure, c.5m long by c.4m wide, and represented by coursed squared sandstone walls standing up to c.0.5m in height (see plate 9). Its function is unclear, but it is likely to be the west end of the former mill building, depicted from 1843 to 1912 and shown on the late 19th century photograph. To the rear (west) of the back wall of this ruined structure is a shallow earthwork which might represent the remains of a bypass leat which diverted the water away from the mill wheel. This leat may then have been directed through the blocked culvert-like opening at the base of the west wall of the yard, and then underground to the arched culvert on the east side of the access track and so into the beck.

4 DISCUSSION AND CONCLUSIONS

- 4.1 The mill complex stands on the west side of the beck, forming a definite physical and visual northern limit to the village here. It is located at the north end of the area defined as the primary area of settlement at Gunnerside, in close proximity to a pound or pinfold, and the village smithy. The concentration of these buildings here, their orientation towards the tracks leading to the mines, and their location above the flood level of the beck (in contrast to the domestic buildings in the village), creates an important reminder of the former self-sufficiency of the settlement, and of its industrial past (Vyner 2001, 17). The juxtaposition of the pound and mill is also interesting, as both are important elements (and indeed symbols) of manorial administration and tenants' responsibilities (Moorhouse 1981a & 1981b).
- 4.2 As stated above, it is not known at what date a water mill was first established in Gunnerside, although comparative evidence from Swaledale and other parts of Yorkshire might suggest that it dates from the later medieval period. It could have served a small settlement, perhaps grinding oats and other cereals grown in lower and middle Swaledale, with corn being imported from local markets such as at Richmond. Alternatively, the mill might be associated with the growth in population resulting from settlement at Lodge Green in the 16th century; the earliest known reference to the mill dates from 1635, shortly after Gunnerside was described as a 'town' in local court records, and by which time most townships in lower and middle Swaledale had their own watermill, as well as some others in the upper parts of the valley.
- 4.3 Before discussing the on-site remains, it should be made clear that the actual mill building itself is no longer extant and has not been for some time. Although a number of other sources (e.g. Vyner 2001, 17) state that the mill machinery and waterwheel were located in the east range, this is clearly not the case, and this conclusion appears in part to be based on a mistaken, but understandable, reading of the tail-race which emerges from beneath the centre of this range. There is no structural evidence that either of the buildings in the east range functioned as a watermill. The head race or leat supplying water to the complex is orientated on what is now the south end of the west range, where a substantial east-west aligned building is shown on the historic maps; furthermore, the west range is described as 'dwelling house and cornmill' in the 1843 tithe map schedule. A linear pit, almost certainly a wheel pit, was formerly visible on the north side of the yard (Mr G Staines, *pers. comm.*), adjacent to the present south end of the west range. Given the height of the head race to the north, the waterwheel would probably have been either overshot or backshot; the former is more likely. It is unclear how water was physically carried from the head race/culvert to the top of the wheel, but it was probably via a high level wooden pen-trough or lauder, which might have passed through an upper floor opening in the building, as is the case at the Grinton lead smelting mill. Once it had passed over the wheel, the water would have run down the tail race which emerges from beneath the centre of the east range. The other culvert on the east side of the access track may have been part of a bypass system.
- 4.4 Apart from this, unless more evidence is forthcoming, there is little that can actually be stated about the former mill building. Its size, as depicted on the historic maps, suggests that it may have housed two pairs of stones, and would no doubt have undergone modification during its lifetime; work in north-east Yorkshire has indicated that most water mills were improved in late 18th-early 19th centuries (Harrison 2001, 86). It would be very interesting to view the internal photographic

view of the mill allegedly held by the Calvert family, or any other similar material, to see if the waterwheel and other mill machinery owed anything to the influence of lead mining in the area, in terms of their construction and engineering. The mill was presumably demolished in the mid 20th century to make way for the bus garage on the site.

- 4.5 There are no medieval elements preserved in the fabric of the existing structures of the site, although it is possible (but unlikely) that some of the earthworks on the east side of the east range could represent earlier building platforms. The earliest surviving element in the complex may well be the leat or head race itself which, although subject to improvement and presumably repeated cleaning, could preserve part of its late medieval or early post-medieval form. The provision of a long leat without a pond is typical of steep sided valley sites in areas of high rainfall (Harrison 2001, 15-17). The short section of culvert at the leat's south end is probably of 19th century date.
- 4.6 The earliest surviving part of the complex is represented by the central part of the west range, almost certainly the much mutilated remains of a two-cell direct-entry house with an axial stack. Such houses are well known in Swaledale and Wensleydale (Harrison & Hutton 1984, 74-75 & 109; McLellan 2000) and they appear to date from the late 17th and 18th centuries. Surviving Wensleydale probate inventories from the same period show that such houses were typically well furnished, with a main living room and one or two parlours on the ground floor, and an upper floor that was not used for storage. They may have had a milkhouse or dairy, but were very rarely provided with a kitchen (Harrison & Hutton 1984, 216-217). The mill house appears to have followed this general pattern, with direct entry into a room with a large fireplace that would have been used for cooking, linked to a further room to the south. Stairs from the north cell led up to the first floor, where a chimneypiece of early 18th century appearance survives. However, this is clearly set into a larger opening, which appears to be located in an earlier structure which was built onto to raise the building to its present height. This earlier structure might be the remains of a firehood, or perhaps represent one side of an earlier roof line at a much steeper pitch than that now existing.
- 4.7 There are also other indications of further changes to the mill house, for example the plinth running along the base of the east elevation. It is probable that all of these apparently anomalous features relate to the alteration of a late 17th-early 18th century house during the late 18th-early 19th century. Swaledale and Wensleydale experienced a major building boom during the 17th century, starting in c.1640 and peaking towards the end of the century. This marked the first phase of vernacular building in permanent materials in the area, and accompanied tenurial changes from tenant farming to freehold in the early 17th century (Harrison & Hutton 1984, 216-218). It seems likely that a new house, perhaps replacing an earlier structure, was built at the mill site in the late 17th-early 18th century; a number of other houses and buildings to the south within the primary area of settlement at Gunnerside may also be 17th century in origin (Vyner 2001, 15-17). The new house was probably provided with a firehood (these continued to be built in Swaledale houses until at least 1757 (McLellan 2000, 33)) and may well have been thatched, with a lower first floor than now exists. At a later date, probably in the late 18th century, the firehood was removed, enabling the insertion of a fireplace on the first floor and the provision of a cooking range on the ground floor. The first floor would have been heightened at the same date and the house re-roofed in stone slates. The painted decoration on the north wall of the ground floor is a rare survival (Harrison & Hutton 1984, 195-197); Hartley and Ingilby noted the

remains of stencilled decoration in a few houses and suggested that it had been fashionable to use such embellishment in c.1850 (Hartley & Ingilby 1981, 25).

- 4.8 The west range has clearly undergone much further alteration since the late 18th century. If the above development outlined for the mill house is accepted, then this would suggest that the mill and house were both initially free-standing structures. Map evidence indicates that some extension to the south end of the west range had taken place by the mid 19th century, with further westward and northward extension between 1853 and 1857. The long east-west aligned building shown on a late 19th century photograph, forming part of the west range but set above the level of the mill, is of particular interest. It seems that it was constructed in the manner of a bank barn, with a single storey at the upper west end and two at the lower east end. Unfortunately, all evidence for its form was removed by later alterations (see below).
- 4.9 The expansion of and additions to the west range may well have been linked to the increase in population due to the growth of the lead mining industry. As increasing numbers of people worked and lived in the Gunnerside area, there would have been an increased demand for flour for bread and oatmeal for oatcakes. The mill may also have installed machinery, such as oat rollers, to produce fodder for the many horses employed locally. There may have been a drying kiln for the oats present on site and perhaps even a barley mill; examples of the latter are known from water mills on the North York Moors (Harrison 2001, 149-150).
- 4.10 The earliest part of the east range is at the southern end, a structure which was originally of a single storey. The surviving detailing and its overall plan form suggest that it is of late 18th century date and that it probably formed a stables originally. Both map and structural evidence show that the longer and wider building to the north was built in the later 19th century. This building preserves internal evidence for a hoist in the form of a ceiling trap and may have functioned as a warehouse and/or preparation space, although there is no surviving evidence for machinery. At a later date, the southern building was raised in height to two storeys, and the large cart entrance constructed in the south gable; the uncommon positioning of the cart entrance here must have been dictated by the topography of the site. The form of the roof trusses surviving around the complex suggest that a general re-roofing took place in the later 19th century; only that surviving at the north end of the east range may be earlier.
- 4.11 Documentary evidence suggests that water-powered milling had ceased on site by c.1900. As with the growth of the mill complex, its decline would have been heavily influenced by the disintegration of the local lead mining industry in the late 19th century and the accompanying depopulation (Bagenal 1999, 47). The complex was probably given over to general storage and a flour/grocery business in the early 20th century, followed by use as a bus garage. The latter marked a period of demolition and re-organisation on the site. The east-west aligned mill building was demolished and the south end of the west range was totally rebuilt. The yard around the mill was partly covered over and the boundary wall surrounding the site partly rebuilt at the south end. The interior of the north end of the east range was probably also changed, with a concrete ground floor being inserted, together with a machine base. In the late 20th century, the complex appears to have fallen into gradual disuse, before being purchased by the current owners in 2000.

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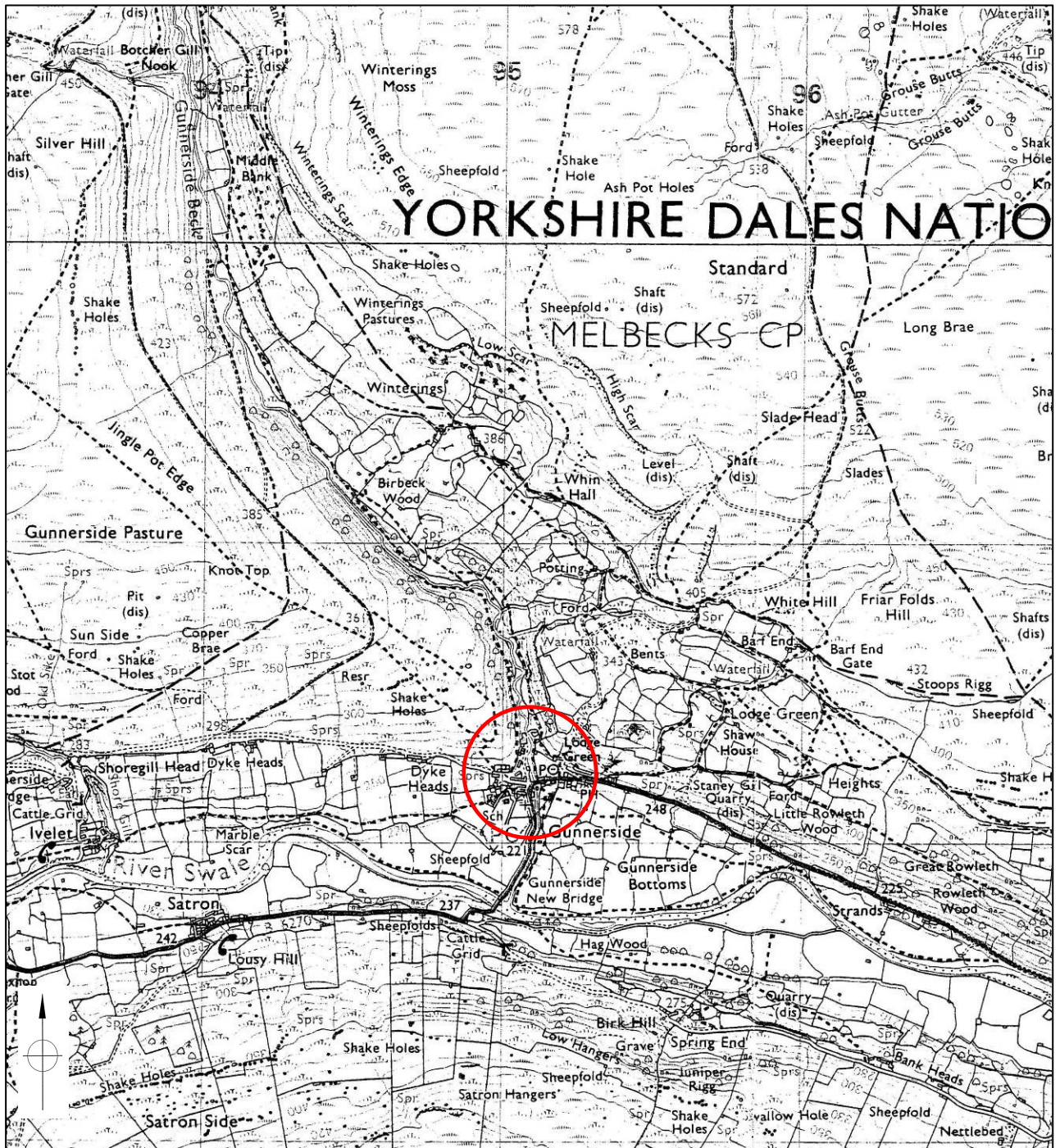
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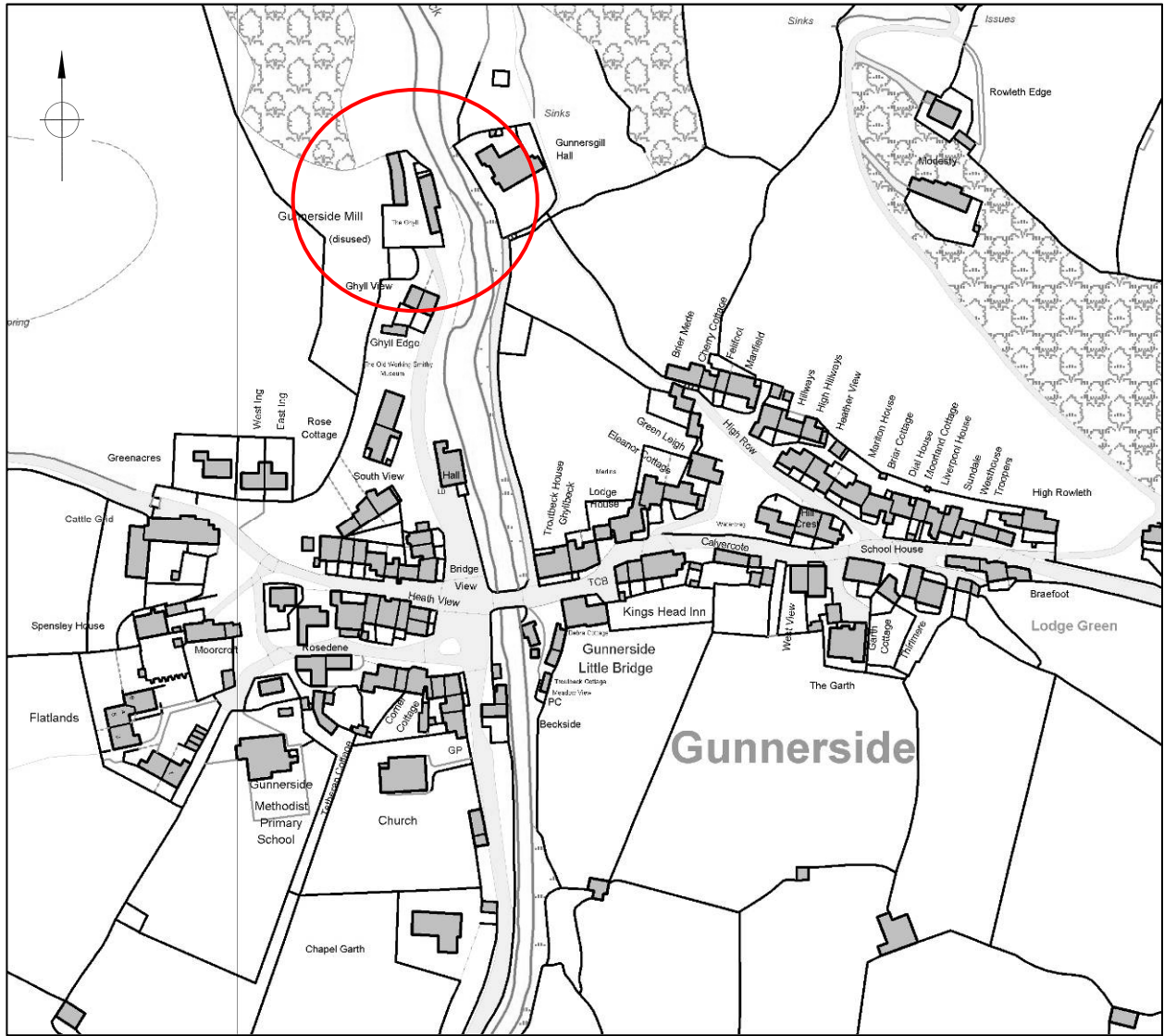
6 ACKNOWLEDGEMENTS

- 6.1 The archaeological recording at Gunnerside Mill was initiated by the Archaeological Conservation Officer at the Yorkshire Dales National Park Authority, Mr Robert White. The on-site recording was undertaken by Shaun Richardson of EDAS, and he also produced the fieldwork records and a draft report. The final report was produced by Ed Dennison, with whom the responsibility for any errors remains. EDAS would especially like to thank Mr G Staines and Miss A Bacon for allowing access to the site and permission to undertake the survey.

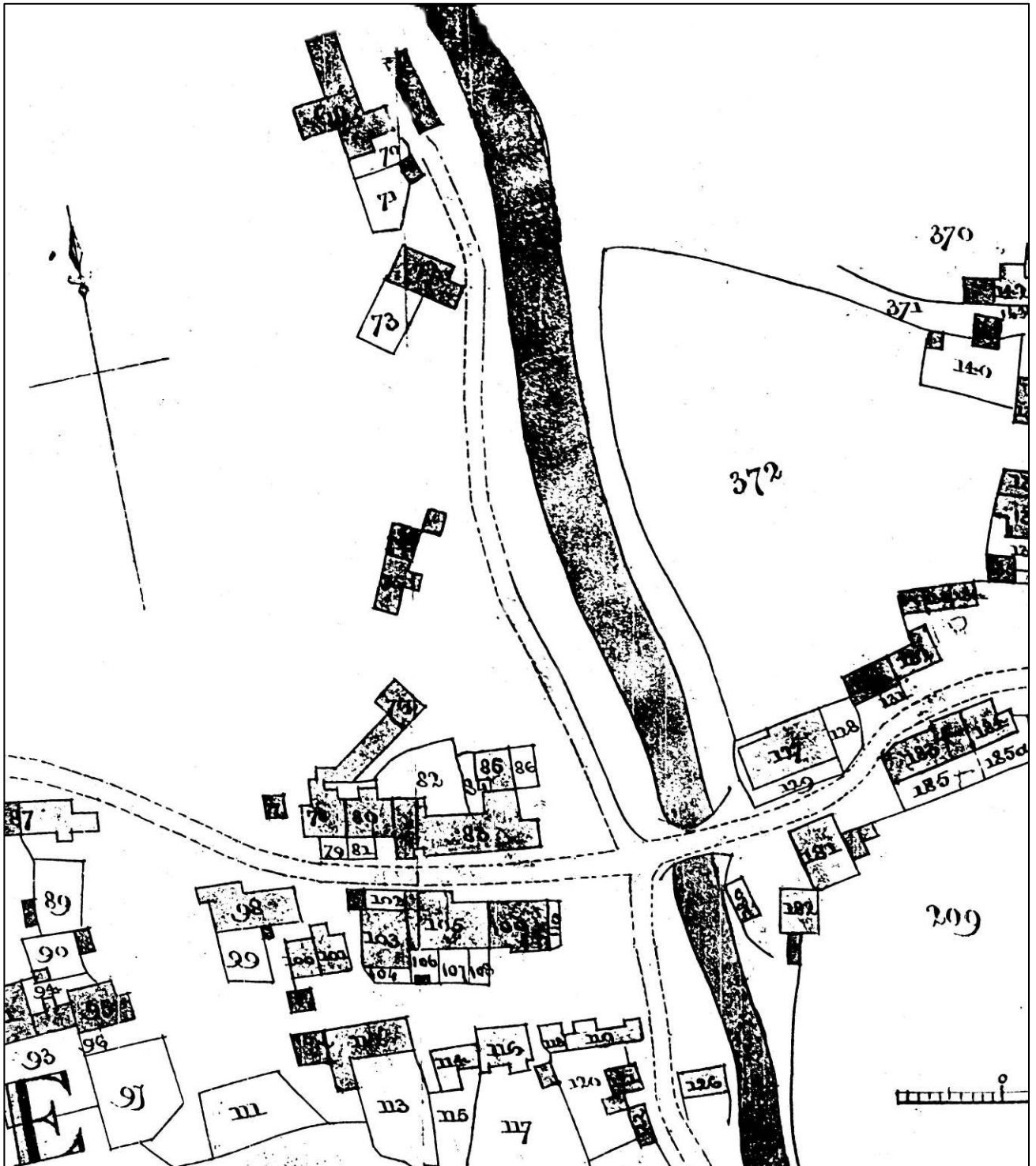


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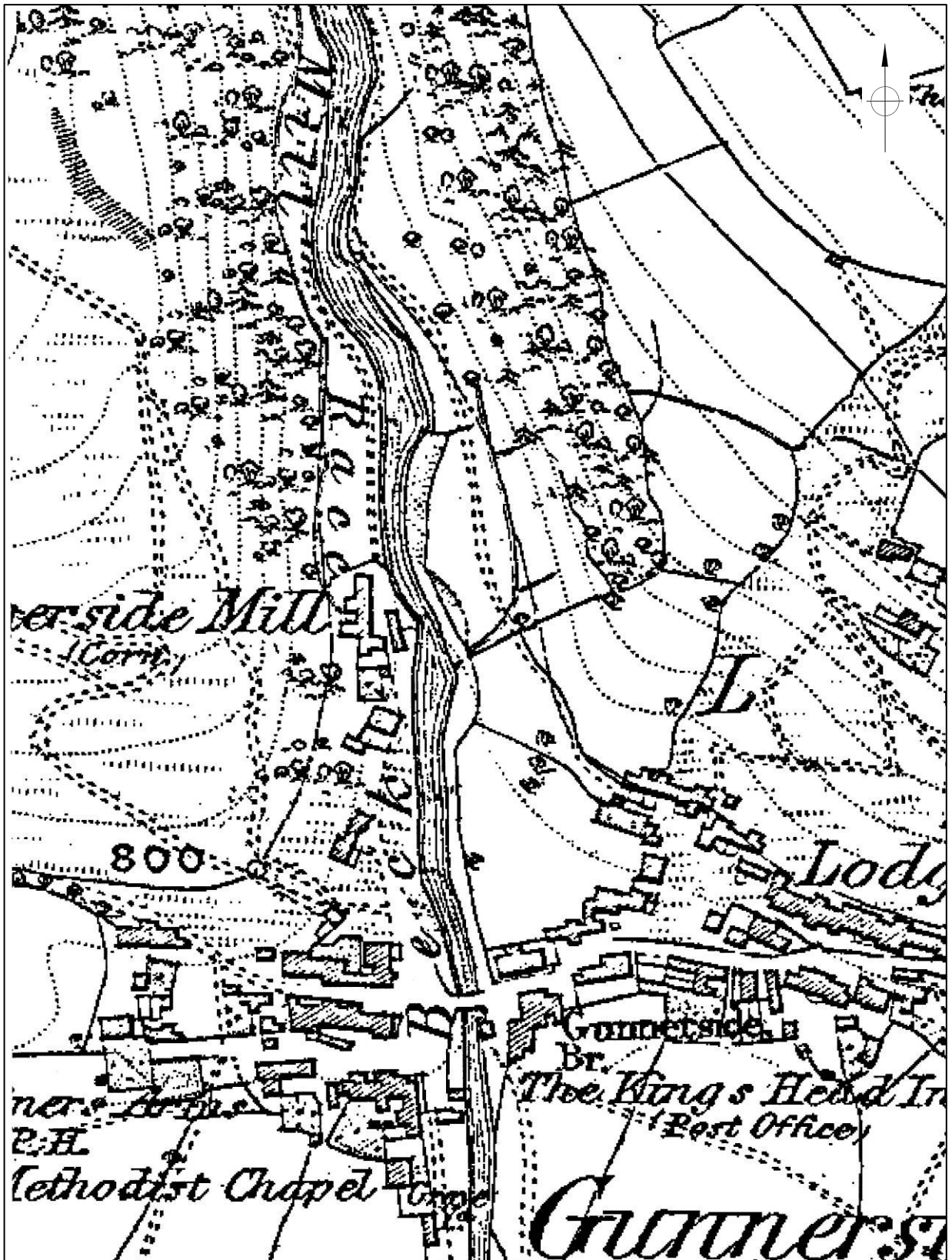


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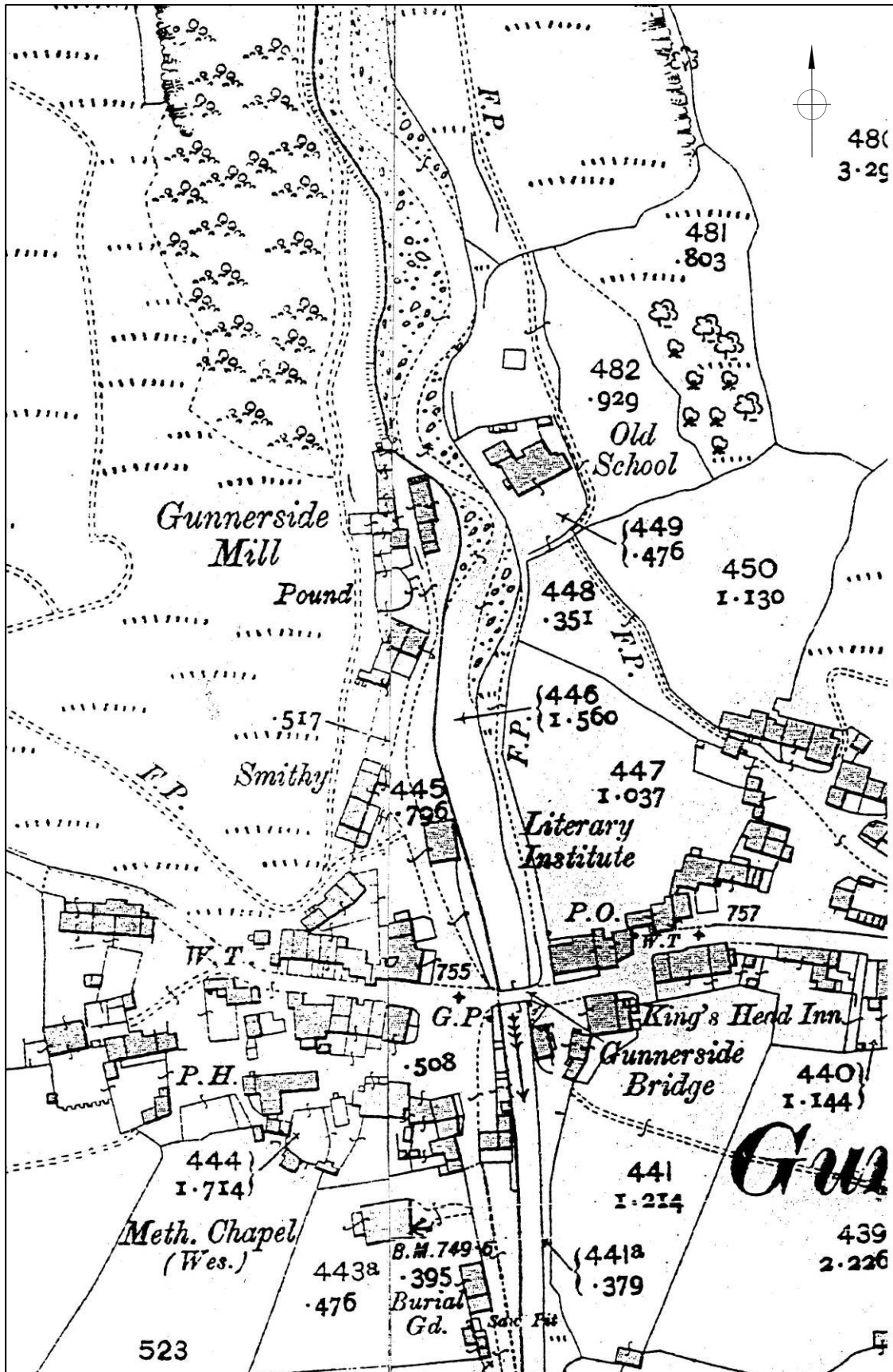
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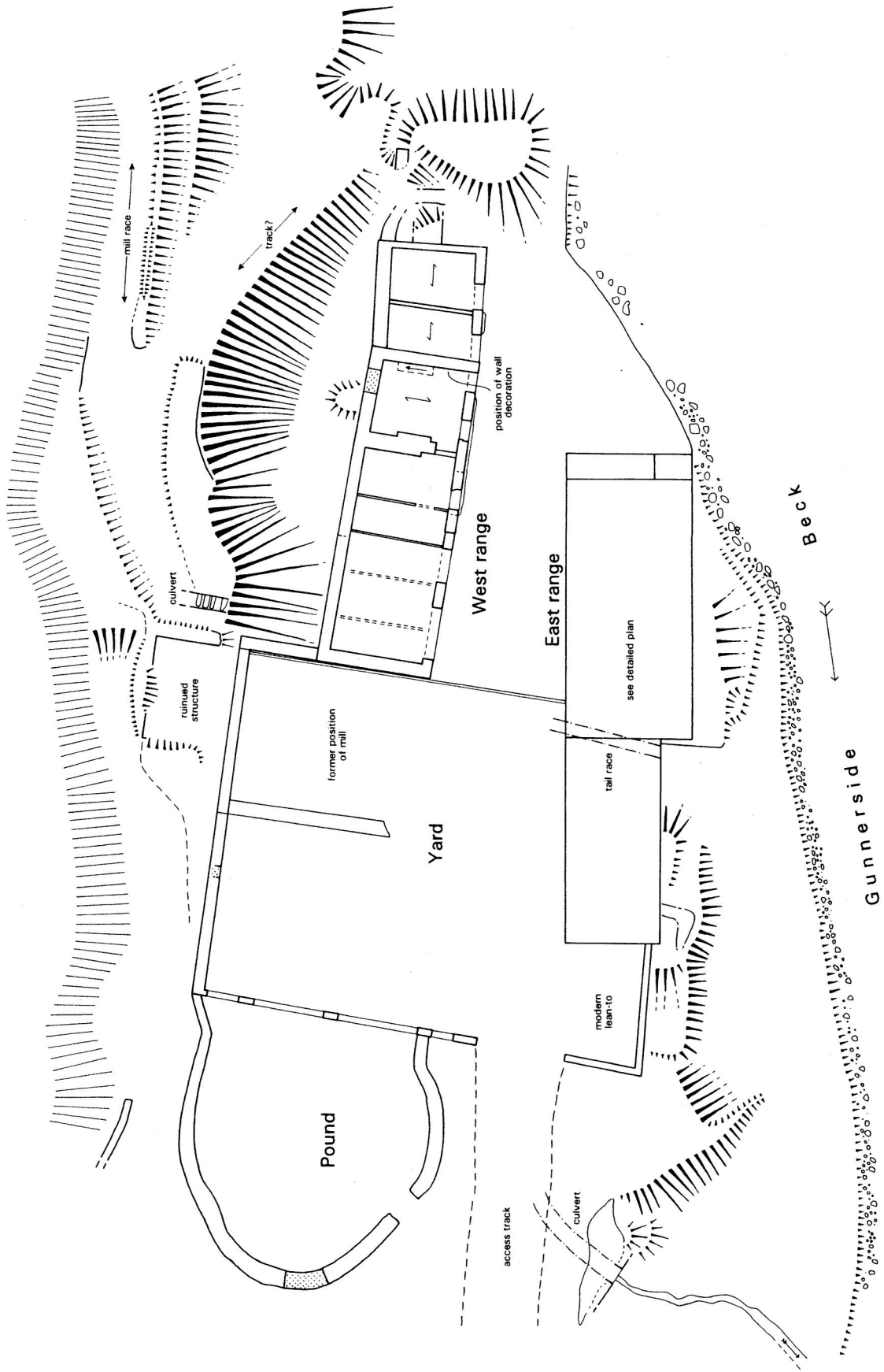
Source: Ordnance Survey 1857 6" map sheet 51

PROJECT		GUNNERSIDE MILL	
TITLE			
1857 ORDNANCE SURVEY MAP			
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EDAS		FIGURE	
		4	



Source: Ordnance Survey 1912 25" map sheets 51/3 & 51/4

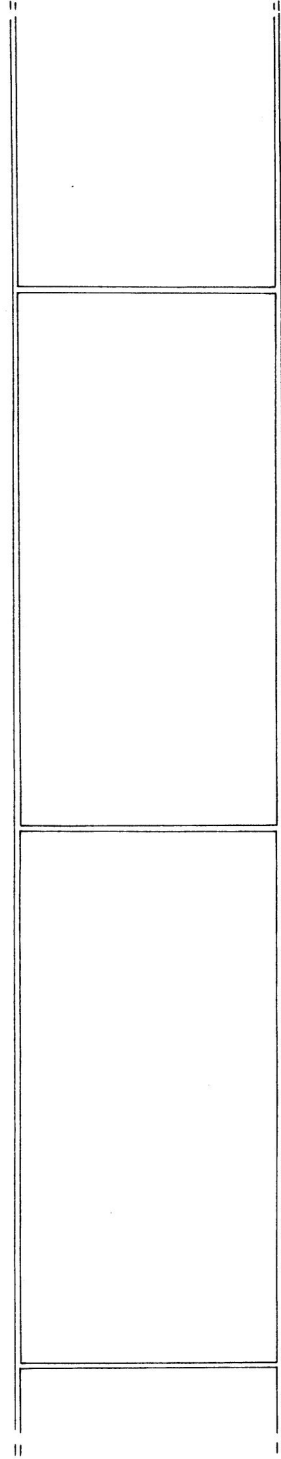
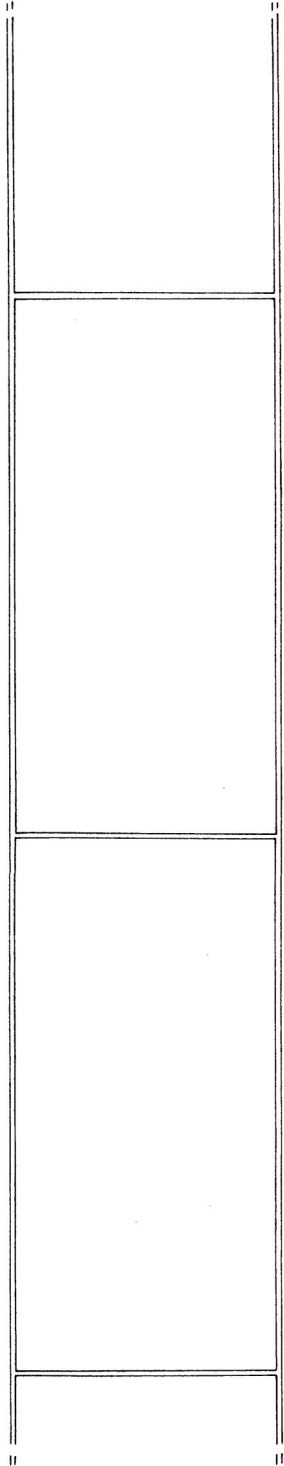
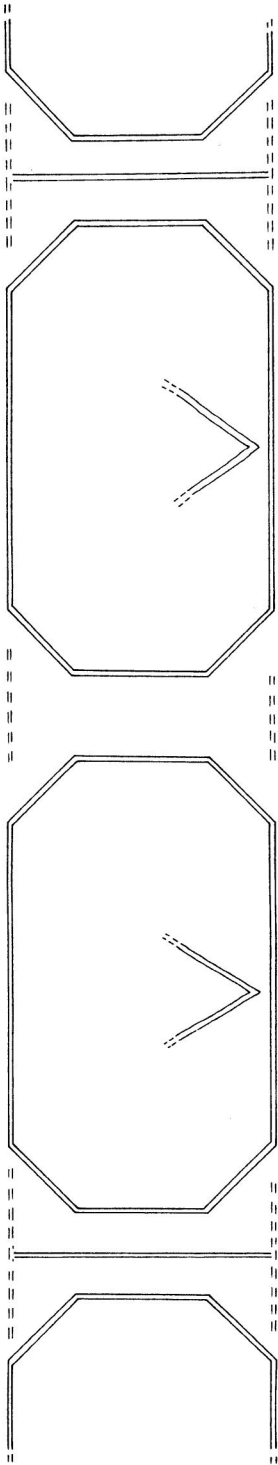
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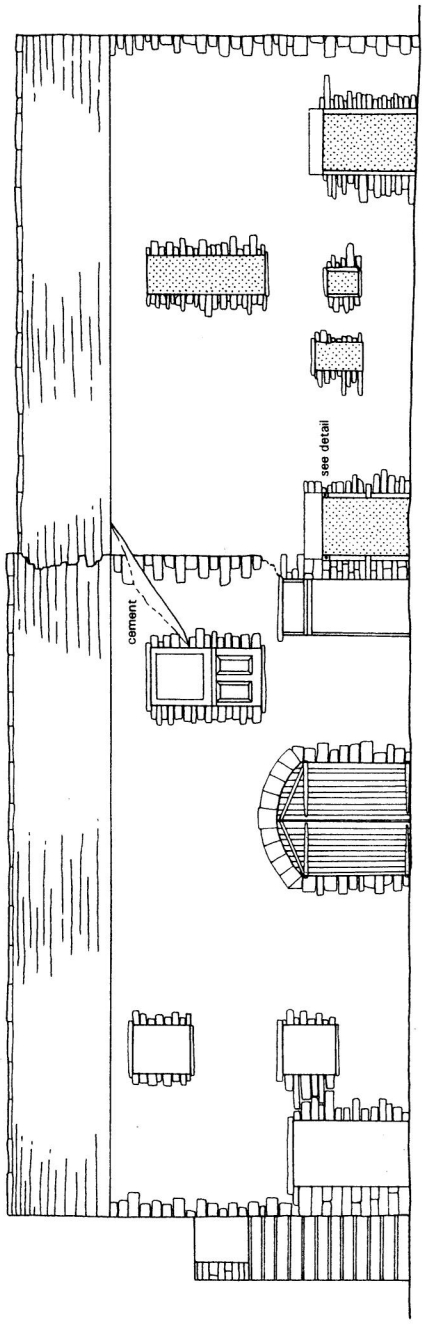
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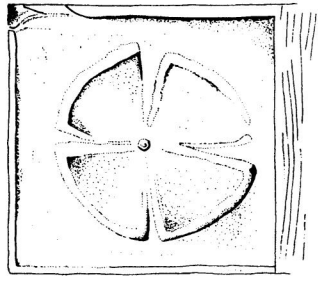
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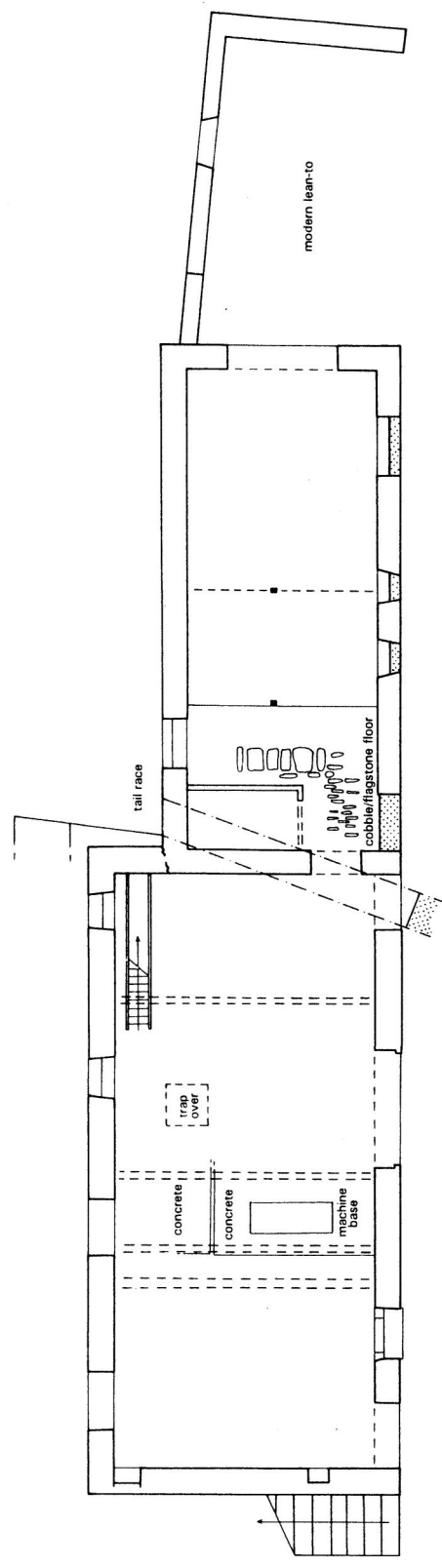
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TITLE	PAINTED PLASTER IN WEST RANGE		
SCALE	AS SHOWN	DATE	NOV 2011
	EDAS	FIGURE	7



East range: west elevation



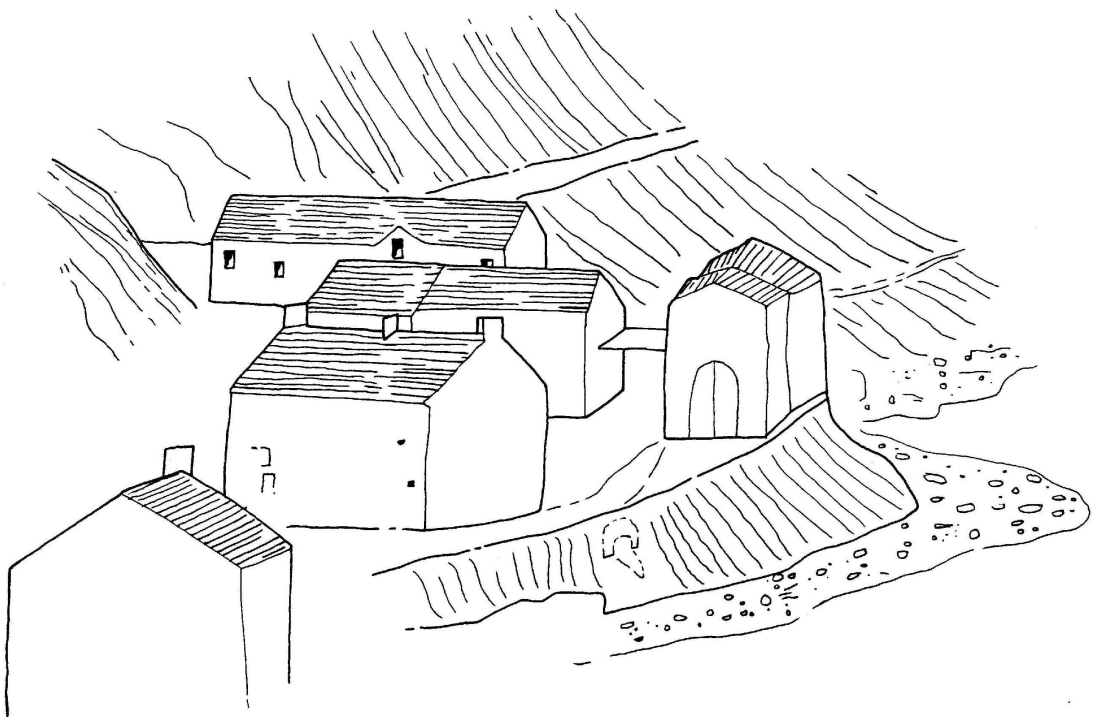
Detail of decoration on door frame
(not to scale)



East range: plan



PROJECT	GUNNERSIDE MILL		
TITLE	EAST RANGE		
SCALE	AS SHOWN	DATE	NOV 2011
	EDAS	FIGURE	8



Source: Sketch from photograph held
by Mr G Staines, The Old Mill,
Gunnerside

PROJECT		GUNNERSIDE MILL	
TITLE		PART OF LATE 19TH CENTURY PHOTO	
SCALE	NTS	DATE	NOV 2011
EDAS		FIGURE	9



Plate 1: General view of mill complex, looking SE.



Plate 2: Culvert on east side of access track, looking NW.



Plate 3: Interior of south end of east range, looking N.



Plate 4: General view of west range, looking NW.



Plate 5: Fireplace in north end of central part of west range (first floor), looking S.



Plate 6: West elevation of east range (south end), looking E.



Plate 7: West elevation of east range (north end), looking E.



Plate 8: East elevation of east range, looking W.



Plate 9: Ruined structure beyond west side of yard, looking N.