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ARCHAEOLOGICAL INVESTIGATIONS AT FARNLEY MILL, FARNLEY TYAS, WEST YORKSHIRE

SURVEY REPORT

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NON-TECHNICAL SUMMARY

In April and May 2012, ArcHeritage undertook desk-based research, walkover and detailed earthwork surveys at the site of Farnley Mill, Farnley Tyas. The surveys were required to record the extent of survival of features relating to the mill, its water management system and associated cottages and outbuildings. ArcHeritage were commissioned by the East Peak Innovation Partnership and Farnley Estates Ltd to undertake the project.

The results demonstrate that significant remains of the mill survive, revealing most of the footprint of the mill buildings as well as several standing walls associated with the 1790s mill structure, the wheel pit and the steam engine setting. Other features include a gas holder base associated with a short-lived gas works at the site, well-preserved remains of the water management system, and features associated with managers' cottages and outbuildings. The remains of the 18th-century mill and power systems are considered to be of Regional archaeological significance, whilst the other features identified are of Local archaeological significance. The archaeological resource is currently at risk from tree roots across the site, whilst standing and pooling water is considered to be a threat to floor deposits at the western side of the mill.

KEY PROJECT INFORMATION

Project Name	Farnley Mill
ArcHeritage Project No.	4026141
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1 INTRODUCTION

This report presents the results of an archaeological survey of Farnley Mill, Farnley Tyas, Kirklees, West Yorkshire. The survey was required to record the visible features at the site to inform a scheme of interpretation and future management plans. Desk-based research was followed by a walkover survey and detailed earthwork survey of the features relating to the mill and associated cottages. The detailed survey was carried out to English Heritage's Level 2 standard, in line with a brief provided by East Peak Innovation Partnership (see Appendix 5). The site is owned by Farnley Estates Ltd, and ArcHeritage were commissioned by the East Peak Innovation Partnership to undertake the project.

2 LOCATION, GEOLOGY AND TOPOGRAPHY

The site is located along the Range Dike, in a wooded valley *c*.500m to the east of Netherton, Farnley Tyas, in the parish of Kirkburton and district of Kirklees, West Yorkshire (Figure 1). The site, centred on SE 1766 1288, comprises the remains of mill structures, cottages and the water management system. Much of the woodland covering the site is quick-growing birch and scrub of 20th-century origin, though just to the northeast is Carr Wood, which is classed as ancient woodland. The walkover survey area was *c*.4.6ha in extent. Farnley Estates owns the site, and a public footpath runs through the survey area. The underlying geology is mudstone, siltstone and sandstone of the Pennine Lower Coal Measures Formation and Greenmoor Rock.

3 METHODOLOGY

3.1 Aims

The aim of the project was to gather sufficient information to establish the presence or absence, character, extent, state of preservation and date of archaeological and historical features and deposits within the development area. Specific objectives of the surveys were:

- To provide a Level 2 archaeological survey and investigation of the former mill building and related features, comprising a metrically accurate topographical plan and accompanying descriptive and interpretative report;
- To provide volunteer and training opportunities for the Huddersfield and District Archaeological Society and the Young Archaeologists Club, including on-site training in a range of archaeological survey techniques and opportunities for volunteers to take part in all aspects of the work;
- To provide material for potential use in interpretation and display.

The scope of the survey was the area outlined on Figure 1, comprising *c*.4.6ha, and included all historic features associated with the mill site and its operation within the immediate surrounding area.

3.2 Methodology

Prior to the commencement of fieldwork, information was collected from the West Yorkshire Historic Environment Record (HER) on the archaeological and historic background of the mill and survey area. This included a search for all recorded archaeological sites and findspots, and historic buildings within a 1km radius of the site. This information is presented in a gazetteer in

Appendix 2, and locations are shown on Figure 2. Information on the historic background of the mill was also requested from Alan Brooke, a local archaeologist who has carried out considerable research into the mill's history. Visits to Kirklees and Leeds Archives to examine original documents were also undertaken.

The earthwork survey was undertaken in two phases. An initial walkover survey comprised an examination of the entire survey area, with features noted on a sketch plan. Features identified were given individual record numbers and notes were made on the nature, form and condition of the features and any visible threats. The walkover survey also allowed the identification of the area in which more detailed survey would be undertaken. A gazetteer of all features identified is included in Appendix 3. This records the feature identifier, description, interpretation, NGR, assessment of significance, current condition, a description of known or potential threats to the feature, and the photo viewpoint number. For consistency, the interpretation categories relate to the RCHME's Thesaurus of Monument Types. A copy of the feature gazetteer is included as an Excel spreadsheet in the project archive; this version also records the dimensions of each feature and the digital photograph number.

During the walkover survey, record photographs were taken of all features, except where they were not sufficiently visible. Record photographs were taken using 35mm black and white print and colour slide film. Supplementary digital photographs were also taken for illustration purposes, though these do not form part of the primary archive. A scale was used in all photographs apart from general shots. Due to the vegetation cover, it was not effective to use a white tape over banks to show the profile, but scales were located to show the height of features where possible. General shots of the site and working shots were also taken. The location and direction of all photographic viewpoints were recorded on a plan, and details of the subjects recorded on photographic registers. A register of all photographic viewpoints and subjects is given in Appendix 4, and viewpoint locations are shown on Figures 11b and 15.

The detailed earthwork survey was undertaken using a Leica 1200 Series Total Station. This covered the main mill complex, between the footpath/boundary wall and the Range Dike, and the water management system (see Figure 11a for location). The head race was not covered by the detailed survey, due to its location at the base of a steep, densely wooded slope which would have been very difficult to survey accurately. It was considered that this feature is accurately represented, as it is shown on the OS map. Measurements were taken at no less than 1m intervals along all walls, and on the top and bottom of banks, ditches and breaks of slope. A profile was taken across the reservoirs and mill site to show changes in height across the site. Field boundaries were plotted to allow the survey to be tied into the OS national grid. It was not possible to get an accurate height above Ordnance Datum for the surveyed features, as there are no benchmarks or spot heights in the vicinity of the site. This was considered unnecessary for the purposes of the survey.

The survey was undertaken between the 12th April and 1st May 2012. A session for the Young Archaeologists Club was held on the 31st March on the site, involving an introduction to walkover survey techniques. Survey training sessions for the Huddersfield and District Archaeology Society were held on the 11th and 17th April.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

4.1 Local area context

A search for known heritage assets within a 1km radius of the survey area was undertaken at West Yorkshire Historic Environment Record (HER). This recorded 16 sites, of which eight are listed buildings. The sites are listed in Appendix 2, and their locations are shown on Figure 2.

There are three Prehistoric findspots within the search area, all surface finds. These comprise a polished stone axe and leaf-shaped flint arrowhead of Neolithic date (sites 11-12), and a stone grain-roller of Neolithic or Bronze Age date. These may be casual losses, but indicate some Neolithic to Bronze Age activity in the area. Just outside the search area is a possible Bronze Age or Iron Age settlement and cultivation site represented by earthen banks and cairns (HER site 1043, SE 188 121). Two cropmark sites are within the search area; one of these may represent a prehistoric enclosure (site 10), but is obscured by natural features, whilst the other is clearly of recent agricultural origin (site 9).

No clear medieval sites were within the search area, although the Mansion House at Storthes Hall Road (site 16) is thought to be on the site of a medieval farmstead or hamlet. Farnley Tyas was recorded in the Domesday Survey of 1086 as 'Ferlei' (Smith 1961, 267), and in 1236 was associated with the family of Baldwin le Teys. Franco Tyas was granted free warren in his demesne lands of Farnley and Woodsome in 1267, and the village was associated with the Tyas family until late 14th century (Faull and Moorhouse 1981, 370).

The remaining heritage assets are of post-medieval date. These relate to structures at Netherton, including four grade II listed farm buildings of late 17th- to early 19th-century date (sites 2, 5, 6 and 7). There is also the site of a tannery (site 4), which was shown on the 1853 OS map, as well as the former location of a pump house, built in the 19th century to supply water to the village (site 3). A farmhouse and cottage at Moorside (site 13) overlook the valley from the opposite side, and are grade II listed. Further to the northeast, Woodsome Lees manor house (site 8) is of 17th-century date. The Storthes Hall Mansion House (site 16) was originally of late 18th-century date, and was reused as a hospital. Its lodge (site 15) was constructed in 1903 and is in Edwardian Free Style.

In 1732, the Earl of Dartmouth came into possession of the manor of Farnley Tyas, and the village continued to be part of the Dartmouth estate until the mid-20th century. The village had a principally agricultural economy, though clothiers formed a significant part of the population in the 18th and early 19th century, working as handloom weavers on a cottage industry basis (Farnley Tyas village website).

4.2 Farnley Mill

Farnley Mill (site 1) was first recorded in Land Tax Returns of 1793, when it was leased by William Roberts. It appears to have been constructed around this date, and in the 1805 Terrier of the Dartmouth Estate it was referred to as a 'fulling and scribbling mill built by the tenants (Roberts and Co) in 1794... The mill is chiefly worked by a steam engine as the water is a very poor supply from a few small reservoirs' (KC1059). A plan of the Farnley Tyas estate within the terrier depicted the mill (as a single rectangular building) with three reservoirs. It was not possible to copy this plan at the archives. In the 1828 Terrier, it was recorded as a stone and slate scribbling, carding and slubbing mill consisting of five chambers, with an engine house

and steam engine of 11 hp and water wheel of 16 hp, on a lease expiring 1 August 1836 at a yearly rent of £5-5-0 (1828 Dartmouth Estate terrier). An accompanying sketch plan of the mill (Figure 3) depicted the general layout of the buildings, with notes on the side recording the machinery: four carders, four billys, six scribblers, two devils or fearnoughts, as well as water power of 16 hp for three months, [steam] engine of 10 hp, and coals, 10 dozen a week at 6 shillings per dozen. At that date, the tenants were Robert and Kay. It is unclear from the sketch plan exactly what the note '16 h.p. – 3 months' refers to. It may mean that 16 horse power was only available for three months of the year, due to fluctuating levels of water in the catchment. At other times of the year, such as summer and winter, the water power may have been substantially lower, or only available for short periods of time.

In 1834, the Factory Commissioners' Report recorded the mill as providing scribbling and slubbing for domestic manufacturers, powered by a 10 hp atmospheric engine and 12 hp water wheel on a 'nameless rill'. There were 21 employees, 11 of which were under 14 (five girls and six boys), as well as three girls aged between 14 and 16. The mill was run by Roberts, Kay and Dyson in 1834, but by 1836, a report in the *Halifax Guardian* mentioned that it was operated by Baildon, Dyson and Co (HG 2 July 1836). The 1838 Farnley Tyas Poor Rate Book recorded the mill as occupied by Fairbourn and Pearson (UKB/FA), and an 1847 trade directory recorded Fairburn and Pearson, scribblers and woollen manufacturers. In 1850, the mill was advertised to let in the *Leeds Mercury*. This described:

> 'A scribbling mill, together with two cottages and the outbuildings belonging thereto, late in the occupation of John Pearson and Co. There is an excellent steam engine of 14 hp with boiler, stove, five scribblers, four billys (60 spindles each), willy, Fearnought and other machinery for carrying on the woollen business to advantage.' (Leeds Mercury 17 August 1850)

All the early 19th-century reports indicate that the mill was utilised for preparatory wool processing activities. Initially, wool from a fleece would have to be sorted into different grades and then scoured to remove dirt and grease. It was then willeyed, which involved further beating of the wool and separation of the mass of fibres, before it was carded to further disentangle and straighten the fibres. This involved drawing wire teeth through the fibres to produce a roll or sliver. Fearnought machines featuring cylinders with hooked teeth were used to disentangle the wool fibres, after which scribbling and carding machines were employed, scribblers producing a coarser product than carders (Giles and Goodall 1992, 7-9). The slubbing billy was used to combine slivers and provide twist, and to wind the product onto bobbins. The yarn would then be distributed to clothiers in the nearby villages, for spinning and weaving.

The 1805 terrier indicates that fulling may also have been carried out at the mill; this was a finishing process for woven fabric, involving scouring and washing the cloth in fulling stocks, where the material was pounded by wooden hammers to give a felted appearance. The fabric would then be stretched and dried on tentering racks, with indoor tentering in dryhouses developed in the early 19th century (Giles and Goodall 1992, 12). It is interesting that prior to 1874 only one document, the 1805 terrier, refers to fulling at Farnley Mill. The 1828 terrier does not mention fulling, and no fulling stocks or drying apparatus were mentioned in the 1850 advertisement for the mill.

The mill lease appears to have been purchased by Herman Geissler, a fancy woollen manufacturer who was born in Frankfurt. In the 1851 census, Geissler was recorded as being married to Harriet, who was born in Kirkburton. They lived at the Dean, Kirkburton. Harriet was the daughter of William Carter, a fancy manufacturer residing at the Dean, Kirkburton. He ran Ellis Mills and the Dean Dye Works. As well as operating Farnley Mill, Geissler also took over Carter's business after his retirement in the 1860s. Geissler died in 1880 and was succeeded by his son, William Carter Geissler, who was in turn succeeded by his brother Gustav in 1888 (Burton Dean website).

The focus of production at the mill appears to have changed after Geissler took it over, with spinning and weaving being introduced for the manufacture of fancy woollens. Spinning mules and jennies were recorded in a report in the Huddersfield Examiner in 1864, when a 15-year-old girl was injured when her clothes were caught in a jenny (HE 22 July 1864). Mechanised spinning and weaving were introduced to the woollen industry in the 1820s-30s, though take-up was relatively slow until the 1850s, and handlooms continued to be used widely in the manufacture of fancy woollens. It is unclear whether Geissler's company continued to provide processed yarn to domestic weavers, or concentrated on production of his own goods.

An indenture of 1874 between William Walter, Earl of Dartmouth and Herman Geissler related to a lease of the mill, waterwheel, cottages and outbuildings, for a term of 33 years from May 1874 (WYL 1219/34). The indenture recorded the property in some detail, including a reference to the waterwheel (which was the property of the Earl) and 'the old shaft and two drums which pass through the old mill'. In addition, it stated that the tenant would 'in the first year of the said term lay out and expend in building improvements and in constructing a new reservoir on the sites already agreed upon'. The accompanying plan and map showed the location of the mill, with three reservoirs (Figure 5b), and the layout of the buildings (Figure 5a). The plan depicted the long rectangular building at the east side as 'woollen mill', and showed the location of the wheel house and a new building to the west called 'weaving shed'. It is unclear whether all these buildings were extant at the time, or included the extensions 'agreed upon'. A report in the Huddersfield Examiner on the 1st January 1876 mentioned that extensive additions had been made to Farnley Mill in the previous year.

The 1854 OS map (Figure 4) depicted the mill as being of a similar size to that shown on the 1828 sketch plan, but the more detailed 1893 1st edition 25 inch: 1 mile OS showed a much larger building (Figure 6). Interestingly, the 1854 map showed four small reservoirs to the west of the mill, whilst by 1874 a much smaller water body was shown at the west end and in 1893 only three were depicted. This may indicate that by the end of its existence, water power was no longer used at the mill, with steam generation requiring substantially less water. Water from the reservoirs may also have been used by the gas plant, mentioned in Section 4.4 below. The new reservoir referred to in the 1874 lease may be the one to the northwest of the mill, depicted in 1893, north of Mill Lane. Water from this reservoir may have been taken into the east end of the mill, though no infrastructure associated with this is visible. Given its location, no other obvious purpose for this reservoir is known.

The 1874 lease document includes subsequent indentures relating to the mill. The first, dated to December 1880 was between Geissler's widow Harriet and his son William Carter Geissler, assigning the mill to him in consideration of a sum of 10 shillings, for the residue of the

unexpired term of the lease. A further document, dated 11th May 1886, was between William Henry Armitage, accountant of Huddersfield, and William Walter, Earl of Dartmouth, surrendering the mill to the Earl in satisfaction of all claims against W.C. Geissler. It stated that the mill had been conveyed to Armitage in January 1886 'upon certain trust for the creditors of said William Carter Geissler'. This suggests that Geissler was facing bankruptcy at the time.

On the 13th February 1886, the machinery from Farnley Mill was advertised for sale in the Huddersfield Examiner. Shortly afterwards, in April, the steam engine, boiler, fittings and gas works were also advertised for sale. The machinery to be sold included scribblers, carders, self acting and hand [spinning] mules, twisting and winding frames, 36 power looms, perpetual, brushing machines, raising gigs, tentering machine, washing and milling machines, four fulling stocks, a hydro extractor and a willow [willey]. The stock of material, woollen and worsted yarns were also sold (HE 13 February 1886). The separate sale included a 35 hp steam power with 28 inch cylinder and five feet stroke by Cole, Merchant and Co and a 'nearly new' boiler with 8 Galloway tubes, by J. and J. Horsfield of Dewsbury (HE 10 April 1886).

Geissler and Son's Ellis Mill in Kirkburton was also sold, in 1884, though the company still operated from Carter Mill, specialising in livery cloth. The company appears to have closed down during the First World War (Burton Dean website). There are no clear records of Farnley Mill having been reoccupied after the sale of machinery in 1886, though it was not described as disused on the 1893 OS map. The sale of the machinery suggests that no other tenant was being sought; it is possible that its remote location made it uncompetitive in comparison with much larger mills in the nearby towns and villages.

The 1906 OS depicted the mill as disused (Figure 7); many of the buildings were still shown, though most of the original mill and the 'woollen mill' at the eastern side had been demolished. A photographic postcard mailed in 1907 showed the west side of the mill, probably part of the 1874 extensions (Plate 1). This indicated a two-storey flat roofed building, roughly square in plan, with a large chimney on the north side. The building appears to be of stone construction. The east elevation had one row of five rectangular windows on the upper storey, though it is possible that the south side had windows on both storeys. The 1923 Farnley Tyas rate book recorded 'here are derelict buildings and disused reservoirs' (UKB/FA). Further demolition had occurred by 1932, when the northern part of the mill was still depicted (Figure 8). The 1948 map showed much the same layout (Figure 9), but by 1964 no structures were shown other than the revetment wall at the west side of the mill. The mapping suggests that the mill was not demolished in a controlled manner, but was left for long periods, possibly used as an unofficial quarry with removal of the building materials for use in walls and structures. Although structural remains and the mill ponds remain at the site, they are not depicted on mapping after the 1960s, after which the area is shown as woodland.

4.3 Mill Cottages

There is no record of the date of construction of the two cottages adjacent to the mill, but they are likely to be roughly contemporary with the original mill. They were recorded in the 1828 Terrier under the lease of Roberts and Kay, as two cottages of three rooms each, one rented by John Pearson, the other by John ?Milner. The record also mentioned a stable and cowhouse, as well as fives closes of land, jointly leased for £15-4-0 per year. The lease for the

mill was recorded separately. The 1838 rate book recorded two 'houses at Farnley Mill', one leased by Henry and John Pearson, the other by John Pearson (UKB/FA).

The inhabitants of the cottages were listed in the censuses from 1841 onwards. This indicates that one cottage housed the overseer or manager of the mill and the other one of the workers, probably a senior worker. John Pearson was still listed in the 1841 census, as an engineer, whilst the other cottage was occupied by Henry Pearson, slubber. Their families also lived in the cottages, but no details of their employment are given. That these two men are managers at the mill is indicated by the 1834 Factory Commissioners' report, which mentioned that 'four slubbers pay eight piecers, and the superintendent or engineer pays four feeders'. In 1851, the engineer was George Dyson, whilst the second cottage was occupied by the Marsh family. Jonathan Marsh, head of the household, was a carder, as was his 15-year-old son, whilst his 13-year-old daughter was a piecer. His five younger children were scholars or infants. In 1861 the occupants of the cottages were the mill manager, Joseph Wood, and a woollen carder, whose name is illegible in the photocopy seen.

By 1871, three households are listed, one being the mill overseer, Henry Woodcock, his wife Ann, a warper, and their daughter. The other households comprised Benjamin Carter, engine tenter and his family, and William Thorpe, scribbling engineer and family. The indenture of 1874 included 'all those several cottages... situate near the mill,... now or late in the tenure or occupation of John Fairburn's representatives' (WYL 1219/34). In 1891, Herbert Carter, woollen weaver, occupied one of the cottages with his family, the other was unoccupied. This is thought to be after Farnley Mill went out of use, so Carter may have been travelling to work in Kirkburton. His surname may suggest a link with the Carter/Geissler families who ran Carter and Ellis Mills in Kirkburton. The census information for 1891 also mentions that the cottage had three rooms, suggesting that no extensions had been carried out after 1828. The 1923 rate book recorded one house and garden at Farnley Mill, as well as land nearby, all in the tenancy of Albert Roberts.

Information from Frances Hobart and several walkers passing the site indicates that the cottages were occupied until shortly after the Second World War. The 1961 OS map depicted the outline of the cottages, suggesting that some structural remains survived at that date, though the buildings were left off the 1964 version. The cottages were shown on the photograph of *c*.1907 (Plate 1). This depicts two rectangular buildings with the gable ends facing onto the footpath, which corresponds with the plan on the 1874 indenture (Figure 5a). The visible windows would appear to suggest at least four rooms in the western side structure, contradicting the three rooms listed in the 1891 census. Also, the cellar currently visible appears to run only under the western side of the footprint of the cottages, though it may have been shared by both cottages. The 1893 and 1906 OS maps show the building divided into four quarters, which would normally indicate four cottages, but this would mean that two extra cottages are not mentioned in the records so far identified (Figures 6-7).

The 1907 photo shows what appears to be a vegetable garden to the west of the mill, between the reservoir and the footpath. This may be associated with subsistence or market gardening undertaken by the cottage occupants. Two small fields were shown in this area on the 1916-32 and 1948 OS maps (Figures 8-9).

4.4 Gas Plant

Information relating to the gas works at Farnley Mill is scarce. A circular structure interpreted as the base of a gas holder survives on site, and was depicted on the 1893 OS map (Figure 6), but not shown in 1854 or on the 1874 indenture plan. Prior to this, it is possible that gas was piped from Kirkburton gas works, or lighting may have been from candles or oil lamps. A gas company was founded by 'leading gentlemen' of Farnley Tyas in 1861, with shareholders including the Earl of Dartmouth and the curate Reverend Wardroper. The gas works, located at the mill, also supplied the village, with a report on a shareholders' meeting in 1863 recording that the church, school and most village dwellings were lit by gas by that date (HC 20 June 1863). The gas works was also put up for sale in the April 1886 sale of plant from the mill (HE 10 April 1886). Documents held by the National Gas Archives in Warrington (not seen for this report) include papers relating to an agreement between Farnley Tyas Gas Proprietors and Kirkburton Gas Light Company for the sale and purchase of gas mains in 1884 (NE:KIS/L/G/1). The minutes of the Farnley Tyas Local Board record that in November 1883 the KGLC had applied for consent to lay gas mains on roads under their control and to transact for the ordinary business of the Board; this was consented in January 1884. This suggests that KGLC took over the supply of gas to Farnley Tyas from the mill gas works *c*.1884, and that the plant was afterwards used only to supply the mill, or was redundant.

The 1893 OS map depicted the circular gas holder adjacent to a small square building, neither of which were shown on the 1854 map (Figures 4 and 6). The square structure is interpreted as the retort house, where gas would be produced. The production of coal gas involved the heating of specially selected coal in a bank of retorts, which were closed cast iron or ceramic tubes housed in a furnace or retort setting. The mixture of gases and vapour given off was passed through a water trap, known as a hydraulic main, and into the air-cooled condenser, in which tar condensed for collection in a well below. Tar was a valuable by-product of gas production. The gas was then passed through a purifier to remove sulphur compounds. The design of purifiers changed throughout the 19th century, but those used in small factory gas works generally consisted of a closed box containing trays of wet or dry lime. The gas was then stored in a water-sealed gas holder (May and West 2006, 7). Figure 10 shows the main processes in coal gas production.

The 1906 OS map showed the gas holder, but not the retort house (Figure 6). The gas holder itself was shown on maps until the 1960s, though the base survives as a visible feature to the present day.

5 SURVEY RESULTS

Survey plans are illustrated on Figures 11-16, and a gazetteer of all the features is given in Appendix 3. The gazetteer includes the feature number, type, description, dimensions, significance, condition and threat, photo viewpoint number and date of the earliest historic map to depict the feature, where relevant. Features located inside buildings (floor platforms, internal walls) are not depicted on any historic maps. The features are briefly described in Section 5.1, and a discussion of the significance of the features is included in Section 5.2.

5.1 Nature and condition of features

5.1.1 Mill buildings

The surviving remains of the mill (Figure 13) include several standing walls (features 1,2, 9 and 21), the remains of a wheel pit (feature 3), a group of machine bases that appear to relate to the steam engine (features 4-5), and a number of rubble banks and level platforms which are interpreted as the remains of walls and floor levels. The standing walls, all located at the eastern side of the mill, appear in the main to relate to the earliest building on the site, built in the 1790s (Plate 2). Wall 2 may represent the remains of the original western wall of the mill. It is constructed of relatively small, regularly coursed stone blocks, with whitewash or plaster visible in patches on the eastern face. It has a row of beam slots close to the current top of the wall, which indicate that the original floor level was probably over 1 metre below the current ground surface, which is formed of substantial deposits of rubble. The wall has evidence for alterations, including an area of blocking which may represent the stub of a former wall towards the southern end. A second wall extends east from the wall at a level below the beam slots and much of the current ground surface, towards the north end (Plate 3). A square hole towards to northern end of wall 2 is surrounded by larger stone blocks in a similar style of construction to wall 1, and may relate to power transmission to the western extension of the mill. A sunken area, feature 75, is located to the west of this hole. The western face of wall 2 is not visible. It appears to have been constructed against a cut into the ground surface, and to be at a lower level than the majority of the western extension, apart from sunken room 75. Wall 2 is in an average condition, but is threatened by tree roots. It does not stand to its full original height.

Wall 1 forms the northernmost standing wall of the mill, but appears to have been an internal wall. It is constructed of much larger and more well-dressed stone blocks than wall 2 (Plate 4). There are several square and rectangular holes in the wall, some of which go all the way through the wall. This includes a large square opening which is likely to be related to power transmission from the steam engine. The stonework around the gap has been burnt and in places cracked by a fire set within it fairly recently (Plate 5). Graffiti has also been carved into the stonework.

To the north of wall 1 are a set of massive stone blocks with bolt holes, incised features and fittings which appear to relate to the position of a steam engine (feature 4, Plate 6). A gap between the bases and wall 1 may indicate the location of a flywheel. One of the stone blocks has been displaced and is lying near the structure. The wall to the west of the machine bases appears to be a continuation of wall 2, with similar beam slot holes, though these are below the level of the top of the machine bases, and were probably redundant. This may indicate that the bases are associated with the installation of the later horizontal steam engine at the site, which replaced the original beam engine. An area of flagged floor (feature 5) is located to the west of this wall and at a slightly higher level than the machine bases. This floor has sandstone paving, and two slightly raised blocks which also appear to have been associated with machinery (Plates 7 and 8). One has a circular shaft cut into it, infilled with water, which extends to a depth of at least 0.40m. This may also relate to a steam engine.

At the southern end of wall 2 are the remains of the former wheel pit. This comprises a sunken area, the sides and base of which are obscured by rubble. The west end wall is formed of tall

but thin sandstone slabs set in a slight curve (Plate 9), which represent the area close to the wheel, which was depicted on the 1828 plan as being 30 feet in diameter. Above this, the wall appears to have been infilled or rebuilt (Plate 10). There is a straight joint in wall 2 to the north, and the stonework immediately above the wheel pit is more irregularly coursed. It also has a tree growing over it, the roots of which are damaging the stonework. The west end of the wheel pit is formed of a wall of neatly dressed sandstone blocks, but this is poorly visible due to a tree growing within the pit. There is a square hole part way up the wall which may relate to the entrance to the tail goit culvert, though it is above the base of the wheel pit. To the south of the wheel pit there is a wall (feature 9) which extends only part of the way along the western side and has a return heading south. The wall is of similar construction to wall 2, and its width is not visible as it is set into the ground surface. There is a level platform at the top which may relate to a former floor layer to the south of the wheel pit. No visible mechanisms relating to the wheel survive; these may be obscured by the rubble and vegetation infilling the pit.

The remains of the western extension of the mill are in a poorer state of survival. There are two large platforms which appear to relate to floor layers. The northern platform, feature 29, is flanked on the north, west and south sides by rubble-filled banks (features 26-28, 32; Plate 11), and is set at a higher level than the southern platform, feature 37. The floor level of 29 is at the same height as the flagged surface of feature 5. A row of square stone flags with central circular holes, interpreted as bases for cast-iron columns (feature 30), survives on an east-west alignment through the centre of this platform (Plate 12). As mentioned above, there is a sunken area at the eastern side of this platform, feature 75, which is immediately west of wall 2, and may have been associated with power transmission (Plate 13). There is a further sunken area, 83, the edges of which are ill defined due to vegetation and rubble, to the immediate west of flagged floor 5.

The southern platform 37 is at a lower level, and the walls are less well-defined, mainly visible as scarps on the south and east sides. A slightly raised area is visible at the northwest side, possibly a platform or floor area. The majority of platform 37 is obscured by boggy ground and standing water, which issues from the northern reservoir and has the potential to cause damage to underlying floor deposits and features. The water issues via a channel (39) through the northeast bank of reservoir 76, which is likely to have originally fed a channel leading to the wheel pit (Plate 14). Any remains of this channel are obscured by platform 37. The water appears to have been diverted into a stone-lined channel, 38, running along the western edge of the mill towards the Range Dike. This channel has become blocked by rubble and vegetation, and the majority of the water from the reservoir now flows across platform 37. Channel 38 may be a later feature of the mill, associated with the wheel pit falling out of use. A cast iron pipe, which has been sealed, issues through the stone wall towards the northern end of this channel (Plate 15). It is unclear if this was part of the overflow system, or was associated with the transport of water to the boilers for the steam engine.

The only structural remains of the long rectangular building to the east of the mill comprise walls on the north and west sides of a possible cellar at the south end (feature 21). The walls survive below the current ground level, but the upper part of the wall is in a poor condition and is at risk of collapse (Plate 16). The room has clearly been used for outdoor gatherings, with benches constructed from the rubble and numerous alcohol cans and bottles in the area.

A slight scarp (22) is visible along the eastern edge of this structure to the north of room 21, and there is a relatively level surface in its former floor location, though this is covered by rubble. This building was shown on the 1874 plan as 'woollen mill' (Figure 5a), and may have been associated with wool processing (carding and/or spinning). It may also have contained warehouses and storerooms.

A drystone boundary wall runs along the north edge of the mill site (feature 24), with a gateway defined by two upright stone slabs (feature 23; Plate 17). The boundary wall continues in a fragmentary state around the eastern edge of the mill plot (feature 19).

5.1.2 Water management system

Three visible reservoirs associated with the mill survive as earthworks (Figure 11a); the easternmost, feature 76, still holds water, though it is heavily silted (Plate 18). The other two, features 48 and 78, are defined on their northeast, southeast and southwest sides by earthen banks. The northwest sides are cut into the natural hill slope. Reservoirs 48 and 78 are silted up and the bases are relatively firm underfoot, though boggy. A narrow channel meanders through them, feeding into reservoir 76 (Plate 19). This channel derives from a narrow stream (feature 80) running downslope towards the western side of the survey area. The main body of this stream runs into the Range Dike, but a small channel diverts off it close to the bottom of the natural slope. This runs through a level area which may be the location of a fourth reservoir (feature 81), located to the southwest of the visible reservoirs, and is defined by an earthen bank on the southeast side (feature 56; Plate 20). This bank continues along the southeast sides of reservoirs 78 and 48 as feature 47. The channel then runs into reservoir 78 via a culvert (53) running through a gap in the southwest bank (feature 52), which may be the former location of a sluice gate.

There are wide cuts through the banks between reservoirs 78 and 48 and between 48 and 76, which currently function as conduits for the water channel to feed into reservoir 76 (Plate 21). There are also longer curving channels running between the reservoirs at the northern corners (features 51, 54 and 62). These channels were depicted on the 1854 OS map, which did not show the more central channels, suggesting the latter may be later features. The channels at the northern corners may be the original route for water to pass along the reservoir system. Feature 54 would run from possible reservoir 81 to reservoir 78 (Plate 22), and its presence further reinforces the likelihood of a fourth reservoir in this area.

The system appears to have been designed to capture and funnel water towards the mill. The head goit (feature 14, Figure 15) feeds off the Range Dike towards the western end of the survey area. There is no obvious weir in the Dike at this point, though there is a natural waterfall which may have been modified to divert water into the head goit. The western end of the head goit is currently dry (Plate 23), with water issuing into it at a bend, possibly from a field drain or stream associated with the pond in quarry 10. As mentioned above, water currently issues into the reservoirs via stream/drainage channel 80. The use of water from this stream is mentioned in the indenture of 1874, and it was depicted on the accompanying map as 'smallest stream' (Figure 5b). The water would have been moved through the system of reservoirs via the overflow channels in the northern corners, possibly supplemented by sluices between the reservoirs in the area of the current central channels. A profile taken across the site shows the fall in height from the southwest reservoir to the wheel pit (Figure 14).

The northeast reservoir, 76, is longer and narrower than the others, and has three overflow channels on its southeast side. The longest, and possibly the original (depicted on the 1854 OS map) is feature 41, running from close to the southern end and feeding back into the Range Dike just south of the mill. Two shorter channels are located close to this, one (42) crossing the northeast end of feature 41, and possibly representing a later breach of the reservoir; the other is to the northeast, and appears to feed into 41, though its northern end adjacent to the reservoir is blocked. Its purpose is unclear. The eastern end of reservoir 76 is reinforced by a substantial masonry wall, probably to withstand the force of water adjacent to the main sluice for the channel (39) leading to the wheel pit. The channel to the wheel pit is no longer visible, and may have been culverted under the mill extension. The water appears to have been diverted into a stone-lined channel (38) running along the west side of the mill to the Range Dike. There is currently no sign of where the water from the wheel pit would have issued back into the Dike. It is likely to have run through a culvert back to the main body of the stream. No exit to such a culvert was noted on the bank of the stream during the survey; it is possible that it has become blocked by a landslip or deliberately infilled, though it may equally be located further downstream.

5.1.3 Cottages and outbuildings

The remains of the cottages occupied by the mill managers survive to the north of the trackway (Figure 13). Oral history suggests that these cottages were standing until the 1940s, though the remains are in a poor condition and little of the fabric survives. The outline of the cottages is visible on most sides (feature 6), either as the remains of stone walls or as rubble banks. The western side of the range is cut into the current ground surface, and walls are visible as low stone revetments against the ground surface (Plate 24). The steps to a cellar are visible at the southern end of this range, and the cellar survives below the ground floor surface, which is solid. The cellar appears to run below the whole of the western side of the building. It survives intact (Plate 25), though it was not entered for the survey due to health and safety considerations. The base appears to be flooded, and it contains dumped asbestos roofing material. Two niches within the western wall of the cellar may relate to coal chutes.

The remains of a central dividing wall survive to up to 2m high between the two rooms on the eastern side of the cottages. This wall is stone built and contains remnants of back-to-back fire places (Plate 26), possibly with remains of grate and oven arrangements, much obscured by rubble. The rubble within the northeast room includes a large, dressed stone block with carved mouldings on the edge, which may be the remains of a decorative window sill. The ground floor level on the eastern side is not visible due to the build up of rubble, but is likely to survive below the debris. The area within and around the cottages would be a good location for archaeological investigation (see section 6), to help understand the layout of the buildings, to assess the extent of survival of floor deposits and features, and to recover material culture associated with its occupants.

A short distance to the west of the cottages are the remains of a small rectangular structure (feature 7), stone built and of uncertain purpose. The structure appears too small to be a pig sty or shed, and does not appear to be a trough. It survives only to a height of 0.3m, and may be a feature related to gardening, such as the base of a cold frame or planter.

Further west are the remains of walls of two stone-built structures (feature 8). Comparison with the 1893 map shows that these relate to the two northernmost buildings of a run of five. They appear to be slightly smaller than the rooms of the cottages; these may be outbuildings or possibly mill workers' cottages, though there is currently no record of the latter at the site. The walls survive up to 1.8m and the faces of the wall are quite neatly coursed with a rubble interior and remains of a lime mortar bonding (Plate 27). There are no visible remains of the other three buildings, other than a relatively level platform.

5.1.4 Gas plant

The visible remains of the gas plant comprise the base of a stone-lined gas holder, feature 20 (Plate 28; Figure 13). The south and east sides remains relatively intact, though the northwest side appears to have partially collapsed and slumped into the base. The tank is partially water filled, probably from rain and groundwater. Water levels were noticeably higher after heavy rain during the survey. A circular void, *c*.0.6m in diameter, is located just to the west of the gas holder. A large circular metal rim was visible within this void, possibly the top of a pipe leading to or from the gas holder. This is located close to the probable location of the retort house, and may relate to the gas supply into the holder. The retort house location was covered with dense bramble vegetation at the time of survey, making it impossible to identify whether any remains of the footprint or walls of the building survive above ground.

5.1.5 Other features

The current footpath runs on a different alignment to that shown on the OS base map. The map depicts the route of an earlier trackway, shown on the 1893 map, which survives as a hollow way through the woodland (feature 64). The hollow way skirts very close to the northern edge of reservoir 76, and may pre-date the reservoir. The trackway/footpath continues northeast to Woodsome Lees and Highburton. Several field boundary walls were recorded within the survey area (features 16-18, 40, 46 and 70). These are of drystone construction, surviving in varying states of completeness. Most are only fragmentary, with taller sections surviving alongside very low stretches. In places, the walls are broken by the river, such as 16 and 17, where an upright orthostat marks the western end of 17, on the south bank of the river. Just outside the survey area is a trackway aligned northwest-southeast. This is known as Mill Lane, and is thought to have been the main route to the mill from Farnley Tyas. It was shown on the 1854 OS map, and intersects with former trackway 64 running past the mill.

At the southwest end of the survey area (Figure 15) is a former sandstone quarry (feature 10). This survives as a substantial grassed hollow with a pond at the base which appears to derive from drainage of the hillslope. The quarry was depicted on the 1854 map, but was not shown in 1893. It may have been used to quarry stone for the boundary walls, or possibly for structures associated with the mill. Two shallow linear depressions (11 and 12) run east from this quarry towards the edge of the sharp slope above the stream and tail goit. One of these was shown on the 1854 map, and may relate to drainage. At the base of the slope below the eastern end of these features is a concave hollow (13), close to the point where water issues from the ground into the head goit.

To the northeast of the mill (Figure 16) were a group of features which may be associated with a stream running through a gully to the north of the cottages, culverted below the track and

rejoining the Range Dike to the east. Alternatively, the features may be related to the proposed conduit for fouled water for the mill, mentioned in the 1874 indenture. The associated plan depicted the preferred route for the conduit leading east from the northeast corner of the mill and running parallel with the Range Dike for a considerable distance, rejoining it close to Highburton (Figure 5b). A linear depression (feature 72) represents a probable channel running to the north of the current stream, with a small area of revetment visible on its northern face. Just after the revetment, part of the channel appears to turn south, rejoining the Dike adjacent to an upright stone slab with square holes running through it (feature 71, Plate 29). To the east of this diversion is a small rectangular building (69), with a deliberate hole at the base of its western wall. A deeper channel runs east from the building to the river. It is possible that part of the western channel 72 ran through/below the building, though its purpose is unclear. The building is of stone construction, neatly coursed with a cement mortar bonding (Plate 30). The walls are missing their upper courses and there is no roof. A small addition in brick is visible in the possible window location. There are two steps down to the doorway, which has grooved incisions on either side for a door case. The purpose of this structure is currently unclear; it may have related to purification or pumping of the 'fouled' water.

5.2 Assessment of significance

The criteria used to assess the significance of each feature are modified from the categories used by Keen and Carreck (1987). An assessment of the national, regional and local significance of the features has also been included. The significance rating of each feature is listed in the gazetteer of features (Appendix 3). Specific details relating to the significance criteria used for this assessment are provided in Table 1, which also provides a summary of the features included in each category. It should be noted that the significance assessment reflects the current state of knowledge of the archaeological resource but that there is always the potential for new archaeological discoveries to be made that may alter the perceived significance of these features.

Significance Level	Significance statement
Level 1 Archaeological and historical features of special (i.e. national/regional) importance.	This includes standing walls associated with the mill and features associated with water management that survive in good condition.
Level 1b Level I monuments that appear to have been badly damaged.	This category includes features associated with the earlier (1790s) phase of the mill and water management features that survive in a poor condition.
Level 2 Archaeological and historical features of lesser (i.e. local) importance.	This includes features associated with the 1850s-70s expansion of the mill and cottages that survive in good condition, as well as features not associated with the mill, such as a bridge, a former quarry, and boundary walls. It also includes features associated with the gas works.
Level 2b Level II monuments that appear to have been badly damaged	This includes features associated with the 1850s-70s expansion of the mill and cottages that survive in poor condition, as well as features not associated with the mill that have been damaged or are in a poor condition.

Significance Level	Significance statement
Level 3 Former archaeological and historical features of importance for which there is confidence that no coherent archaeological remains (including buried features) are recoverable.	No features have been identified associated with this category.

Table 1: Summary of significance assessment

The features associated with the early stage of the mill, from 1790 until the 1850s-70s expansion, are considered to be of regional (Level 1 and 1b) significance. This wool-processing mill was one of the early adopters of steam power in the Huddersfield region, to supplement its relatively poor water supply. The features associated with this are considered to include all standing walls, the wheel pit and the water management system.

Features associated with the later stage of the mill, including the western extension, are considered to be of Local (Level 2 and 2b) significance. There are numerous examples of this type of integrated woollen mill surviving in the region in better condition, and many of the features from this phase are fragmentary and in a poor condition. Most of the outline of the western extension survives only as rubble banks with intermittent stretches of low walling, and details of floors are obscured by vegetation and pooled water. Remains associated with the possible conduit to return fouled water to the Range Dike, including two channels, a possible sluice gate feature and a small stone building (features 68-73) to the east of the mill are also considered to be of Local significance. These were relatively late 19th-century additions, though further research on their function may increase their significance.

The remains of the cottages and outbuildings to the north of the mill are also considered to be of Local significance. These cottages were associated with the mill, but survive in a poor condition and examples of similar cottages in a better state of preservation are common in the region.

Surviving features associated with the gas works comprise the base of the gas holder and an associated pipe. It was not possible during the survey to identify remains of the former retort house, though this may reflect vegetation coverage rather than absence of features. Gas holders are the most common survival of former gas works, and the example at Farnley Mill is of relatively late (1860s) construction; it is therefore considered to be of Local (Level 2) significance.

Features not associated with the mill include a possible hollow way which appears to continue a former route of the track running along the northwest side of the mill, now used as a footpath (feature 64). There is also a former sandstone quarry, shown on the 1854 OS map (feature 10), a stone footbridge over the Range Dike, drainage channels and boundary walls. These features are considered to be of Local archaeological significance (Level 2 and 2b).

6 DISCUSSION AND CONCLUSIONS

The visible remains of the Farnley Mill complex include standing walls associated with the late 18th-century structures and the steam engines, as well as the footprint of the mid-19th-century western mill extension (see Figures 12 and 13). The remains generally survive in a poor to average condition, and are threatened by tree roots and water damage, as well as by

vandalism. Despite their condition, the remains display a good proportion of the outline of the mill buildings, and hint at different construction techniques. The remains of features associated with power generation and transmission also survive, though these are difficult to interpret. It is possible that more detailed study of the machine bases and associated wall cavities may reveal evidence for the changes of steam engine types, from the atmospheric engine in the early phases to the later horizontal engine. The wheel pit also survives, and many details of the water management system, including an interesting system of cascades between the three to four reservoirs. Documentary research has indicated that the wheel was still in use in 1874, and was the property of the landowner rather than the tenant at that date. The remains of the 18th-century mill building and its power system are considered to be of Regional archaeological significance.

The water management system seems to have been designed to utilise the maximum available water, from small streams running downhill as well as from the main Range Dike. A probable fourth reservoir is indicated to the southwest of the visible dams, depicted only on the 1854 map. This was not shown on an 1805 plan, and may indicate an attempt to increase the available water supply, which was stated at that date as being 'very poor', hence the early adoption of a steam engine. The steam engine would also require water, presumably taken from the reservoirs. The relationship between the reservoirs and the engine is currently unclear, but further research and fieldwork may be able to address this issue.

The documentary evidence has revealed conflicting evidence for the processes undertaken at the mill during its earlier, pre-1850s phase. The 1805 terrier lists the mill as a fulling and scribbling mill, but fulling is not mentioned in later references. The advert for the sale of the mill in 1850 describes it as a scribbling mill, and lists specific types of machinery associated with wool processing (Leeds Mercury, 17 August 1850). It does not mention fulling, though it is possible that this is covered by the phrase 'other machinery for carrying on the woollen business to advantage'. In this early phase, the mill was used for processing wool for local weavers; fulling of the cloth would have been a valuable supplementary activity and would have been required prior to sale of the woven fabric. In 1850 the mill was taken over by Hermann Geissler, and the focus of the business changed to include the production of cloth. The 1874 indenture for the mill included the phrase 'Hermann Geissler will not carry on any trade or business other than that of a Cloth Factor in all its processes from the raw wool to the finished cloth without a licence or consent in writing of the Earl of Dartmouth' (WYL 1219/34). This statement would suggest that the fulling process was in operation at the mill at that time, and fulling stocks were mentioned in the catalogue of machinery available for sale in 1884. It is possible that documentary research may be able to provide more information on the range of processes undertaken at the mill and its changing relationship with local handloom weavers in the surrounding villages.

Features to the northeast of the mill complex may be related to a conduit for fouled water on its return to the Range Dike. This conduit was proposed in an indenture of 1874. The features include remains of channels and a small stone building. Remains of a gas works at the mill are also interesting; although many West Riding mills had gas plants at an earlier date, this one has been recorded as supplying Farnley Tyas on the hill to the northwest. It appears to have had a relatively short life, being constructed in the 1860s and out of use by the mid-1880s. The

only visible remains relate to the gas holder, but sub-surface remains of the retort house could survive adjacent.

The remains of two cottages are located to the north of the mill, and were recorded as being occupied by mill managers and senior workers throughout the life of the mill. Information from oral sources suggests they were occupied into the 1940s. There are few standing remains, apart from fireplaces and part of the north wall, but an intact cellar survives under the western cottage. The standing remains are at risk of collapse and tree root damage, and the cellar is flooded and contains asbestos roofing material. The remains of further structures survive to the west of the cottages, possibly further workers' dwellings or outbuildings.

The mill site has considerable potential for interpretation and display. Careful and selective clearance of vegetation would increase the visibility of the features, as well as reduce the ongoing damage to the structural remains. Redirection of water issuing from the reservoir back into the channel along the west side of the mill would also reduce the damage to any surviving floor deposits within the western mill extension. Interpretation could include the explanation of the visible features, as well as the history of the mill, cottages and gas works, and their relationships to the surrounding villages.

There is the potential for further archaeological work at the site, in conjunction with community groups and the Huddersfield and District Archaeological Society. This could include further archive research, particularly with the Dartmouth Estate records held at Leeds Archives; this material appears to be largely uncatalogued and could reveal useful information relating to the mill and gas plant. Information from people passing the site indicates that it would be possible to undertake oral history research on the later history of the cottages.

There are also a number of potential fieldwork opportunities. Geophysical survey is unlikely to be a useful technique across much of the complex due to the presence of rubble; however, it may be useful to define the extent of the probable fourth reservoir, and to establish whether remains of the retort house, woollen mill building and structures and garden plots to the west of the cottages survive. More detailed recording of the standing remains of the mill could be undertaken, particularly following vegetation clearance. Much of the mill site is in a poor condition for community excavation at present, due to the presence of large quantities of rubble overlying many of the surface. Potential areas for excavation could include the cottage site, where the layout of the structures is at present poorly defined, and where material culture recovered could provide information on the living conditions of occupants. Trial trenches or surface stripping in the area of the woollen mill structure to the east of the mill and the upper platform (29) in the western extension could assist in establishing the extent of survival of sub-surface remains and floor deposits, and any indications of the layout and uses of the buildings.

A valuable future project would be to establish the relationship between the various power sources utilised by the mill. Documentary research, particularly in the letters and memoranda of the Dartmouth Estate, could assist in providing more details on the types, functions and uses of the atmospheric and horizontal steam engines, the function of the water wheel and the design of the water management system. More detailed recording of the building remains and fieldwork, including some clearance of rubble around the building as well as trial trenching

or test pits, would have the potential to provide further information on how the mill's power sources functioned.

Any proposals for future archaeological and restoration works at the site should be discussed in consultation with West Yorkshire Archaeology Advisory Service, in order to formulate a programme that will provide significant information and community benefits without causing significant damage to the archaeological resource.

7 LIST OF SOURCES

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1828 terrier of the Dartmouth estate (photographs provided by Alan Brooke)

UKB/FA: Farnley Tyas rate books, 1838, 1924, and minutes of the Local Board and UDC. Kirklees Archives.

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NE:KIS/L/G/1: Bundle of agreements and correspondence for lighting, gas supply, tar, etc. Made by Kirkburton Gas Light Co and various parties, including agreement between Farnley Tyas Gas Proprietors and KGLC for sale and purchase of gas mains, 1884. National Gas Archives, Warrington.

Census: 1841, 1851, 1861, 1871, 1891 (photocopies held at Wakefield HER)

Maps

Farnley Tyas tithe award and map, 1847 (does not show site). Kirklees Archives.

1854 6 inch: 1 mile

1893 25 inch: 1 mile

1906 25 inch: 1 mile

1916-1932 25 inch: 1 mile

1948 1:10560

1962-1964 1:2500

8 ACKNOWLEDGEMENTS

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9 FIGURES

10 PLATES

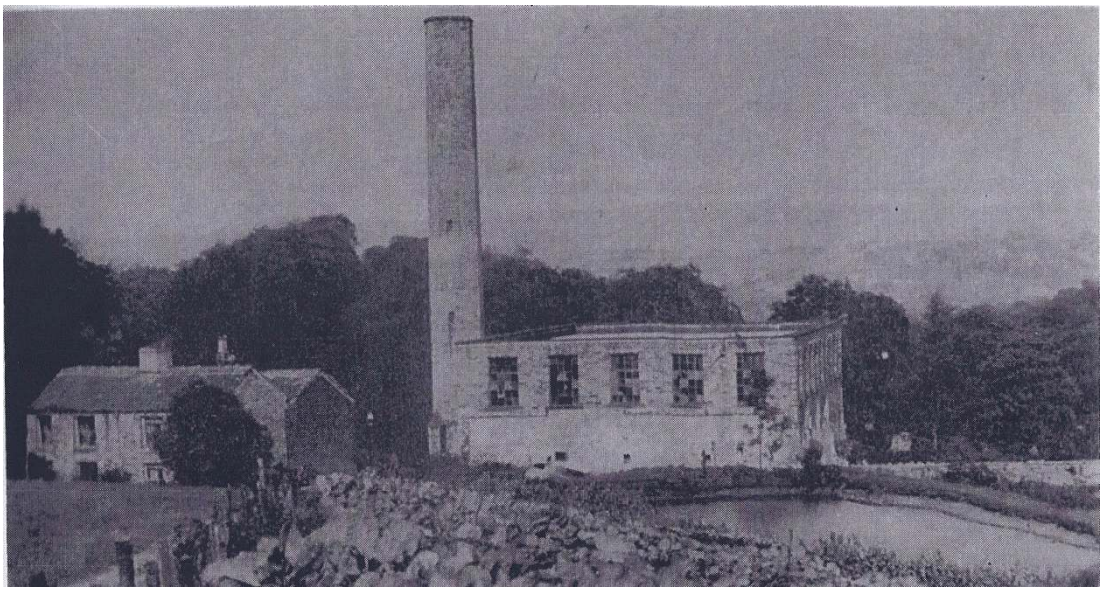

Plate 1: Postcard of the mill from c.1907, showing cottages to left

(reproduced from Wheeler 1989, p.65)

Plate 2: Standing walls of the mill building, viewed facing west (viewpoint 82)

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Plate 26: Dividing wall in eastern half of cottages, showing fireplace, viewed facing northwest (viewpoint 32)

Plate 27: Structure 8, viewed facing northwest (viewpoint 31)

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Plate 29: Upright slab 71 with holes, possibly part of a sluice gate associated with channel 72, viewed facing west (viewpoint 46)

Plate 30: Building 69, possibly associated with water outflow from mill, viewed facing north (viewpoint 43)

APPENDIX 1 – INDEX TO ARCHIVE

Item	Number of items
Digital survey files (CAD)	1
Photographic register	1
B/W photographs (films)	4
Colour slides (films)	3
Digital photographs	112 (1 CD)
Feature gazetteer, Excel spreadsheet	1
Project design	1
Report	1

APPENDIX 2 – GAZETTEER OF KNOWN ARCHAEOLOGICAL SITES

Site no	Description	NGR	Reference
1	Farnley Mill. Built *c.*1792 as a scribbling and fulling mill. In 1805 it was recorded as being 'chiefly worked by a steam engine, as the water is a very poor supply'. By 1851 it was taken over by Hermann Geissler, fancy manufacturer, who ran it until the firm went bankrupt in the 1880s. The mill buildings were taken down gradually between 1886 and the 1940s. Farnley Mill cottages, built at around the same time as the mill, to house the overseer or engineer and workers, according to census data. They appear to have remained in use after the mill was closed, until just after the Second World War	SE 1783 1299	HER 6221
2	44 Manor Road, Farnley Tyas. Grade II house and offices, part of a former farm group. C17 or early C18 origin with mid C19 and recent alterations. Hammer dressed stone, with stone slate roof. Two storeys.	SE 1719 1283	HER 9639 LB 1135372
3	Site of former pump house, demolished in 2007. The building was of stone with a slate roof, built to house a steam engine or pump to supply the village with water via a reservoir and gravity system, later adapted to house a gas engine and electronic pump.	SE 1718 1279	HER 9640
4	Site of a tannery at Manor Road, Farnley Tyas. Shown on 1854 OS.	SE 172 127	HER 6010
5	32 Manor Road. II. Formerly a handed pair of houses. Late C18. Hammer dressed stone, stone slate roof. Two storeys. The doorways are to the centre, that to the right being blocked.	SE 1713 1278	LB 1313323
6	Netherton Farmhouse, Manor Road. Grade II listed late C18 farmhouse. Hammer dressed stone, two storeys. Stone slate roof.	SE 1703 1280	HER 9641 LB 1135373
7	Barn at 18 Manor Road. II. 1693, in dressed coursed rubble with large stone quoins, under a stone slate roof. 4 bays, cut back at one end, and a single storey attachment to rear.	SE 1678 1279	LB 1392519
8	Manor House, Woodsome Lees. II. Formerly one large house, now divided. C17. Believed to have been built by the Kaye family of Woodsome for the Broadhead family. Ashlar front with dressed stone stacks. Two storeys, two-gabled front. C19 addition to rear.	SE 1859 1346	HER 10512 LB 1300254
9	Cropmark, modern agricultural marks. Non-antiquity.	SE 184 135	HER 1466
10	Cropmark, fragmentary, possible enclosure but obscured by other features.	SE 178 136	HER 5769
11	Neolithic polished stone axe, found during ploughing in 1966, Field Lane.	SE 1729 1350	HER 2031
12	Neolithic leaf-shaped flint arrowhead, found on the surface of a ploughed field, Farnley Moor, in 1957.	SE 1753 1220	HER 1194
13	Moorside Farm Cottage and Moorside House, Storthes Hall Road. II. Farmhouse and cottage. House late C18 or early C19, cottage early to mid C19. Hammer dressed stone, stone slate roof. Two storeys.	SE 1764 1253	LB 1313311
14	Neolithic/Bronze Age sandstone grain roller. Would have been used with a saddle quern to grind grain. Location of find spot uncertain.	SE 1834 1214	HER 4030
15	Lodge, Storthes Hall Road. II. Built c.1903, in Edwardian Free Style.	SE 1823 1293	LB 1184008
16	Mansion, Storthes Hall Road. II. Mansion house, late C18 built for the Horsefall family. Two additions to left probably early C19. Ashlar. Later a hospital, with modernised interior. Thought to be the likely site of a medieval farmstead or hamlet, for which there are documentary records but no clear location.	SE 1850 1292	HER 6227 LB 1313310

APPENDIX 3 – SURVEY GAZETTEER

ID no	Description	Interpretation	Significance	Condition	Threats	Viewpoints	Historic maps
1	Northernmost standing wall of mill complex, formed of large, well-dressed stone slabs, neatly coursed. There are several through-holes, including a large square hole with two smaller square holes below, as well as 3 rectangular holes that only go half way through wall and may be beam slots. Base obscured by rubble.	Internal wall of woollen mill building, associated with power transfer and engine house.	1: Regional	Average	Vandalism (evidence of fire damage to stones); vegetation damage; carved grafitti.	1, 10, 82, 83, 84	
2	Western standing wall of mill complex. Apart from a small section at north end, the construction is of smaller, more roughly coursed stone than wall 1. There is lime render visible on parts of the east-facing elevation. A row of small, square beam slots is visible along much of the wall. Towards south end is evidence of some later blocking or infilling. At the north end is an upper section formed of the larger stone blocks, with a square hole, possibly associated with power transfer.	Wall of woollen mill building, possibly from the 1792 structure.	1: Regional	Average	Tree-root and vegetation damage; potential for collapse of upper stonework.	2, 3, 4, 82, 84	
3	Rectangular hollow at south end of standing mill structure. Base and sides obscured by rubble and tree roots. Masonry visible at east and west ends. At the west end are thin, wide stone slabs set in a slight curve, possibly indicating the location of a wheel pit. Wall above this is missing facing slabs, and very uneven, but a straight joint in wall 2 to the north suggests this may be later infill. East end is formed of neatly dressed slabs, with a square hole partway down.	Wheel pit	1: Regional	Poor	Threat of wall collapse at west end; trees growing in wheelpit hollow.	5, 6, 82, 84	1828 sketch
4	Structure formed of large stone slabs to the north of wall 1, separated from the wall by a gap. Remains of a wall run along the north side of the slabs, obscured by rubble. There are incised grooves and bolt holes in some of the slabs indicating the presence of machinery. A gap is located between two groups of slabs which appears to be deliberate. A massive displaced slab to the north has grooves matching those in one of the slabs adjacent to the gap, and appears to have overlain this.	Machine bases (engine house?)	1: Regional	Average	Vandalism; vegetation.	7, 8, 9, 10, 11, 83	

ID no	Description	Interpretation	Significance	Condition	Threats	Viewpoints	Historic maps
5	Floor surface west of 4 and at a slightly higher level. Wall along north edge (where visible) is similar in construction to 1. Floor is of stone flags, with two groups of slightly raised slabs which have steel/iron bolts and marks of engine bases. One features a circular shaft hole, currently water-filled.	Machine bases (engine house?)	1: Regional	Good		11, 12, 13, 14	
6	Remains of walls, mainly vegetation/earth-covered rubble mounds, but some standing sections or stonework visible on inner faces of banks. The walls define a square structure with internal divisions. In eastern half, divided into two rooms, fireplaces survive to either side of the north/south dividing wall. In the western half, no north/south dividing wall, but stone steps survive at south end leading down to a cellar (not accessed). There is a possible hatch visible in the west wall overlying a recessed area in the cellar. In the rubble within the northeast room, there is a decorated/moulded stone ?window sill.	Foreman's houses	2: Local	Poor	Tree and vegetation damage; risk of collapse of some of the standing wall sections; flooding and asbestos in cellar.	32, 33, 34, 35, 36	1854 OS
7	Narrow, stone-built rectangular feature to west of cottages. Unclear function. Two upright blocks at east end, and drystone construction at west end.	Unknown structure	2b: Local	Poor	Vegetation	37	
8	Remains of walls, two adjoining north and west walls of a small structure; further south are rubble remains of walling. They appear to relate to buildings shown on the 1893 map. No visible remains of structures to south, but area is quite level. The walls are relatively neatly coursed, faced to either side with rubble core, and lime mortar.	Structure	2b: Local	Poor	Threat of collapse of standing wall remains; trees growing within and over structure.	31	1854 OS
9	Section of stone walling heading south from sunken feature 3. Only a small part (c.1.5m wide) has facing stones, the continuation to the south is more rubbly. The ground surface to the west is at the level of the top of the wall. The faced section is similar in form to the west mill wall 2.	Wall of woollen mill building	1b: Regional	Average	Vegetation damage; wall cracking and threat of wall collapse.	82, 83, 84, 93	
10	Sub-oval quarry hollow, with water in base (from drainage channel?)	Sandstone quarry	2: Local	Average		74	1854 OS

ID no	Description	Interpretation	Significance	Condition	Threats	Viewpoints	Historic maps
11	Faint linear depression heading down slight slope from quarry 10 towards edge of steep bank adjacent to river.	Possible drainage ditch or hollow way	2: Local	Average		75	1854 OS
12	Faint linear depression heading down slight slope from quarry 10 towards edge of steep bank adjacent to river.	Possible drainage ditch or hollow way	2: Local	Average		None	1854 OS
13	Steep-sided hollow on steep slope adjacent to head goit. Close to point where water issues into head goit from ?drainage pipe. Possibly associated with channel 11.	Hollow	2b: Local	Poor		None	
14	Channel leading from river towards mill ponds, running to northwest of the Range Dike. The west end is currently dry, but water issues into the channel c.60m from west end (from slope drainage?). The channel is cut into the slope on the northwest side, and is bounded by bank 15 on southeast side. No stone revetment visible.	Head race	1: Regional	Good		79, 80	1854 OS
15	Earthen bank forming southeast side of head goit, between the goit and the river.	Bank for head race	1: Regional	Good		79, 80	
16	Drystone wall on northwest side of river. Varying states of survival.	Boundary wall	2: Local	Average		77	
17	Drystone wall on southeast side of river. Varying states of survival. Continuation of 16. The southwest end adjacent to river is marked by an orthostatic slab.	Boundary wall	2: Local	Average		78	
18	Remains of a drystone wall aligned northwest-southeast along edge of field. Fragmentary survival, supplemented by a wire fence on east side.	Boundary wall	2: Local	Poor		76	
19	Drystone wall, fragmentary survival. In places only a rubbly bank, in others surviving up to 0.8m high. Runs along eastern edge of mill plot.	Boundary wall	2: Local	Poor	Tree roots, vegetation.	38	1854 OS
20	Circular stone-lined tank sunk into ground. Revetted with regular sandstone blocks. Northwest side partially collapsed and obscured by rubble. Currently holds water. Small void to west of feature with circular metal ?pipe set into it may be associated with the feature.	Gas holder	2: Local	Average	Tree growing out of side wall. Wall collapsed in north half.	17, 18	1893 OS

ID no	Description	Interpretation	Significance	Condition	Threats	Viewpoints	Historic maps
21	Sunken room at south end of former building to east of main mill. Walling survives around the edges.	Building	1b: Regional	Average	Trees growing on and out of walls. Potential for collapse at top of north wall.	19	1854 OS
22	Platform on site of former building. No obvious walling visible on west side, scarp at eastern side.	Site of building	2b: Local	Average	Tree roots, vegetation. Lots of rubble across surface.	20	1854 OS
23	Gateway forming main entrance to mill. Gateposts to either side (orthostatic slabs).	Gate	2: Local	Good		21	1893 OS
24	Drystone boundary wall along north edge of mill plot. Survives to varying heights	Boundary wall	2b: Local	Average		21	1893 OS
25	Stone built, roughly rectangular structure, obscured by rubble and vegetation. Located to north of former mill building. Details of the structure are difficult to identify, but there is a circular central hollow which appears to be original and may be part of a chimney shaft.	Chimney base	1b: Regional		Tree root and vegetation damage.	15, 16	1893 OS
26	Rubble-filled bank at north edge of western mill extension, aligned east-west.	Earthwork - woollen mill wall	2b: Local	Poor	Tree root and vegetation damage.	23	1893 OS
27	Rubble-filled bank within west side of western mill extension, aligned north-south.	Earthwork - woollen mill wall	2b: Local	Poor	Tree root and vegetation damage.	24	
28	Scarp and wall. The wall is of sandstone with lime mortar. Aligned east-west within western mill extension.	Earthwork - woollen mill wall	2b: Local	Poor	Tree root and vegetation damage.	None	
29	Platform within northern part of western mill extension, probably a floor level.	Building platform	2b: Local	Poor	Tree root and vegetation damage.	None	
30	Line of 6 column bases running on an east-west alignment, parallel with walls, within western mill extension. Bases are square, with central hole for cast-iron column.	Column bases	2b: Local	Good	Leaf/vegetation cover.	22	
31	Linear hollow within western mill extension, south half.	Hollow	2b: Local	Poor	Tree root and vegetation damage.	26	
32	Banked rubble from building in vicinity of former wall.	Earthwork - woollen mill wall	2b: Local	Poor	Tree root and vegetation damage.	25	

ID no	Description	Interpretation	Significance	Condition	Threats	Viewpoints	Historic maps
33	Scarp on alignment of east wall of western mill extension.	Earthwork - woollen mill wall	2b: Local	Poor	Tree root and vegetation damage.	27	1893 OS
34	Scarp on alignment of south wall of western mill extension.	Earthwork - woollen mill wall	2b: Local	Poor	Tree root and vegetation damage.	None	1893 OS
35	Rectangular structure formed by three low sandstone walls with no bonding material. Surviving to 1 course high, on south side of western mill extension.	Structure	2b: Local	Poor	Covered with moss and weeds.	89	1893 OS
36	Linear channel aligned north-south to west of mill.	Linear ditch or hollow way	2b: Local	Average		28	1893 OS
37	Platform within southern part of western mill extension, probably a floor level. Fragments of machine bases, displaced and in situ.	Building platform	2b: Local	Poor	Poor drainage - water puddling across the platform, issuing from reservoir 76 via channel 39.	None	
38	Stone-lined drainage channel; sandstone, lime mortar, partially infilled with rubble. Appears to be culverted at south end.	Overflow leat	2b: Local	Average	Tree roots, vegetation growing within and disturbing structure.	28	1893 OS
39	Channel leading out of reservoir 76 towards mill. Stone facing partially intact on north side.	Pentrough leat?	1b: Regional	Average	Badly eroded along base at south side.	29	1854 OS
40	Sandstone drystone wall/revetment.	Boundary wall	2b: Local	Poor	Tree roots, moss.	56	
41	Linear channel, heading east from reservoir 76 towards river.	Overflow leat	2b: Local	Good		54	1854 OS
42	Linear depression/channel heading southeast from south end of reservoir 76. Possibly associated with disuse or water management. Masonry at north end may relate to a former sluice.	Overflow leat	1b: Regional	Average		55	
43	Earthen bank on southeast side of reservoir 76.	Earthwork - dam embankment	1b: Regional	Good	Tree roots.	53	
44	Spread of masonry, mostly buried, possibly a dump, through some orthostatic stones may be in situ.	Stone spread	2b: Local	Poor		None	

ID no	Description	Interpretation	Significance	Condition	Threats	Viewpoints	Historic maps
45	Channel, possibly remnant of culvert, between reservoirs 48 and 76. Heavily eroded masonry at either end, possibly the location of sluice gates. Cast iron pipe runs along base of channel.	Culvert	1b: Regional	Average	Tree roots.	57	1854 OS
46	Sandstone drystone wall/revetment.	Boundary wall	2b: Local	Poor		None	
47	Earthen bank on southeast side of reservoirs 48 and 78.	Earthwork - dam embankment	1b: Regional	Good	Tree roots.	60	1893 OS
48	Reservoir, cut into natural slope on northwest side and embanked on southeast side. Small area of masonry revetment visible at southwest end. Silted, but a narrow channel runs through.	Mill pond	1b: Regional	Good	Trees growing within.	61	1854 OS
49	Channel through earth banks between reservoirs 48 and 78. No visibly masonry at either end, so may not be original. Heavy erosion.	Culvert?	1b: Regional	Average	Trees growing within.	63	
50	Sandstone masonry, in situ revetment or part of sluice structure. Visible on both sides of the reservoir bank between 48 and 78.	Sluice gate?	1b: Regional	Poor	Tree roots, vegetation cover.	64	
51	Curving cascade channel between reservoirs 48 and 78 at north side, with displaced mansonry fragments along base, but no visible structure.	Leat	1b: Regional	Good	Tree roots, vegetation cover.	65	1854 OS
52	Channel through earth bank at southwest end of reservoir 78. Possible former sluice location.	Leat/sluice?	1b: Regional	Average	Erosion.	67	
53	Stone lined sandstone culvert. Continues to the southwest, with sections exposed on northeast and southwest sides of the bank.	Culvert	1b: Regional	Poor	Exposed sections pose tripping risk.	None	
54	Narrow, curving channel running into northwest corner of reservoir 78 from possible reservoir 81.	Leat	1b: Regional	Good		70	1854 OS
55	Earthen bank on southwest side of southern reservoir.	Earthwork - dam embankment	1b: Regional	Good	Tree roots.	None	1893 OS

ID no	Description	Interpretation	Significance	Condition	Threats	Viewpoints	Historic maps
56	Earthen bank, uncertain purpose, but continues on same alignment as bank to southeast of reservoirs 48 and 78. Possibly associated with fourth reservoir shown on 1854 map.	Earthwork - linear bank	1b: Regional	Good		68	1854 OS
57	Sandstone bridge on current footpath, crossing Range Dike. Banks on either side eroding.	Bridge	2: Local	Good		69	1854 OS
58	Channel/linear depression aligned roughly east-west leading towards northwest corner of southern reservoir. Unclear if man-made or natural.	Leat/hollow way?	2b: Local	Average		72	
59	Channel/linear depression aligned roughly southeast-northwest leading towards northwest corner of southern reservoir. Unclear if man-made or natural.	Leat/hollow way?	2b: Local	Average	Heavy vehicle tracks within channel, associated with dumping 61.	71	
60	Level platform to northwest of reservoir. Possibly part of a field.	Terraced field	2: Local	Average	Heavy vehicle tracks crossing area, associated with dumping 61.	None	
61	Dumps of rubble at top of and down slope on northern side of reservoir 78 - recent activity.	Dumped material	None		Covers part of the side of reservoir 78	88	
62	Channel, curving round north corner of central reservoir. Sandstone fragments along base.	Leat	1b: Regional	Good		59	1854 OS
63	Sandstone revetment at southwest corner of northern reservoir.	Revetment wall	1b: Regional	Average	Erosion.	58	
64	Linear depression, probably a hollow way, continues part of (earlier) route of footpath south of current route.	Hollow way	2b: Local	Average	Tree roots and vegetation.	30	
65	Platform, roughly square, with scarp on east side. East of boundary wall 19. No obvious structural remains.	Platform	2b: Local	Average		33	1893 OS
66	Drystone structure, possibly a revetment wall, on slope east of wall 19. Adjacent to culvert exit 68. Within a slightly cut-in area within slope. Full extent of structure unclear due to vegetation.	Revetment?	2b: Local	Poor	Vegetation cover.	40	

ID no	Description	Interpretation	Significance	Condition	Threats	Viewpoints	Historic maps
67	Exit to culvert running below path from gully to north of cottages. Stone slab visible at top, possible small stones at sides. Slab may be slumped?	Culvert	2: Local	Average		41	1854 OS
68	Linear channel running east from building 69 towards river. Possibly associated with 72. Bank on south side. Currently dry, but looks more like a channel than a hollow way.	Conduit	2: Local	Good	Tree roots and vegetation.	42	1893 OS
69	Rectangular structure with doorway on southeast side. Built of neatly coursed stone with (?cement) mortar. Small brick addition/infill in window area. Walls are missing upper courses and there is no roof. Two steps down to the doorway, with grooved incisions either side of door embrasure for door case. Hole at base of north end wall (appears to be original), lines up with channel 72.	Building (pump house?)	2: Local	Average	Saplings growing on and out of wall.	43, 44	1893 OS
70	Drystone wall, fragmentary survival. Aligns with the footings of a wall visible on opposite bank of stream.	Boundary wall	2b: Local	Average	Tree roots, vegetation.	45	1893 OS
71	Upright narrow stone slab with two square holes through, one above the other. Possibly part of a gate/sluice system associated with channel 72.	Sluice gate?	2: Local	Good		46	
72	Linear channel/hollow leading along base of slope from route of stream towards building 69. There is a possible diversion towards the main course of the Range Dike, adjacent to possible sluice gate 71. Only a faint bank visible on southeast side. May be associated with 68.	Conduit	2: Local	Average	Tree roots, vegetation.	48	
73	Area of revetment towards east end of 72. Drystone construction, fairly large blocks. Close to possible diversion towards stream.	Revetment?	2: Local	Average	Tree roots, vegetation.	47	
74	Rubble bank to north of machine bases 4. Possibly remains of former north mill/engine house wall.	Earthwork - woollen mill wall	1b: Regional	Poor	Roots and vegetation.	49	
75	Rectangular hollow/sunken area to west of wall 2, adjacent to the square hole. Rubble obscures sides and base. A wall is visible on the north side. Sunken area is possibly associated with power transmission to mill extension.	Building - woollen mill room	1b: Regional	Poor	Tree roots and vegetation.	50	
76	Northeastern reservoir. Sub-rectangular, appears to be relatively shallow, but may be due to silting. Currently the only one holding water.	Mill pond	1: Regional	Good	Trees growing within sides.	51	1854 OS

ID no	Description	Interpretation	Significance	Condition	Threats	Viewpoints	Historic maps
77	Revetment wall at northeast end of reservoir. Relatively large, neatly dressed blocks. No obvious bonding. Appears to extend north of current edge of reservoir, but earth-covered.	Revetment wall	1b: Regional	Average	Trees growing over wall, some damage from fallen tree.	52	
78	Southwestern reservoir. Surrounded by earth banks on three sides, cut into natural slope on northwest side. Silted, but a narrow stream runs through (from drainage ditch 80).	Mill pond	1: Regional	Good	Trees growing within sides.	62	1854 OS
79	Linear depression/gully leading from near cottages towards mill gateway. Possible drainage channel or trackway.	Gully	2b: Local	Average	Trees growing within.	66	
80	Drainage ditch aligned northwest-southeast, running along edge of field to north of survey area, and continuing as a small stream down to Range Dike. Also has a feeder running off it into possible fourth reservoir 81.	Drainage ditch	2: Local	Good		81	1854 OS
81	Level platform with bank to south and slope to north. Possibly a former, infilled reservoir. A narrow channel runs through it from drainage ditch 80 towards (and through) southwest reservoir.	Possible mill pond	1b: Regional	Average		73	1854 OS
82	Channel/overflow leat leading in a straight line from reservoir 76 to channel 41. Appears to be blocked at the northwest end adjacent to the reservoir.	Overflow leat	2b: Local	Average		None	
83	Shallow sunken area to west of flagged floor 5. Possibly associated with power transfer.	Building - woollen mill room	2b: Local	Poor	Tree roots and vegetation.	91	
84	Slight rectangular platform within western extension of mill. Possibly a floor level. Only visible due to pooling of water in lower surrounding areas.	Building platform	2b: Local	Poor	Tree roots, vegetation, water pooling.	None	

APPENDIX 4 – PHOTOGRAPH VIEWPOINT REGISTER

Viewpoint	Description	Direction facing
1	Feature 1, north wall of mill, south-facing elevation	North
2	Feature 2, west wall of mill, east-facing elevation	West
3	Feature 2, west wall of mill, detail of north end, east-facing elevation	West
4	Feature 2, west wall of mill, detail of south end and wheelpit	West
5	Feature 2/3, detail of west end wall of wheelpit showing curved masonry	South
6	Feature 3, view of east end of wheelpit	East
7	Feature 4, east-facing elevation of machine base and wall 1	West
8	Feature 4, plan view of machine bases	East
9	Feature 4, view of gap and stones with bolt holes	West
10	Features 1 and 4, detail of square hole in 1 and fire damage	South
11	Features 4 and 5, north-facing elevation of wall along north side of machine bases	South
12	Feature 5, flag floor and machine bases	East
13	Feature 5, detail of central machine base	West
14	Feature 5, detail of machine base and shaft hole at west end	South
15	Feature 25, east-facing elevation of chimney	West
16	Feature 25, view of circular hollow - chimney shaft?	North
17	Feature 20, view of circular gas holder tank	Southeast
18	Feature 20, view of small void - pipe to tank?	Southwest
19	Feature 21, view of cellar/sunken room	Northwest
20	Feature 22, view of scarp along east edge of former building	North
21	Feature 23-24, gateway and boundary wall to mill	North
22	Feature 30, detail of column base	West
23	Feature 26, view along rubble bank at north edge of mill extension	East
24	Feature 28, scarp and wall within mill extension	North
25	Feature 32, banked rubble, remains of mill wall?	South
26	Feature 31, view of linear hollow within mill extension	South
27	Feature 33, scarp at east edge of mill extension	North
28	Features 36 and 38, linear hollow and overflow leat to west of mill	South
29	Feature 39, view of former sluice area adjacent to overflow	West
30	Feature 64, hollow way to south of current footpath	East
31	Feature 8, view of building remains north of mill	Northwest
32	Feature 6, view of fireplace in southeast room of cottages	North
33	Feature 6, view of north wall of cottages	Southwest
34	Feature 6, view of west rooms of cottages	South
35	Feature 6, view of steps to cellar in southwest room	South
36	Feature 6, view of cellar entrance in southwest room	West
37	Feature 7, view of rectangular structure northwest of cottages	West
38	Feature 19, view of boundary wall at east side of mill site	East
39	Feature 65, platform and scarp east of 19	West
40	Feature 66, segment of wall adjacent to culvert	West
41	Feature 67, exit of culvert from drainage ditch	West

Viewpoint	Description	Direction facing
42	Feature 68, view of channel east of building 69	East
43	Feature 69, south face of small building	North
44	Feature 69, west face of small building, showing hole at base	East
45	Feature 70, south face of boundary wall	Northwest
46	Feature 71, upright stone slab, possibly a sluice gate	West
47	Feature 73, revetment walling in channel 72	Northwest
48	Feature 72, channel/linear depression west of building 69	West
49	Feature 74, rubble bank to north of machine bases 4	West
50	Feature 75, sunken room to west of wall 2, within mill	Northeast
51	Feature 76, view along eastern reservoir	West
52	Feature 77, view of revetment/forebay wall at east end of reservoir 76	North
53	Feature 43, view along bank on south edge of reservoir 76	Northeast
54	Feature 41, channel/overflow leat from reservoir 76	East
55	Feature 42, channel/breach from reservoir 76	Southeast
56	Feature 40, north-facing elevation of boundary wall on south bank of river	East
57	Feature 45, channel/culvert between reservoirs 48 and 76	West
58	Feature 63, segment of revetment walling at west end of reservoir 76	Southwest
59	Feature 62, view of northern channel between reservoirs 48 and 76	Northeast
60	Feature 47, view along bank to south of reservoir 48	Northeast
61	Feature 48, view across reservoir	Northeast
62	Feature 78, view across reservoir	Southwest
63	Feature 49, channel/culvert between reservoirs 48 and 78	Northeast
64	Feature 50, segment of revetment walling at south end of reservoir 48	Southwest
65	Feature 51, northern channel between reservoirs 48 and 78	Northeast
66	Feature 79, gully/linear depression to east of cottages 6	Northeast
67	Feature 52, channel between reservoir 78 and possible former reservoir 83	Northeast
68	Feature 56, earthen bank along southeast edge of possible former reservoir 83	Southwest
69	Feature 57, stone bridge across Range Dike	South
70	Feature 54, northern channel between reservoir 78 and possible reservoir 83	West
71	Feature 59, linear hollow/drainage channel? On slope.	Northwest
72	Feature 58, linear hollow/drainage channel on slope.	East
73	Feature 81, view across possible former reservoir	Southwest
74	Feature 10, view across former quarry	Northwest
75	Feature 11, view along linear depression/drainage channel	West
76	Feature 18, drystone boundary wall, east-facing elevation	Southwest
77	Feature 16, drystone boundary wall on north bank of river	Southwest
78	Feature 17, drystone boundary wall and orthostatic slab on south bank of river	Northeast
79	Features 14 and 15, head race and associated bank	North
80	Features 14 and 15, head race and associated bank	Southwest
81	Feature 80, drainage channel to west of reservoirs	Southeast
82	General view of standing walls of mill (features 1-3)	West
83	General view of north end of mill (features 1, 4)	West
84	General view of standing walls of mill (features 1-3)	Southwest

Viewpoint	Description	Direction facing
85	General view of standing walls of mill from track	Southwest
86	General view of platform 22 and east end of mill site from track	South
87	View along track from mill entrance towards cottages	Southwest
88	Feature 61, recent rubble dumping	East
89	Feature 35, low rectangular structure at south side of mill extension	Southwest
90	Feature 2, view of wall butting against east-facing elevation	Southwest
91	Feature 83, view across sunken area	East
92	Feature 38, stone revetment wall with pipe issuing above culvert	West
93	Feature 9, wall to south of wheelpit, east-facing elevation	West

APPENDIX 5 – PROJECT BRIEF