

CROMFORD CORN MILL

WATER LANE, CROMFORD, DERBYSHIRE



Heritage Appraisal

August 2015

Document No: TJC2015.11



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SUMMARY OF PROJECT DETAILS

OASIS ID:	Thejesso1-213 213
TJC Project Code:	CCM15
Project Type(s):	Archaeological Buildings Appraisal
National Grid Reference:	SK 29232 57024 (centered); DE4 3QG
County:	Derbyshire
District/Unitary Authority:	Derbyshire Dales
Parish:	Cromford
Elevation (above sea level):	c.95m
Designation Status(s):	Listed Building – Grade II (Historic England No.1272587) Within the UNESCO Derwent Valley Mills World Heritage Site Within the Cromford Conservation Area
HER Record No(s):	Derbyshire No.9722
Prepared by:	Oliver Jessop MCIfA Victoria Beauchamp Phd MA
Reviewed by (internal):	Karen E Walker MCIfA FSA
Date:	August 2015
Version:	FINAL (August 2015)

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NON-TECHNICAL SUMMARY

This report is a heritage appraisal of the former corn mill on Water Lane in Cromford, Derbyshire (SK 29232 57024). The building is Grade II Listed, is within the Cromford Conservation Area and UNESCO Derwent Valley Mills World Heritage Site. It has been prepared to provide supporting information for a planning application to convert the semi-redundant building into a dwelling to use as a holiday let.

Cromford Corn Mill was built by George Evans in c.1780 lies on the western extremity of Cromford village and on a piece of land known as the Ball Eye. The land was sold to Sir Richard Arkwright in 1789 and the building is associated with the development of the settlement built by Arkwright to serve the Cromford Mills. The building is listed as a near complete example of a late 18th century water-powered corn mill complex which survives with ancillary buildings and structures. The building is constructed from coursed rubble and squared blocks of gritstone, with ashlar dressings to the window openings and a slate roof covering.

The structure makes an important contribution to the wider setting of Water Lane and the northern extents of Cromford. It was of the earliest purpose built industrial buildings in the village, being integral to the creation of a substantial dam to form Corn Mill Pond, c.1780. The proposed alterations to the Cromford Corn Mill will ensure the long-term preservation of the building, the external appearance of which makes an important contribution to the both the Conservation Area and World Heritage Site.

The proposed external changes are limited to improving light levels to the interior by the introduction of four new windows in the south and west elevations. The principal view of the building from Water Lane will not be impacted upon, although the appearance of the north elevation overlooking the mill pond will be affected.

To enable the four internal levels to be adapted to domestic use, the intention is to insert new partitions to create bedrooms, bathrooms, kitchen and sitting areas. The proposed layout has considered the surviving historic elements and the scheme intends to retain as much historic fabric as possible, whilst also improving visibility of those fixtures and fittings that survive. The proposals include the adaptation of the existing staircase, the removal of a raised timber up-stand inserted in the 1990s on the first floor, the removal of a section of flooring between the first and second floors to create a double height space and the removal of elements of the grain storage bins on the third floor. These alterations are considered as causing differing amounts of impact to the fabric of the building.

It is recommended that a photographic record is made of the building, commensurate to a Historic England level 1 survey.

I INTRODUCTION

BACKGROUND

This document presents the results of a heritage appraisal of the former water powered corn mill in Cromford, Derbyshire (**Figure 1**). It has been prepared to support a planning application for listed building consent to undertake essential structural repairs and convert the interior into domestic accommodation.

Cromford Corn Mill is a grade II Listed building (Historic England No. 1272587) and lies within the Derwent Valley Mills World Heritage Site and Cromford Conservation Area.

AIMS OF THE HERITAGE APPRAISAL

The aim of this report has been to research the historical development of the building and identify surviving features of archaeological and architectural significance. An assessment of the impact of the development proposals has been undertaken, making reference to the wider historic setting of the World Heritage Site that may be affected by the proposed alterations.

PRINCIPAL DELIVERABLES DERIVING FROM THIS WORK:

- A** - A summary of the known historical archives associated with the former mill;
- B** - A description of the surviving features of archaeological interest;
- C** - Guidance to inform the proposed internal refurbishment of the building.

DISSEMINATION

Printed and digital copies of this report will be distributed to the Client, the Derbyshire Historic Environment Record (HER), and once permission has been obtained from the Client, a digital copy will be uploaded to the OASIS (Online Access to the Index of archaeological investigations) with the reference number: thejesso1-213 213.

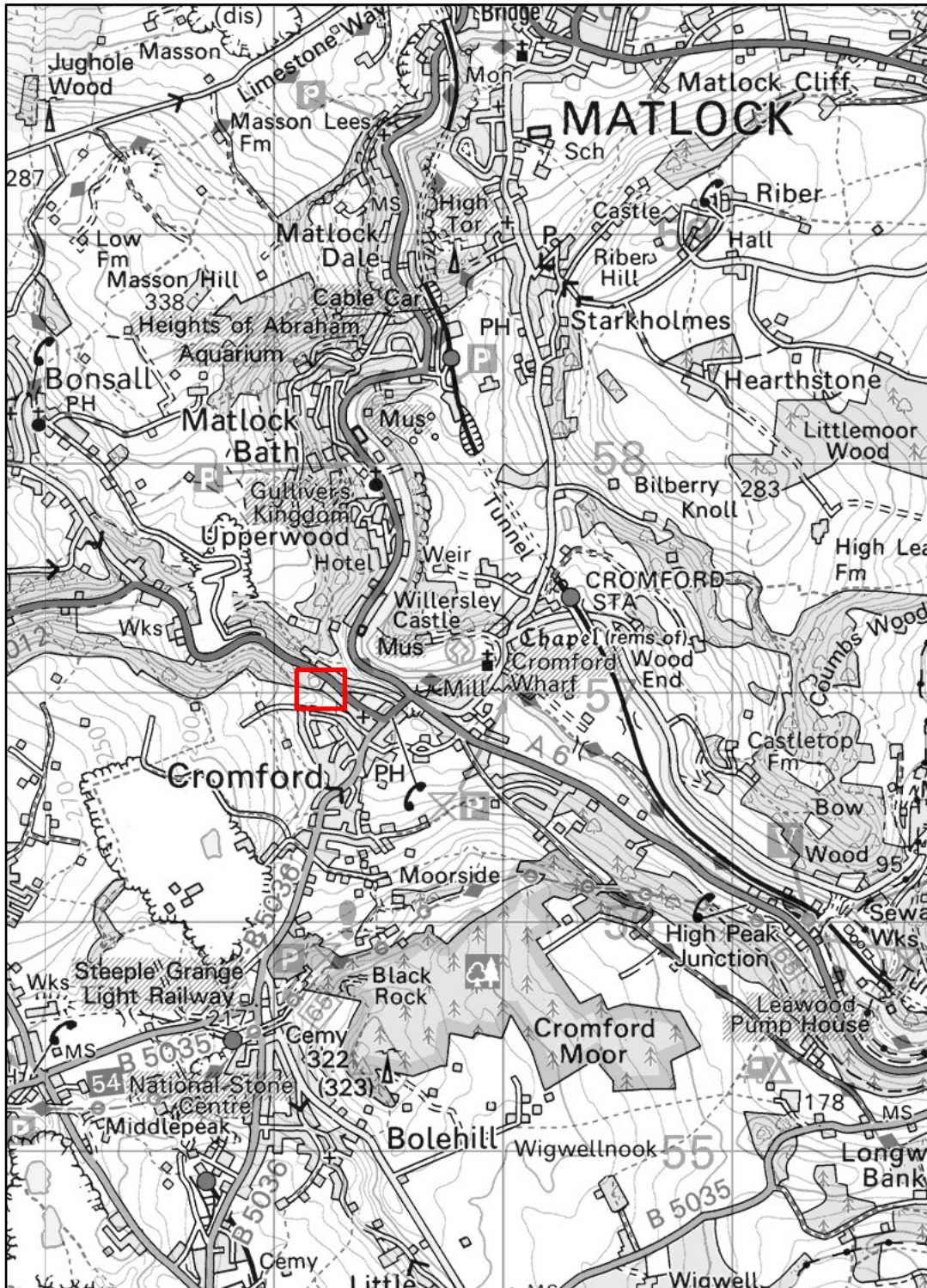


Figure 1: Location map of Cromford Corn Mill (marked with red square)

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2 SITE LOCATION AND BASELINE CONDITION

LOCATION OF SITE AND SETTING

Cromford Mill (the Site) is located on the western extremity of Cromford village in Derbyshire (**Figure 1**). It is positioned at the south end of a long linear mill pond that follows the natural topography (Corn Mill Pond), and is accessed from Water Lane (**Figure 2**). It is in the base of a steep sided valley, on a piece of land known as the Ball Eye. The mill pond is fed by the Bonsall Brook.

The site is centred on NGR SK 29232 57024, and is c.95m above sea level.

SITE LAYOUT

The building which forms the subject of this report, comprises of stone built structure which has a single storey to the west over looking the mill pond (**Appendix 3.3**), whilst to the east (**Appendix 3.7**), south (**Appendix 3.5**) and north (**Appendix 3.4**) the ground falls away and building is three and a half-storeys in height.

The south end of the mill pond is defined by a large dam, along the top of which is a narrow path leading to the Corn Mill, with access at second floor level (**Appendix 3.4**). At the base of the north and south elevations, are narrow stone channels, representing the former wheel pits and mill races from the former corn mill. A new hydro power plant has been installed against the north gable, being partially clad with timber planks.

There is an open area of hard standing with vehicular access to the west (**Appendix 3.2**), and the plot of land is partially surrounded by limestone field walls, with rounded copings (**Appendix 3.1**). A lower yard provides access from the east into the ground floor of the building (**Appendix 3.7**). Built against the southwest section of the building is a three-storey stone structure with a gable and attached dwelling, now converted into a house (Corn Mill Cottage). A second addition stone addition is built against the southwest corner of the building, which was the former maltings, but was converted into domestic accommodation in the 1990s (see **Appendix 2.4**).

GEOLOGY

The underlying bedrock geology beneath the Site is the Monsal Dale Limestone Formation, a sedimentary bedrock. No superficial deposits are recorded (BGS Digital data 2015).

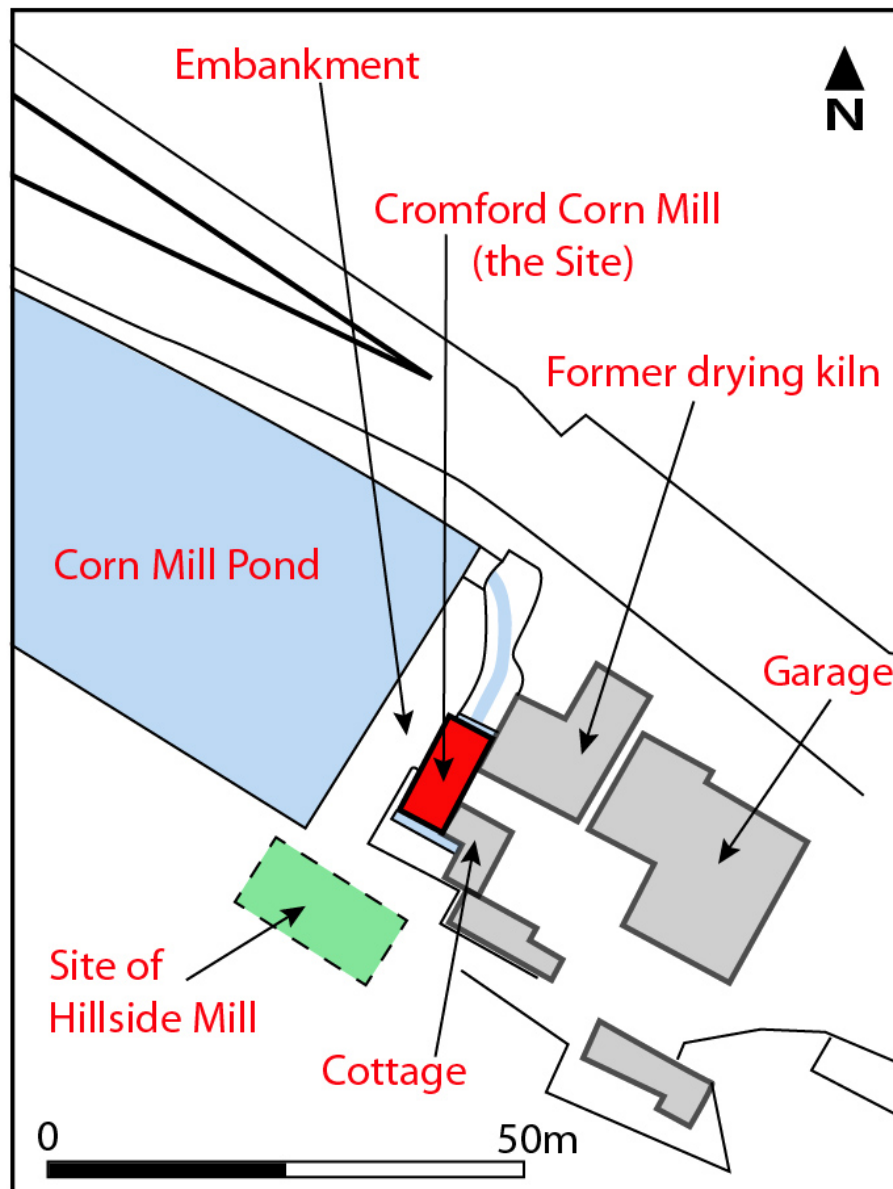


Figure 2: Site plan with key features.

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ORIENTATION

The orientation of the building is approximately northeast – southwest, however, for ease of reference during this report the northwest elevation facing the mill pond is referred to as the west elevation, with the remaining elevations re-orientated to respect the remaining points of the compass.

3 METHODOLOGY

INTRODUCTION

This heritage appraisal has been prepared in accordance with a guidance prepared the Chartered Institute for Archaeologists (IfA 2008, 2011) and accepted best practice. Consultation has been made with the records held by the Derbyshire Historic Environment Record (HER), the Derbyshire Record Office and the Heritage Gateway (online reference) to ensure that the baseline archaeological data of any associated heritage assets are correct.

LIMITATIONS

The scope of this report has been focused upon the assessment of features of significance within the immediate setting of the Site, and that form the historic fabric of the building. The attached structures to the southwest and southeast are not considered in detail, and it should be noted that they have previously undergone extensive restoration and conversion into domestic dwellings.

No geotechnical borehole, or trial pits logs, have been undertaken, or made available for consideration during this assessment.

The report is limited to the following:

- Consultation with Evans Vettori Architects in regards to the proposed alterations;
- A review of relevant archive and documentary material;
- A Site visit in the form of a walk-over inspection of the Site and surrounding area;
- A consideration of the setting of the Site and the identification of heritage assets;
- The preparation of this report.

NOMENCLATURE

The terminology used throughout this document has been derived from existing names and descriptions associated with the site and its surrounding area. Additional descriptions are based upon an assessment of the current and historic character of the site, however, it should be noted that future research may identify additional descriptions for these areas or spaces.

SOURCES CONSULTED

The following archaeological databases and archive repositories were consulted during the preparation of this document:

- Aerial Photographs;
- Archaeological Data Service (ADS) – York;
- Archives held by the Arkwright Society;
- Derbyshire Historic Environment Record;
- Derbyshire Record Office and Local Studies Library;
- Documentary sources, including archaeological publications where available;
- Geological Mapping;
- Heritage Gateway;
- Historic mapping including relevant Ordnance Survey Maps;
- Internet Archives;
- National Archives – Kew;
- The English Heritage Archive – Swindon;
- The National Heritage List for England – English Heritage.

SITE SURVEY

The site was inspected by Oliver Jessop MCIFA in April and June 2015.

4 PLANNING LEGISLATION AND GUIDANCE

PLANNING CONTEXT

The wider planning legislation that underpins planning decisions in regards to archaeological sites and designated heritage assets, is detailed within the Ancient Monuments and Archaeological Areas Act 1979. This legislation (relating to England) has been strengthened by the subsequent National Heritage Acts (1983; 2002).

Further legislation in the form of the Planning (Listed Buildings and Conservation Areas) Act 1990, defines both a 'Listed Building' and a 'Conservation Area'. In considering whether to grant planning permission for development that affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest (sect. 66.1)

NATIONAL PLANNING GUIDANCE – NATIONAL PLANNING POLICY FRAMEWORK

The National Planning Policy Framework (NPPF) was published on 27th March 2012. It replaces previous planning guidance as detailed in Annex 3, including Planning Policy Statement 5 (PPS5), which formed the basis of planning matters relating to the Historic Environment.

NPPF sets out the Government's planning policies for England and how these are expected to be applied. The new emphasis states that planning requirements within the planning system must be relevant, proportionate and necessary to each individual application (Para. 1). This guidance includes 12 Core Planning Principles that include promoting the different roles and character of our main urban areas and protecting the Green Belts around them. The conservation of heritage assets in a manner appropriate to their significance is also important, so that they can be enjoyed for their contribution to the quality of life of this and future generations (Para. 17).

NPPF encourages local planning authorities to identify and bring back into residential use empty housing and buildings (Para. 51), and make effective use of land that has previously been developed (brownfield land), provided that it is not of high environmental value (Para. 111). Section 12 of the NPPF, 'Conserving and enhancing the historic environment', seeks to ensure that heritage assets at risk, through neglect or decay, should be conserved (Para. 126). The setting of any heritage asset needs to be described in a planning submission, with the level of detail proportionate to the asset's importance (Para. 128).

Where a proposed development will lead to substantial harm or total loss of significance of a designated heritage asset, local planning authorities should refuse consent, unless it can be

demonstrated that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss (Para. 133). Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal (Para. 134).

The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining an application, although a balanced judgment will need to be made in regards to the scale of harm, or loss, and the significance of the heritage asset (Para. 135).

NPPF does, however, encourage planning authorities to look for opportunities for new development within Conservation Areas and World Heritage Sites and within the setting of heritage assets to enhance or better reveal their significance (Para. 137). Clear guidance is also given in regards to the requirements of developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and to make this evidence publically accessible (Para. 141).

NPPF tasks local planning authorities to have up-to-date evidence about the historic environment in their area and to use it to assess the significance of heritage assets and the contribution they make to the environment (Para. 169). Where appropriate, landscape character assessments should also be prepared and integrated with an assessment of historic landscape character, especially where major expansion options are being considered in areas of landscape sensitivity (Para. 170).

CROMFORD CONSERVATION AREA

The Cromford Conservation Area is a designated area of special architectural or historic interest, the character or appearance of which it is desirable to preserve or enhance (Section 69 of The 1990 Planning (Listed Buildings and Conservation Areas) Act).

The main attributes that define the special character of the area are its physical appearance and history, i.e. the form and features of buildings and the spaces between them, their former uses and historical development. Where there are a number of periods of historical development, the character of individual parts of the Conservation Area may differ. Contrasts between the appearance of areas and the combination of buildings of various ages, materials and styles may contribute to its special character.

In September 2007 a character appraisal was undertaken of the Cromford Conservation Area, which identified sixteen distinctive characteristics. Those that are applicable to any proposed alterations to the Cromford Corn Mill are listed below (after Cromford Conservation Area Derbyshire Dales website, June 2015):

RELEVANT CHARACTERISTICS

- a working community which depends on quarrying and associated industries and as such has a 'gritty' nature which has, so far put a halt on over-prettification;
- association with Sir Richard Arkwright, one of the most significant figures of the Industrial Revolution;
- an industrial core of mill buildings threading through the valleys, accompanied by complex systems of water management & control;
- significance of Bonsall Brook & River Derwent as power sources for mills;
- a linear ribbon development of planned industrial housing;
- dramatic topography & geology of two gorges, riverside and lush wooded setting;
- use of locally quarried, deep pink gritstone for the historic buildings;
- the prevalent use of gritstone for boundary walls;
- informal open spaces (millponds, water meadows, Allen's Hill).

WORLD HERITAGE SITE – DERWENT VALLEY MILLS

World Heritage Sites are cultural and/or natural sites considered to be of outstanding universal value - places or buildings which are considered to have special importance for everyone. They are thought to represent the most significant, unique or best examples of the world's cultural and/or natural heritage, and because of this they have been inscribed on the World Heritage List by the World Heritage Committee. The Derwent Valley Mills are the birthplace of the factory system. It was for this reason that they were added to the UNESCO World Heritage List in 2001.

Arkwright established his industrial settlement in Cromford over a period of 20 years. The first significant house-building was in 1776 in North Street, followed soon after by the three-storey houses towards the top of Cromford Hill. From 1776 until 1789 Cromford was owned by Peter Nightingale, and it was not until Sir Richard had purchased the estate that the pace of development accelerated. Nor is it possible until that time to discern any element of conscious planning in the community's development. The village continued to grow under the stewardship of Richard Arkwright junior until the time of his death in 1843.

Proposals to alter, or adapt aspects of the World Heritage Site need careful consideration in regards to any future harm, or increased benefit to the special qualities of the area in question.

5 UNDERSTANDING THE SITE - HISTORY

INTRODUCTION

This section of the report presents a summary history of the development, ownership and operation of Cromford Corn Mill. It has been compiled from a variety of sources, which are presented as both a timeline and historical narrative in the following sections.

HISTORICAL TIMELINE

Date	Description/Event	Evidence
1760s (possible)	Edwin Lascelles owned four smelting Mills in Cromford to grind calamine. Some were at Cromford Bridge, but Crossley and Kierman (1992) suggest that the corn mill is a second potential site after lead slag was found there.	Stroud, G 2001; 13.
n.d.	"It is on the site of a previous mill worked by a company from Cheadle in Staffordshire for the smelting of zinc oxides. It was this company that built Staffordshire Row for its workers."	Cromford Village website
1776	Enclosure Award of "Common and Waste ground" around Bonsall – George Evans awarded allotments at Ball Eye (allotment 246).	Buxton and Charlton 2013; 14.
1776	Note that no buildings are shown as existing on the mill site in 1776 and that no dams or ponds are marked.	Derbyshire Record Office Q/R/19 available on CD121.
c.1780	Evans builds a corn mill at "extremity of Ball Eye". A dam 20ft deep was built to secure the pond.	Buxton and Charlton 2013; 14.
1783	William Bray – Sketch of a Tour into Derbyshire, "In the way to Bonsal some pieces of water have lately been formed by dams across the little stream, which runs down the bottom, and on one of them a large corn-mill is built".	Bray 1783; 129.
1787	Evans purchased from Adam Simpson, land allotment 244 adjoining 246.	Buxton and Charlton 2013; 14.
1789	Legal source describes site as 'A new corn mill in Cromford...water is turned and conveyed to it by a cut or aqueduct through the wood' (Slinter Wood).	Buxton and Charlton 2013; 16.
1789	Evans sells allotments 244 and 246, the corn mill and the three lower ponds to Sir Richard Arkwright. The sale included "kiln and drying house". 7 th April 1789	Buxton and Charlton 2013; 14 & 17; Meeson & Welsby 1840; 211
1789	8 th April 1789 Richard Arkwright purchases manor of	Buxton and Charlton 2013;

Date	Description/Event	Evidence
	Cromford from Peter Nightingale (Peter Nightingale was Brother in Law to G. Evans).	16; Kelly's Directory of Derbyshire 1889; (D258/2/29/19 Probate Will of George Evans dated 1785 acted on 1808).
1794	Joseph Higgott described as of "Cromford Mill".	Buxton and Charlton 2013; 16.
1797?	George Robertson Sketch: North West View of a Corn Mill Cromford (Arkwright Society Collection). Note: the limekiln but no drying kiln. Image possibly predates 1797.	Buxton and Charlton 2013; 15.
1797	Advert that Mills available to let 'with 4 pairs of stones, bolting machine, drying kiln' Derby Mercury.	Derby Mercury Thurs June 1st and June 8th 1797; http://www.britishnewspaperarchive.co.uk ; Buxton and Charlton 2013; 17.
1818	Henry Moore described site as "two mills, one immediately above the other; the upper mill has an overshot wheel, a cascade near it; they are backed by rock and trees, making a pretty subject for sketching".	Buxton and Charlton 2013; 15.
1829	Higgott, Joseph and John millers in Cromford.	Glover, S 1829 a Directory of the County of Derby.
1835	Higgott, George Maltser: Cromford. Isaac Biddulph, miller: Bonsall (plot 29 on Bonsall Tithe) and Robert Clay, Miller Bonsall (plot 100 on Bonsall Tithe), George Higgott, miller Matlock.	Pigot's Directory of Derbyshire 1835.
1840	Mills at Cromford (artist unknown) in private collection.	Buxton and Charlton 2013; 15.
1841	Cromford Tithe Map. Joseph Higgott shown as occupying plot 152 and 153 Corn Mill, Warehouse, outbuildings, yard (1 rood and 32 perches) and garden (14 perches). Richard Arkwright recorded as the owner. Note: 141, 142 & 143, 144, 145, 147 & 149 Richard Arkwright Owner and Occupier – 141- Dam 1r 29perches, 142- Fens Dam and Bank at Turnpike (1r 31p) and a willow coppice (4 perches), 143- New dam and bank next to turnpike (2r-11p) and willows (28 perches), 144 Upper Little New Dam (19p) and 145-Nether Little New Dam (22p), 147- Dam next to Mill and Bank next to Turnpike (2r 16p), Part of large dam (3r 19p); 146 R. Arkwright owner and George	D2360/3/52a/b Derbyshire Record Office.

Date	Description/Event	Evidence
	Higgott occupier Swifts Patch- arable (1r 8p); 148 R. Arkwright owner, Joseph Higgott occupier - Mill Goit (33 perches).	
1841	Mr Joseph Higgott, corn miller of Cromford. Report of a robbery of his servant on his way to Derby to collect a wagon load of wheat. 4 men stole £35 from the servant in the attack at four in the morning.	Derbyshire Courier (Saturday 11th Dec 1841); http://www.britishnewspaperarchive.co.uk/
1841	Census: Living in Cromford; Joseph Higgott, 50, Land Surveyor and his wife, Mary, 45 together with 6 children including recorded as having two sons William, 19 and George 17 as millers. George Higgott, 76, recorded a publican in Bonsall.	http://www.wirksworth.org.uk/C41-05.htm#Cm094a .
1842	Higgott, George Maltser: Cromford. (Isaac Biddulph and Robert Clay millers in Bonsall – relates to corn mill up stream of site).	Pigot's Directory of Derbyshire 1842.
1848	Bonsall Tithe Map (plots 1 & 2) and schedule records George Higgott occupying Water Corn Mill, Gardens, Yard and Waste (1 rood 29 perches) and part of Mill Dam (3 roods 29 perches). The plots recorded as being owned by Peter Arkwright (4th Son of Richard Arkwright junior born 1784). Plot 20 – occupied as Joseph Higgott as a stone quarry; Plot 18 Occupied by Simon Spencer and recorded as – “Part of the Ball Eye and building”; Plots 17,19, 22 and 23 (pond immediately above to 22) are recorded as fishponds belonging to Peter Arkwright.	www.bonsallhistory.org.uk ; http://www.cromfordvillage.co.uk/arkwrights.html (family history of the Arkwrights and image of Peter as a child).
1851	Census Cromford: Joseph Higgott, 60, Miller, with 14 acres born in Winster, daughter Mary Ann, 29, son Francis, 25 miller, daughter Judith, 21, John Taylor a scholar and Mary Stafford servant. George Higgett (note e not o), 58, Miller, farmer and innkeeper, Market Place, Cromford (innkeeper with 4 acres employing 4 men) together with his sister, brother, niece and 3 servants and William Henshaw, 19 miller.	http://www.wirksworth.org.uk/C51-08.htm#Cm172a .
1855	George and Joseph Higgott, millers, Cromford (no mention of millers in Bonsall).	Post Office Directory of Derbyshire & Nottinghamshire, 1855.
1861	Census: Isaac Biddulph, 63 (born Tutbury), Corn Miller employing 2 men. Mary Biddulph (wife), 68 (born Wirksworth), and Isaac Biddulph, 10 (born Manchester) scholar; Water Lane, Cromford.	www.wirksworth.org.uk .

Date	Description/Event	Evidence
1870	Biddulph Brothers, corn millers, Cromford Mills.	J. G. Harrod & Co.'s Postal and Commercial Directory of Derbyshire, Leicestershire, Rutland, and Staffordshire (1870).
1871	Census: John Biddulph, 49 (born Wirksworth), Corn Miller Master, Anthony Biddulph, 42 (brother) (born Bonsall), Thomas Biddulph, 16 (son)(born Stepney), corn miller also William A, 14, Sampson, 11, Elizabeth, 9, George, 7, and Fred, 5 (children), scholars; Mill House, Cromford.	www.wirksworth.org.uk.
1879	OS Map shows Evan's Mill and the hillside mill.	OS 6" map Derbyshire XXXIV.NW.
1881	Census: John Biddulph, 59 (born Wirksworth), Corn Miller. Mary A (wife), 58, Anthony Biddulph, 52 (brother) (born Bonsall) corn miller, John Biddulph, 29 (son)(born Manchester) corn miller, Sampson, 21 (born Ashbourne) Corn Miller, Elizabeth, 19 (born Matlock), George, 17 (born Matlock) corn miller; Water Lane, Cromford.	www.wirksworth.org.uk.
1881	Biddulph Bros. millers, Cromford.	Kelly's Directory of Derbyshire 1881; 967.
1889	Biddulph, John miller (water), and corn dealer, Cromford.	Kelly's Directory of Derbyshire 1889; 120.
1891	Census: John Biddulph, 69 (born Wirksworth), Miller, Mary A (wife), 67, Anthony Biddulph, 62, (brother) Miller, (born Bonsall), John Biddulph, 38 (son)(born Manchester), miller; Water Lane, Cromford.	www.wirksworth.org.uk.
1891	John Biddulph was known locally as the Singing Miller.	Pers. Com. John Biddulph (last surviving Cromford Biddulph) email 22/4/15.
1893	Advert in Newspaper concerning a deed of assignment the corn mill, Cromford. "Joseph Hodgkinson has received instructions from R. Hall, Esq (Trustee in the Estate of Messers Biddulph Brothers), To sell by auction upon premises as above. On Thursday January 19 th 1893, Miller's utensils, 2 Horses, Spring Carts, Harnesses, Cart Gears, Hay, Manure, Poultry, Household Furniture &c."	Derbyshire Times and Chesterfield Herald - Saturday 14 January 1893; http://www.britishnewspaperarchive.co.uk .
1895	Biddulph J& F, millers (water) and corn dealers.	Kelly's Directory of Derbyshire 1895.
1897	Report regarding shooting attack by William Wilkinson in Matlock, who was an employee of messers Biddulph	Derby Mercury - Wed 25 th August 1897;

Date	Description/Event	Evidence
	Bros at Cromford Corn Mill. Note: how far flour was delivered to Hopton, Brassington and Via Gellia.	http://www.britishnewspaperarchive.co.uk .
L.19 th C	Evan's Mill changes from waterwheel to turbine. "The piped water was delivered at a high level into a cast iron pipe. A remnant of this system, the bracket which helped the cast iron pipe feed still in place on mill wall. Water from the turbine was returned to the pond". (The goit supply to the hillside mill confined to buried pipes).	Buxton and Charlton 2013; 16.
1900	Biddulph, John miller (water), and corn dealer.	Kelly's Directory of Derbyshire 1889; 120.
1900	By this date the hillside mill has disappeared from OS Maps. Wall supporting the water wheel survived until 1980s.	Buxton and Charlton 2013; 16; OS 6" Derbyshire XXXIV.NW 1900.
1901	Census; Mary A (head), 78, John Biddulph, 48 (son)(born Manchester), corn miller, Arthur Biddulph (Gson) (born Cromford), 9; Water Lane, Corn Mill, Cromford.	www.wirksworth.org.uk .
1902	Note in newspaper regarding the death of John Biddulph in 1902 and that potential claimants on the Estate are to contact F.C. Lymn, solicitor in Matlock Bath.	Derbyshire Times and Chesterfield Herald - Saturday 26 April 1902; http://www.britishnewspaperarchive.co.uk .
1904	Barker and Son, Millers (water) & corn dealers	Kelly's Directory Derbyshire 1916.
1906	Newspaper advert for a young man as a corn miller to be able to dress stones, and some knowledge of horses, abstainer preferred. Apply to Bar and Son, corn mill, Cromford, Matlock Bath.	Derbyshire Times and Chesterfield Herald - Saturday 02 June 1906; http://www.britishnewspaperarchive.co.uk .
1916	Barker and Son, Millers (water) & corn dealers	Kelly's Directory Derbyshire 1916
1924	S Barker buys the Corn Mill from the Trustees of the late Mr F.C. Arkwright. This is detailed through the Derbyshire Times and Chesterfield Herald. 12 th July 1924 report that Mr W Barker sent a letter via Messrs Lymn and Lymn to Bonsall Council stating that "he would be glad if the council would make arrangements to prevent objectionable matter being washed off the main road into the dams". The surveyor thought this would be a considerable expense as the sumps would have to be deeper. The matter was to be reported back to Mr Baker as	Derbyshire Times and Chesterfield Herald July 1924; www.britishnewspaperarchive.co.uk/

Date	Description/Event	Evidence
	“receiving the attention of the council”.	
	19 th July Mr S Barker wrote to the paper to let them know that he had purchased them and that “Mr W Barker has no connection with the above mills” and he wished “to cause the council no unnecessary expense.”	
1925	Barker and Son, Millers (water) & corn dealers.	Kelly’s Directory Derbyshire 1925.
1933	S Barker sells corn mill to EH Bailey of Matlock.	Buxton and Charlton 2013; 18.
1934	Bailey EH Ltd. Millers (water).	Kelly’s Directory Derbyshire 1934.
1941	Bailey EH Ltd. Millers (water & steam), Water Lane.	Kelly’s Directory Derbyshire 1941.
1947	Bailey’ sell corn mill. Alex Paterson, the last miller was transferred to Bailey’s mill at Matlock.	
1948	OS Map .	OS 6” Derbyshire XXXIV.NW 1948
1971	Corn Mill reported to become a memorial to Sir Richard Arkwright. £15,000 fund launched to restore the mill on the 200 th anniversary of spinning in Cromford. “The English Calico Ltd Group will covenant £3500 towards the restoration of the mill”.	Derbyshire Life September 1971.
1971	Mill given to the Arkwright Society after Arkwright Festival by the Lemand Organisation. Another reference (pers com Buxton) suggests the Building transferred from Shands to the Arkwright Society.	Arkwright Local History Trail no 14 1975.
n.d.	Machinery from Miller’s Dale corn mill, donated by the North Derbyshire Water Board and part of the water wheel from Darley Bridge installed.	Buxton and Charlton 2013; 18; www.cataloguemillsarchive.org .
1975	Reference in Arkwright Walk Leaflet 14 says “at present the building is a shell...it contains little of it’s original equipment apart from storage bins and a sack hoist which may be seen from the top floor. It is likely that original that water wheels at each end of the building drove 2 independent sets of mill stones”.	Arkwright Walk Leaflet 14 dated 1975
1980s - 1998	Mill photographed by DCC Env Services (also some pictures from 1980s).	http://www.picturethepast.org.uk/ .
1994	Photographed by R Freestone. 165 Cromford Corn	Derbyshire Record Office

Date	Description/Event	Evidence
	mill from the S.	Illustration File 165-170
	Listed Building Status Grade II (21 Oct). 1272587; Former water-powered corn mill, attached cottage,	http://list.historicengland.org.uk/resultsingle.aspx?uid=1272587
1995	Stabling demolished when garage extended. Arkwright Society (with help from Prince's Trust) converted kiln and malthouse to hostel for young people. Known as Cromford Venture Centre it was opened by Prince of Wales in 1996 and used until 2013.	Buxton and Charlton 2013; 18.
1999	A.Grifford reported in Derbyshire Water Mills: Corn Mills that a pentrough could still be seen as well as the two wheel pits.	Gifford 1999; 34.
2001	Corn mill included in the World Heritage Site nominations.	http://whc.unesco.org/uploads/nominations/1030.pdf .
2011 - 2012	Cromford Corn Mill Hydro Scheme. Funded by EDF, Aggregates levy fund, Rolls-Royce and Sustainable Development fund. CINK manufactured and installed the turbine and it was commissioned March 2012.	Annual review of Arkwright Society 2011/12. http://cromfordmills.org.uk/sites/default/files/AS_report_V_LOW.pdf .
2011	Corn Mill Wheel Pit excavated. Funding from Renaissance East Midlands. Work carried out by The Blend from Ripley (groups of young people not in Education or Training). Sam Farnham of Nottingham University over saw the project. Excavation revealed wheel had a diameter of about 6.5 m.	http://cromfordmills.org.uk/sites/default/files/Newsletter_20.pdf .

HISTORICAL SUMMARY

The earliest depiction of the Site is the Bonsall Enclosure Map from 1776 (**Appendix 1.1**), which indicates that the land was relatively at this date. It is widely accepted (Unesco 2001; Buxton and Charlton 2013, 14) that the corn mill was built by George Evans in c.1780. He had been awarded part of the land (allotment 246) in the Enclosure Award of 1776 (Buxton and Chalton 2013, 14), and had built the mill by the time William Bray visited the area in 1783 (p129). He later acquired (1787) the adjoining allotment of 244 belonging to Adam Simpson before selling both to Richard Arkwright in 1789. The sale documents described the plot as including the corn mill, kiln and drying house (Buxton and Charlton 2013, 14 & 17).

The earliest depiction of the mill is a sketch by George Robertson; an illustration which includes a lime kiln to the west (**Appendix 2.1**). The mill is described in a newspaper advert in the Derby Mercury of the same year, which notes that it contained 'four pairs of stones, a bolting machine and a drying kiln' (June 1st & 8th). The millers from 1794 appear to have been the Higgotts,

(Buxton and Charlton 2013, 16) who were still recorded as being in residence in the Glover's Trade directory of 1829. A second illustration c.1840 of the south prospect of the mill by an unknown artist (**Appendix 2.2**), is remarkably similar to the 1797 sketch and indicates that the Site comprised of two parallel blocks (the Cromford Corn and Hillside Mills), although there appears to be a degree of artistic licence in regards to the layout and form of the buildings.

In 1841 the schedule for the Cromford Tithe Map (**Appendix 1.3**) lists that Joseph Higgott was occupying a corn mill, warehouse, outbuildings and yard, comprising of 1 rood and 32 perches, with an attached garden occupying a further 14 perches. The land was owned by Richard Arkwright. It is interesting to note that a report of a robbery in the Derbyshire Courier (11th December) shows that Joseph Higgott was sending to Derby for wheat to grind, although in the census for that year he is described as a land surveyor whilst his sons William (19) and George (17) are described as the millers.

The 1848 Bonsall Tithe map (**Appendix 1.2**) indicates that it was George Higgott who occupied the water corn mill, gardens, yard and waste (1 rood 29 perches) and part of Mill Dam (3 roods 29 perches). The plots recorded as being owned by Peter Arkwright (4th Son of Richard Arkwright). Joseph Higgott is shown as occupying a stone quarry (plot 20), although it is unclear if the stone from here would be used for the millstones or was just another source of income. The dams which eventually fed water to the corn mill are also recorded as fish ponds described as being in-hand, or owned by Peter Arkwright.

From the mid 1850s the trade directories stop recording separate millers in Bonsall and Cromford, suggesting that by this date at least, the site with both its mills were worked together, although some of the earlier references to the Bonsall millers are records of the corn mill situated at plot 100 on the Bonsall Tithe further upstream from the Site.

Census and trade directories demonstrate that the Higgotts remained as millers until the 1860s when the Biddulph family took over. Isaac Biddulph, 63 is recorded as a miller employing 2 men in the 1861 Census at Water Lane; he was previously recorded in the trade directory of 1835 as being a miller in Bonsall. From the 1870s the Biddulph Brothers are recorded as millers in the trade directories, the census revealing that it was John (59) and Anthony (52) Biddulph in 1881 who worked the mill together with John's sons John (29), Sampson (21) and George (17).

In 1893 some misfortune appears to have befallen the Biddulph family. An advert in the Derbyshire Times and Chesterfield Herald for Saturday 14 January 1893, states that for a sale 'under a deed of assignment, the Corn Mill Cromford' to dispose of Miller's utensils, 2 horses, 4 spring and other carts, cart gears, hay, manure, poultry and household furniture'. It is unclear which

mill this refers to but the OS map for 1899 (**Appendix 1.6**) does not depict the hillside mill, it presumably having been demolished.

The Biddulphs (listed as J & F) continued to be recorded as millers and corn dealers in 1895. John Biddulph was known locally as the ‘Singing Miller’ (pers.com. John Biddulph’s great grandson April 2015). In 1897, a report about an attack in Cromford revealed that a witness William Wilkinson (20) who lived at 24 Cromford Hill was employed as a driver for the Biddulph brothers delivering flour (Derby Mercury 25th August 1897). By 1900 only John was recorded in the trade directory, and shortly after in 1902 (April 26th) his death was announced in the Derbyshire Times and Chesterfield Herald.

Barker and Son are recorded as millers and corn dealers by 1904, and an advert in 1906 advertises for a ‘young man as corn miller, able to dress stones, also having some knowledge of horses: abstainer preferred’. When the Arkwright estate was put up for sale in 1924 Mr Barker brought the mill. The details are found in the Derbyshire Times and Chesterfield Herald as there appeared to be much debate as to whether it was him, or his father had brought it, and there was some controversy over a request for Bonall council to stop “objectionable matter being washed off the main road into the dams” (July 1924). Mr Barker sold the mill to E.H. Bailey in 1933 (Buxton and Charlton 2013;18) who continued to operate the mill until about 1947. The trade directories in 1941 show “Bailey E.H. Ltd, millers. The last miller (now of animal feed, rather than corn) was Alec Paterson, who was transferred to E.H. Bailey’s Matlock mill in the late 1940s.

Little is known of the fate of the mill from 1947 until 1971 when Derbyshire Life reported that it was to become a memorial to Sir Richard Arkwright. The English Calico group contributed towards its restoration, although the Arkwright Society recall it was transferred from the Shands to their ownership after the Arkwright Festival in 1971. At some time in recent years the mill was repaired internally and it contains some machinery from the Miller’s Dale corn mill and parts of the waterwheel from Darley Bridge (Buxton and Charlton 2013; 18). A description of the mill in 1975 says “at present the building is a shell...it contains little of it’s original equipment apart from storage bins and a sack hoist which may be seen from the top floor. It is likely that originally there were water wheels at each end of the building, which drove two independent sets of mill stones” (Arkwright Trail 14).

In 1994 it became a listed Grade II building and in 1995 the Arkwright Society converted the associated kiln and malthouse to the Cromford Venture Centre.

Most recently it was developed as the Cromford Corn Mill Hydro Scheme in 2011/2012 during which time some excavation work took place in the wheelpit revealing a water wheel of approximately 6.5m in diameter (Arkwright Newsletter 2011).

ANALYSIS OF HISTORIC MAPPING

The earliest illustration which depicts the layout of the mill built by George Evans in c.1780 is the 1841 Tithe Map (**Appendix 1.3**). The layout of the buildings is comprised of two main blocks. To the west are two attached linear structures, apparently associated with a series of leats aligned around a square, interpreted as being the Hillside Mill. The second block is centrally located and is comprised of a series of separate structures that appear to interconnect, or abut one another to form an inverted u-shape. The northern rectangular block correlates with the existing mill building (**Appendix 3.3**) and two side walls that define the steep drop on the south face of the dam embankment (**Appendix 3.1** and **3.4**). The southeast building is interpreted as the former corn drying kiln and the dwelling to the west.

There is a long tapering mill pond extending up the valley towards the north (plot 149), with woodland along the west bank that contains a separate mill leat for Hillside Mill. To the southeast of the buildings there is a curved section of an open tailrace, and two narrow walled linear enclosures or fields.

The appearance of the site appears to have remained unchanged on the 1848 Tithe map (**Appendix 1.2**), although a rectangular structure has been added to the south of the kiln by 1880 (see **Appendices 1.4, 1.5**). The Hillside Mill is not illustrated on the 1899 OS map (**Appendix 1.6**), presumably having been demolished. Between 1922 (**Appendix 1.7**) and 1968 (**Appendix 1.8**) a large rectilinear garage had been built to the south of the former kiln. This structure remains in use today (**Appendix 3.2**). Also, between 1922 and 1968 the millpond had partially silted up, with water apparently being mainlined as a water course to the east of the mill. No further changes of note are depicted on the historic mapping (**Appendix 1.9**) up to the present day.

6 UNDERSTANDING THE SITE – HISTORIC FABRIC

INTRODUCTION

This section of the report presents the results of a rapid appraisal of the historic fabric of the former mill, and in particular any fixtures and fittings associated with its former operation (see **Figures 3, 4**). To accompany the written description a selection of digital photographs are included as **Appendix 3**. The building has a very simple layout comprising of four rooms located one above each other, referenced here as **G1, F1, S1, T1** (**G1** = ground floor room 1, etc). The only exception is on the ground floor where a temporary partition has been inserted in the eastern half of the room **G2** to protect the historic mill gearing in this area.

DESCRIPTION OF FABRIC - EXTERIOR

The building that forms the historic core of the mill complex, and is the subject of this report is a four-storey rectangular building (**Figure 2**). Its external dimensions are c.7.1m x c.13.1m and it is built using locally quarried dark pink/yellow gritstone. The walling is comprised of squared blocks arranged in irregular courses, with larger stones used as quoins. Flush mullioned ashlar blocks are used to form the windows, which are centrally arranged in pairs the west and east elevations (**Appendices 3.4, 3.5**). The fenestration has louvered lower sections with four light timber frames above. The roof is pitched and covered with slate with no ornamentation.

The building is built against the dam and embankment that retains the Corn Mill Pond to the north (**Appendix 3.4**). It is likely that the mill building was constructed as a free standing structure with the embankment built against it. The embankment has a stone parapet wall along the east edge, where the ground drops by c. 7-8m. The ancillary buildings to the southeast and southwest were built as secondary structures, as evidenced by vertical construction joints where they meet one another.

The result of being positioned against the retaining wall of the mill dam, is that the west elevation (**Appendix 3.3**) is only one-storey, although internally forms a split level, and the remaining elevations are four-storeys in height (**Appendices 3.4, 3.5, 3.7**). This is an ingenious design that allows for the milling building to operate over four separate levels, whilst not apparently existing as a towering structure in this part of the village.

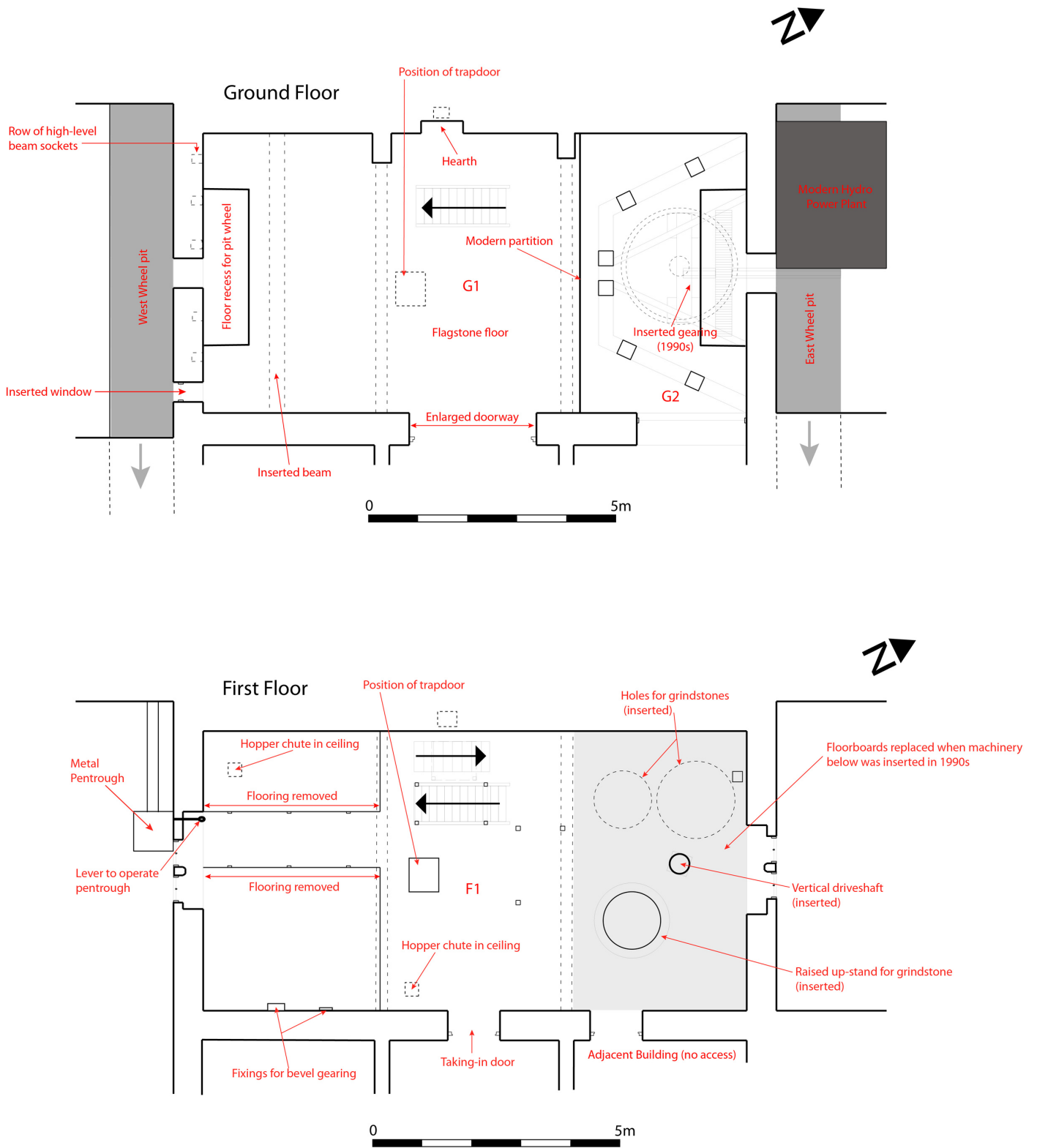


Figure 3: Ground and First Floor plans with location of the principal historic features.

Base drawings provided by Evans Vettori Architects Ltd © May 2015

The west elevation facing the mill pond (**Appendix 3.3**) and has a single access doorway, reached up a short flight of three steps. There is an off-centre chimney stack rising from above the wall head, which links to a hearth on the ground floor in **G1**. The principal feature of note is at the north end of the elevation where a vertical drive shaft or shuttle mechanism was located. This was housed in metal brackets (**Appendix 3.6**) and partially concealed behind a low stone retaining wall in the top of the embankment.

The north and south elevations are similar in form (**Appendices 3.4, 3.5**), with centrally arranged paired windows on the three upper floors. The lower section of each elevation was built using large blocks of ashlar, which were indented to support the immense weight of two external overshot water wheels. The wheels no longer survive, although the circular scars caused by their rotation on the ashlar stonework is clearly visible (**Appendix 3.5**). Excavation of the east wheel pit in 2011 indicated that the diameter was 6.5m. Centrally located within each section of ashlar masonry at the base of these two elevations are large openings, where the central horizontal shaft that supported the waterwheels was located. The wheel pits are defined by sunken stone lined channels that form leats flowing away to the south beneath the existing motor garage. There is a rectangular riveted steel pentrough set at first floor level on the west elevation (**Appendix 3.5**), and constructed within the east wheel pit is a modern hydro-powered turbine (**Appendix 3.4**).

The east elevation of the mill (**Appendix 3.5**) is largely obscured by the later addition of the former kiln and cottage to the north and south, which form a narrow entrance yard. The exposed central section of the elevation has an inserted double wooden access door at ground level supported by an RSJ. Above this is a single wooden plank and baton door, which is likely to have facilitated the transfer of sacks of flour down on to waiting wagons, or carts in the yard below. Above this door, at second floor level is a central square window with four lights in a wooden frame.

DESCRIPTION OF FABRIC - INTERIOR

The interior dimensions of the building are c.5.8m x 12.1m. The walls are unplastered and roughly painted, although the second floor has an internal brick skin. The building can be subdivided into three structural bays, being defined by substantial spine beams orientated north-south, which correspond with timber trusses that support the roof structure on the top floor (see **Figures 3 and 4**). Vertical access through the building is via a staircase centrally located against the west wall.

Each floor is described in turn in the following section of this report.

Millpond

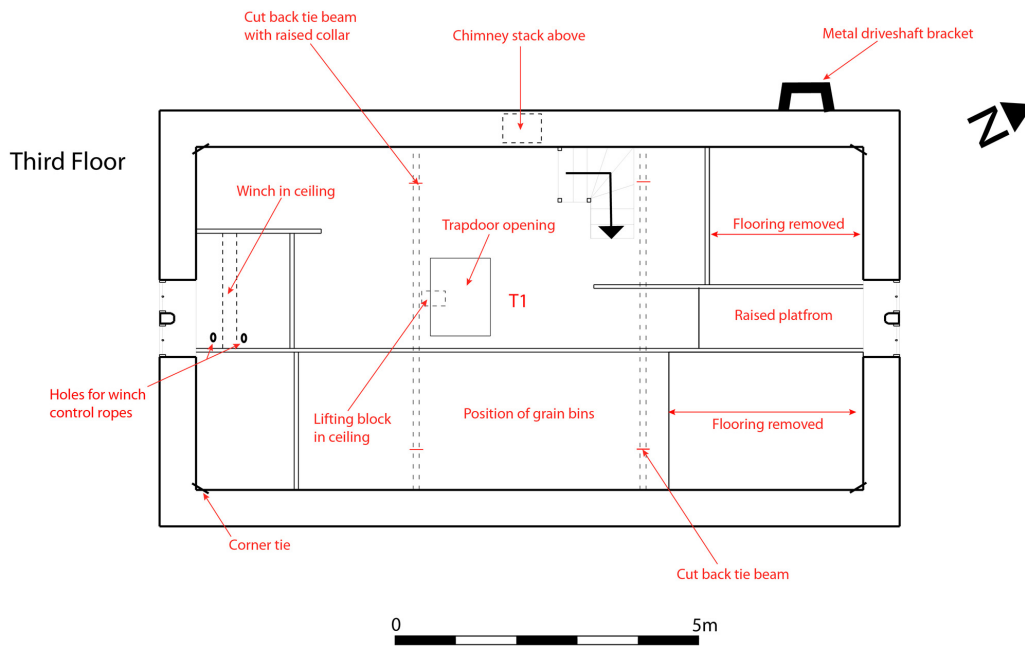
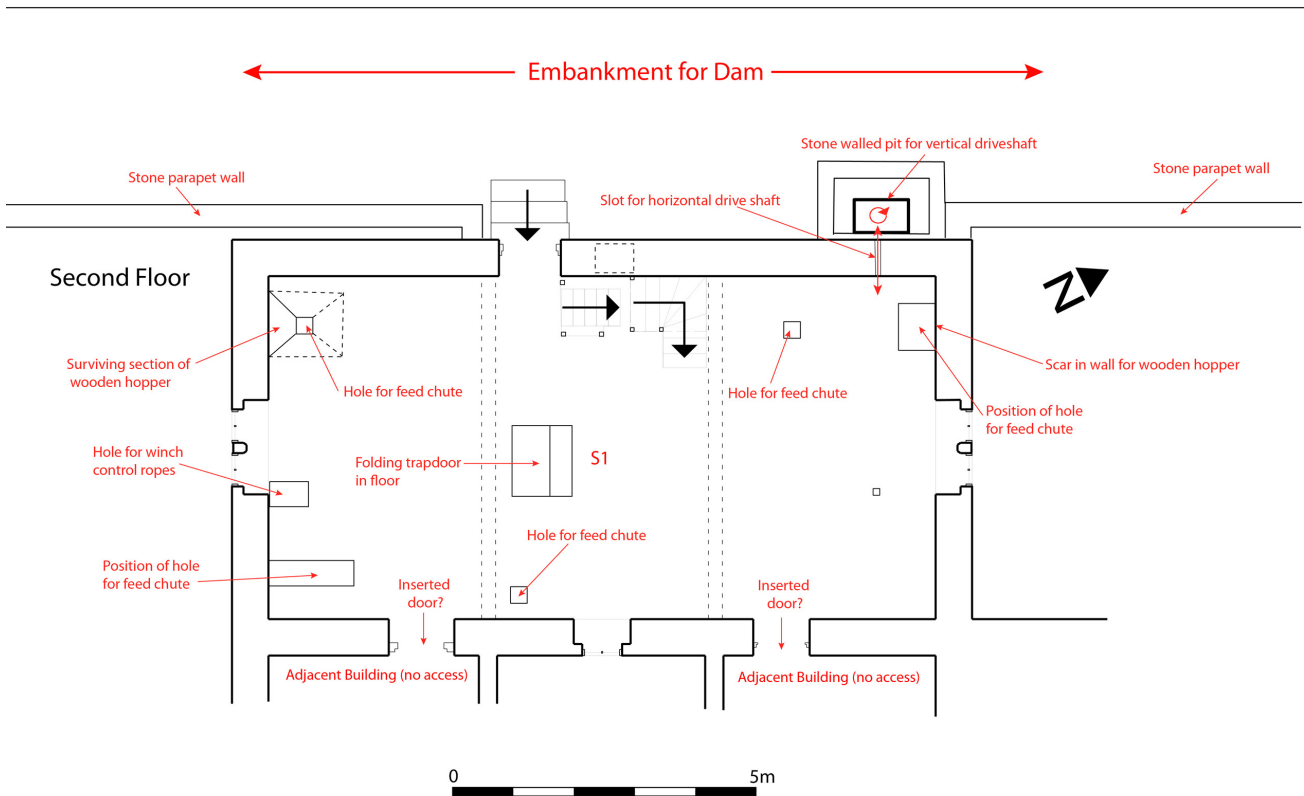


Figure 4: Second and Third Floor plans with location of the principal historic features.

Base drawings provided by Evans Vettori Architects Ltd © May 201

Ground floor

The ground floor is divided into two rooms. The eastern bay **G2** contains the re-housed gearing, drive mechanism, bevel gearing and a vertical drive shaft apparently salvaged from Longford corn mill (**Appendix 3.9**). It is separated from the south and central bays of the ground floor **G1** by a modern softwood framed partition.

External access into the ground floor is via a pair of double doors (**Appendix 3.7**), which are inserted in the fabric presumably replacing a narrower opening. The floor is formed from stone flagstones (**Appendix 3.11**) with later patches of concrete, and there are sunken pits against the north and south walls (**Appendix 3.12**) originally intended to house the 'pit wheel' attached via an axle to the external waterwheels. Access to the upper floors is via a steep open timber staircase (**Appendix 3.10**). Beneath the staircase in the north wall is a segmental arched recess that forms an open hearth (**Appendix 3.10**).

There is an approximately centrally located rectangular opening in the ceiling (**Appendix 3.8**), which marks the position of the sack hoist – the rope scars of which are still visible. At the south end of **G1** a secondary beam has been inserted to support the existing walkway at first floor (**Appendix 3.13**). This is an attempt to replace the former flooring in this area which was once supported by joists orientated north-south. The sockets for the latter survive in the south wall (**Appendix 3.13**).

First floor

The first floor **F1** is a single open space (**Appendix 3.12**). Compared to the floor below where the height of the room was c. 2.6m, the first and second floors have a restricted head room of c.1.9m. At either end of the room above the former mill machinery on the ground floor below, there would have been grindstones, although these have been removed. The flooring in these areas has also been adjusted, being totally removed to the south (**Appendix 3.21**) and replaced in the 1990s to the north (**Appendix 3.14**). During the replacement of this section of floor, a raised timber up-stand was created to represent the potential location of one of the grindstones (**Appendix 3.14**), but this location actually relates to the inserted machinery below and does not necessarily have any relevance to the former arrangement of grindstones in this building.

In the southeast corner of the room, two mounting brackets for a bevel gear power transmission survive (**Appendix 3.19**).

Timber hopper chutes survive in the ceiling (**Appendices 3.16, 3.17, 3.18, 3.19**) of the floor above. These would have allowed the movement of grain from storage bins on the third floor down to

this level, where the grinding wheels were located. Centrally located is the position of a vertical sack hoist, with the openings for the trapdoors remaining in the floor and ceiling (**Appendix 3.20**). In the east wall are a taking-in door to the yard below, and an inserted door that leads to the adjacent building.

Second floor

The second floor **SI** is a single open space (**Appendices 3.22, 3.23**), similar in appearance to the floor below with windows in the north and south walls, and another centrally positioned along the east wall. The trapdoor from the sack hoist remains *in-situ* (**Appendix 3.24**), and is a folding design with leather hinges. It is suggested that this level of the mill would have functioned as a storage area for sacks of milled flour before being taken away for delivery. The remains of three timber hoppers survive in the northwest (**Appendix 3.27**), southwest (**Appendix 3.26**) and southeast (**Appendix 3.28**) corners of the building, which would have allowed grain to be dropped directly from the third to the first floors and on to the rotating millstones below.

In the northwest corner of the room is a small timber lined slot that links to the exterior of the building (**Appendix 3.29**). This would have enabled direct power transmission to an external vertical shaft (**Appendix 3.6**), presumably to power an internal machine used in the milling operations.

Access to the other floors was via a narrow timber staircase against the west wall (**Appendix 3.19**). There is a single doorway to the top of the dam in the west wall, although this has been adapted and may even be a later insertion.

Third floor

The third, or upper floor **TI** of the mill is open to the underside of the roof slates (**Appendix 3.30**) that form a pitched roof. The roof is supported upon two timber trusses, however, the tie beams have been sawn back (**Appendix 3.35**), and secured with metal straps (**Appendix 3.36**). The roof batons are nailed on to timber softwood purlins that are offset on either side of the principal rafters of each truss (**Appendix 3.34**). The original trusses were pegged together, and the associated the assembly marks still survive (**Appendix 3.33**). Many of the rafters are modern replacements dating to when the roof was replaced in the 1990s.

In the apex of the west gable the winding mechanism for the former sack hoist (**Appendix 3.31**) is still *in-situ*. This comprises of a simple timber shaft with hemp rope wound around it and a deeply grooved timber operating wheel at one side (**Appendix 3.31**). It appears to have been possible to operate the winch from the lower floors within the building, as there are associated holes still

exposed within the floor (**Appendix 3.32**). Linked to the winch and located in the central bay of the roof, a timber lifting block is fixed to the apex of the southern truss (**Appendix 3.30**). This would have allowed the rope to hang in a vertical position, being directly above a series of trap doors in the floors below (**Appendix 3.25**) to allow sacks of grain, or flour to be manoeuvred between the different operational levels of the mill.

Along the east wall is a 0.5m high section of vertical boarding, set c.1m from the rear wall. This is interpreted as forming part of the grain storage bins (**Appendix 3.30**).

At the north end of T1 the floorboards have been removed, possibly associated with the construction of a raised platform (**Appendix 3.35**). The purpose of this feature is unclear, but may be associated with a secondary use of the building after it had ceased to function as a mill.

There is a modern water tank against the east wall (**Appendix 3.36**).

7 PROPOSED DEVELOPMENT IMPACTS

POTENTIAL IMPACTS

The proposed scheme is to identify a sustainable future use for the building (as a holiday let), with the intention to display and retain as much historic fabric as possible. To achieve this, the interior layout will be re-modeled, new services introduced, along with modest openings into the external fabric for improved fenestration (see **Figures 5, 6**).

PREVIOUS IMPACTS UPON THE HISTORIC FABRIC AND INTEGRITY OF THE MILL

The roof of the building was replaced, in the 1990s, and the mill gearing and machinery on the ground floor was introduced into the building from redundant mills elsewhere in the region.

The impact of the proposals could result in:

- Permanent complete or partial loss of structural elements;
- Permanent or temporary loss of the physical, and or/visual integrity of historic features;
- Damage to the built fabric of the standing structures by the creation of new openings;
- Damage by the excavation of new service routes, or as a result of the lifting of historic floor surfaces to improve insulation, and the stability of the building.



Figure 5: External west elevation of Mill with superimposed locations of proposed windows.

ARCHAEOLOGY – PHYSICAL IMPACTS

The proposed adaptation of the Site including the excavation of new services, or foundations has a low potential to encounter buried archaeological deposits from earlier periods. The construction of the mill and its associated leats and drainage channels will have made a significant impact upon any earlier remains on the Site.

BUILT HERITAGE – PHYSICAL IMPACTS

The magnitude of impact of the proposed alterations in regard to the standing building will vary. Alterations to the external façade will be minimal, apart from where new fenestration is proposed, in particular three new windows on the west façade overlooking Corn Mill Pond (see **Figure 5**). Internal adaptations would involve the introduction of new partitions and associated services (see **Figure 6**), the removal of a section of the second floor at the south end of the building, and the re-orientation and replacement of the main staircase against the west elevation.

8 DISCUSSION AND RECOMMENDATIONS

SUMMARY OF PROPOSALS AND IMPACTS

This heritage appraisal of Cromford Corn Mill has confirmed that it is a designated heritage asset, with three significant associations. It is a Grade II listed building, it is within the boundary of the Cromford Conservation Area, and is a named building within the Derwent Valley Mills World Heritage Site. The structure therefore makes an important contribution to the wider setting of Water Lane and the northern extents of Cromford.

The building is one of the earliest purpose-built industrial buildings in this part of the village, being integral to the creation of a substantial dam to form Corn Mill Pond, c.1780. The Bonsall Brook which provides a power source for the mill is a critical component of the water management and control along the valley, and Cromford Corn Mill is one of a network of industrial structures associated with Sir Richard Arkwright. The building is constructed using the local palette of materials common throughout the village, comprising locally quarried deep pink gritstone and simple unadorned ashlar blocks for the window and door openings.

The building has a direct physical and visual connectivity with the mill pond to the north, which has functioned as a reservoir for powering the water mill since the 1780s.

The loss of the external water wheels and the change of use of the adjacent mill related structures into private dwellings, have had a significant impact upon enabling the function of mill to be readily understood. The introduction of a new hydro powered plant in the wheel pit at the base of the east elevation, does maintain the continuity of use, however, it is unsightly and does not contribute to the wider setting of the Conservation Area, or World Heritage Site. It is important to note, that these recent changes have been permitted by the local planning authority, even though they have limited value in enhancing their historic setting.

The proposed alterations to the Cromford Corn Mill that are considered as part of this report, also involve the change of use of the building from a redundant, partially derelict industrial shell into a dwelling. This will ensure the long-term preservation of the building, the external appearance of which makes an important contribution to the both the Conservation Area and World Heritage Site. The proposed external changes are limited to improving light levels within the interior of the building in the form of four new windows (three in the west façade and one in the southern one). It should be noted that principal view of the building from Water Lane (the north elevation) will not be impacted upon (**Appendix 3.4**), and the existing appearance will be maintained.

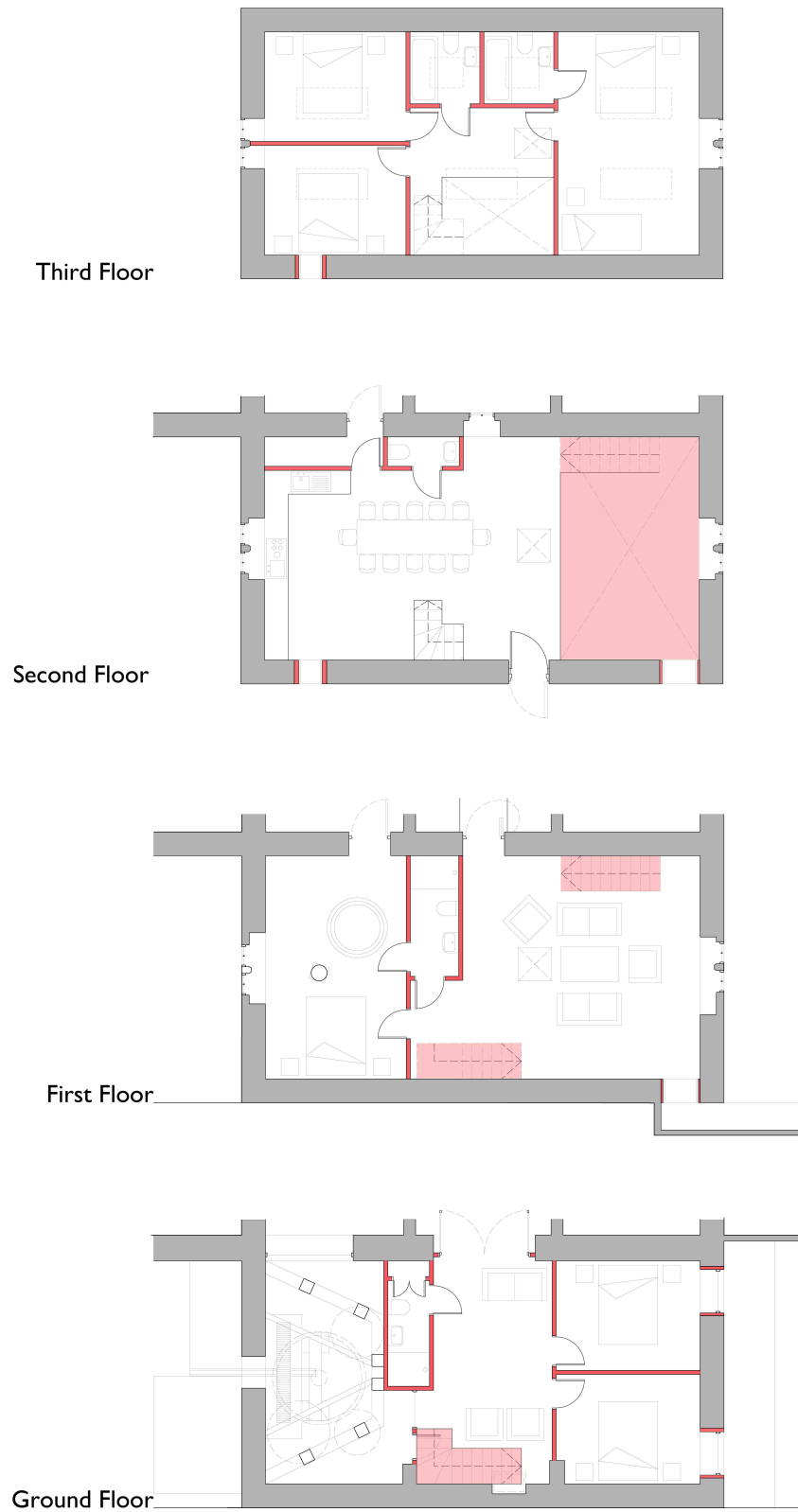


Figure 6: Floor plans with proposed alterations to internal layout highlighted in pink.

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One window is proposed to be added at low level on the south gable, beneath the external pentrough (**Figure 6**), and which is largely shielded from general view. Three windows are proposed to be added to the west elevation (**Figure 5**). The proposal is to insert a long window to span between the first and second floors to act as a light-well. The lower half of this would be completely obscured from view, as it will be set within a recess against the dam wall. At the north side of the elevation, two further narrow windows are proposed, being set above and below the external fixing bracket from the former drive shaft. The impact of these two openings will be such that they will help to emphasise the former position of this driveshaft, by re-introducing verticality to the elevation to reflect the former industrial machinery. These openings are located in positions that are discreet and the overall harm to the building and its setting is regarded as low.

The principal impact of the proposals upon the setting of the Conservation Area and World Heritage Site concerns the proposals for additional fenestration on the single-storey west elevation facing the mill pond (**Appendix 3.3**). This has always been a plain façade, with a narrow doorway and tall chimney stack (see **Appendices 2.1, 2.2**). The requirement for improved light in this west elevation is an important consideration in respect to the future internal layout of the building. The proposal to introduce a new vertical opening that reflects the former drive shaft is a sympathetic option, which whilst it does cause some impact upon the overall appearance of this side of the building does provide a much needed improvement to the internal light levels. The introduction of high quality design into the historic fabric of listed buildings is not unprecedented in Conservation Areas, and it is suggested that this is an occasion such an approach here will be considered as acceptable.

This heritage appraisal has established that whilst the basic timber floor structure of the building is relatively intact, the only elements that can be directly attributed to the functioning of the corn mill are the winch and hoist, the trap doors in the floors, and the remnants of grain chutes and storage bins. The machinery on the ground floor in **G2**, was rescued from mills elsewhere in the region and introduced into the building by the Arkwright Society in the 1990s. It should also be noted that when the building was a functioning mill, each floor was a single open plan space, however, this would have contained operating machinery associated with milling.

To enable the four levels to be adapted to domestic use, the intention is to insert new partitions to create bedrooms, bathrooms, kitchen and sitting areas. The proposed layout has considered the surviving historic elements and the scheme intends to retain as much historic fabric as possible, whilst also improving visibility of those fixtures and fittings that survive.

The intention would be to conceal services in boxed ducts, which would be discreetly positioned so as not to adversely impact upon the overall appearance upon the historic fabric of the interior, which will involve maintaining the exposed ceiling joists and industrial character of the building.

It is suggested that there are four elements of the proposals (see **Figure 6**) which have the potential to cause harm to the internal fabric of the building, and each are considered in turn. Firstly, the lower section of the existing staircase (**Appendices 3.10**) located against the central section of the west wall will be removed as it is narrow and cannot be upgraded to comply with current building regulations. This is considered to be a significant intervention, however, as it is maintaining the primary location of vertical access within the building, and assuming that appropriate materials are used to form the new flights and landings the overall impact upon the lower floors will be limited.

The second intervention relates to the adaptation of the third floor into three separate bedrooms with two bathrooms and a central landing. This level of the building has historically been extensively altered, including removal of the tie-beams from the roof trusses (**Appendix 3.35**), the removal of sections of floor and creation of a raised section over the east half of the floor. However, the ceiling retains a former winch and hoist mechanism and there are remnants of upstanding sections of timber partitions that would have formed grain storage bins (**Appendix 3.30**). The proposals will remove the evidence for the grain storage bins which would have formed an integral aspect of the operation of the mill at his upper level, and which can thus be considered as significant. It should be noted that it is intended to incorporate the sides of these bins into the walling of the central corridor, thus perpetuating the character and appearance of this element of the mill. The winch is to be retained (**Appendix 3.31**), and assuming that it is still an exposed feature, then the impact of the proposals upon it is low.

The third area where the proposals have a direct impact upon the existing nature of the historic fabric is at the north end of the first floor (**Appendices 3.14**). The intention is to create a single bedroom, with a partitioned off bathroom against the south wall. This layout will maintain the central timber driveshaft, however, will require the removal of the timber up-stand associated with the gearing on the floor below. The overall appearance of the room will enhance the character of this part of the building, and as the upstand and flooring was only introduced in the 1990s, its removal is considered acceptable and will remove a secondary feature which is derived from another mill elsewhere.

The fourth element of the proposed scheme which is regarded as having a significant impact upon the historic fabric of the interior of the building is the removal of a section of flooring between the first (**Appendix 3.21**) and second floors (**Appendix 3.22**) to form a double height space (see Figure 6), which will incorporate a new stair flight against the east wall. This proposal will change the overall character of this part of the mill, but will enable a greater flexibility in the use of space in regards to the change of usage in to a dwelling. The work would involve the removal of one of the ceiling mounted grain chutes (**Appendix 3.19**) and the removal of the ceiling joists and floorboards. This proposal will cause substantial harm, but must be balanced against an improved circulation pattern within the building, and a desire to create a greater exposure of the historic fabric in this section of the mill, which has already been damaged by the removal of the former grinding stones and associated machinery.

RECOMMENDATIONS

In regards to a consideration of the proposed internal alterations, it is recommended that a detailed b/w photographic record is produced prior to any alterations commensurate to a Historic England level 1 survey (English Heritage 2006, 14).

9 SUPPORTING INFORMATION

AUTHORSHIP

This report has been prepared by Oliver Jessop MIfA, with the archive research being undertaken by Victoria Beauchamp Ph.D. Editing has been provided by Karen E Walker MIfA, FSA.

ACKNOWLEDGEMENTS

Paul Staley is thanked for his patience, for arranging access and for discussing the proposed alterations to the mill.

Gareth Puttock of Evans Vettori has provided advice concerning the refurbishment of the building and is thanked for providing reference drawings for use in this survey.

The staff at the Derbyshire Archives have been incredibly helpful in identifying historical material relating to the site.

Nicola Manning at the Derbyshire Historic Record has provided access to their databases and reference material.

SOURCES AND REFERENCES CONSULTED

PRIMARY SOURCES CONSULTED: MAPPING

- British Geological Map of Britain (digital data), 2014
- Bonsall Enclosure map 1776, Q/RI/19, CD121, Derbyshire Record Office
- Bonsall Tithe Map and Schedule, 1848
- Burdett's Map of Derbyshire 1791 (reprint 1975 Derbyshire Archaeological Society)
- Cromford Tithe Map and Schedule, 1841, D2360/3/52a & b, Derbyshire Record Office
- Ordnance Survey Maps for 1880, 1899, 1922, 1986, 1994, 2014

PRIMARY SOURCES CONSULTED: NEWSPAPERS

- Derby Mercury: June 1st and June 8th 1797, 25th August 1897
- Derbyshire Courier: Saturday 11 December 1841
- Derbyshire Times and Chesterfield Herald: 14th Jan. 1893, 26th April 1902, 2nd June 1906, 12th, 19th, 26th July 1924

PRIMARY SOURCES CONSULTED: DIRECTORIES

- Glover. 1829 Directory of the County of Derby
- J.G. Harrod & Co. 1870 Postal and Commercial Directory of Derbyshire, Leicestershire, Rutland, and Staffordshire
- Kelly's. 1881, 1889, 1895, 1900, 1904, 1916, 1934, 1941 Directory of Derbyshire
- Pigot's. 1835 & 1842 Directory of Derbyshire
- Post Office Directory of Derbyshire & Nottinghamshire 1855

PRIMARY SOURCES CONSULTED: CENSUS

- 1841, 1851, 1861, 1871, 1881, 1891, 1901.

PRIMARY SOURCES CONSULTED: PHOTOGRAPHS

R. Freestone, Illustration File, No.s 165-170. Derbyshire Record Office.

SECONDARY SOURCES CONSULTED: PERIODICALS

- Derbyshire Life 1971 (IX) Arkwright memorial (article).
- Arkwright Society 2011 Annual Review

SECONDARY SOURCES: PUBLISHED WORKS AND GREY LITERATURE

Arkwright Society. 1975. *Local History Trail 14*

Bray, W. 1783. *Sketch of a Tour into Derbyshire and Yorkshire*. White: London

Buxton, D. and Charlton, C. 2013. *Cromford Revisited*. The Derwent Valley Mills World Heritage Site Educational Trust

Cromford, W.I. 2000. *Memories of Cromford: a Derbyshire Village seen through the eyes of its people 1900-2000*

English Heritage, 2006. *Understanding Historic Buildings – a guide to good recording practice*. English Heritage: London

Fowkes, D. (ed). 1997. *Derbyshire Industrial Archaeology: A Gazetteer of Sites. Part IV. Derbyshire Dales*.

Meeson, R. & Welsby W.N. 1840 *Reports of Cases Argued and Determined in the Courts of Exchequer and Exchequer Chamber*. Vol.V. Sweet and Stevens: London.

Stroud, G. 2001. *Derbyshire Extensive Urban Survey Archaeological Assessment Report: Cromford*

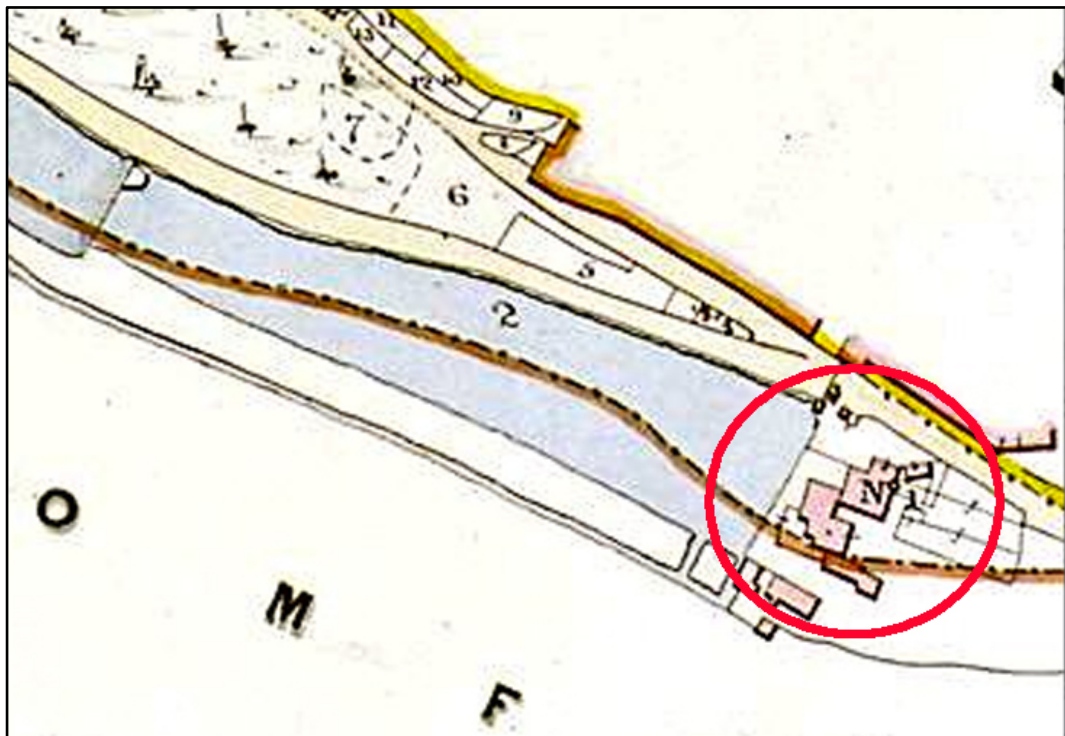
INTERNET RESOURCES

- ADS: www.archaeologydataservice.ac.uk
- Arkwright Society: www.cromfordmills.org.uk
- Bonsal History Society: www.bonsallhistory.org.uk
- British Geological Survey: www.bgs.ac.uk
- British Newspaper Archive: www.britishnewspaperarchive.co.uk
- Census: www.wirksworth.org.uk
- Cromford Village: www.cromfordvillage.co.uk/crom_tor.html - Guide to Village
- DVMWHS: https://www.derbyshire.gov.uk/images/DVMP%20Man%20Plan07_tcm44-21996.pdf
- Heritage Gateway: www.heritagegateway.org.uk
- Mills Archive: www.catalogue.millsarchive.org/
- National Archives: <http://discovery.nationalarchives.gov.uk>
- National Heritage List: <http://www.english-heritage.org.uk/professional/protection/process/national-heritage-list-for-england/>
- Picture the Past: www.picturethepast.org.uk/
- UNESCO Derwent Valley Mills: <http://whc.unesco.org/en/list/1030/> and <http://whc.unesco.org/uploads/nominations/1030.pdf>

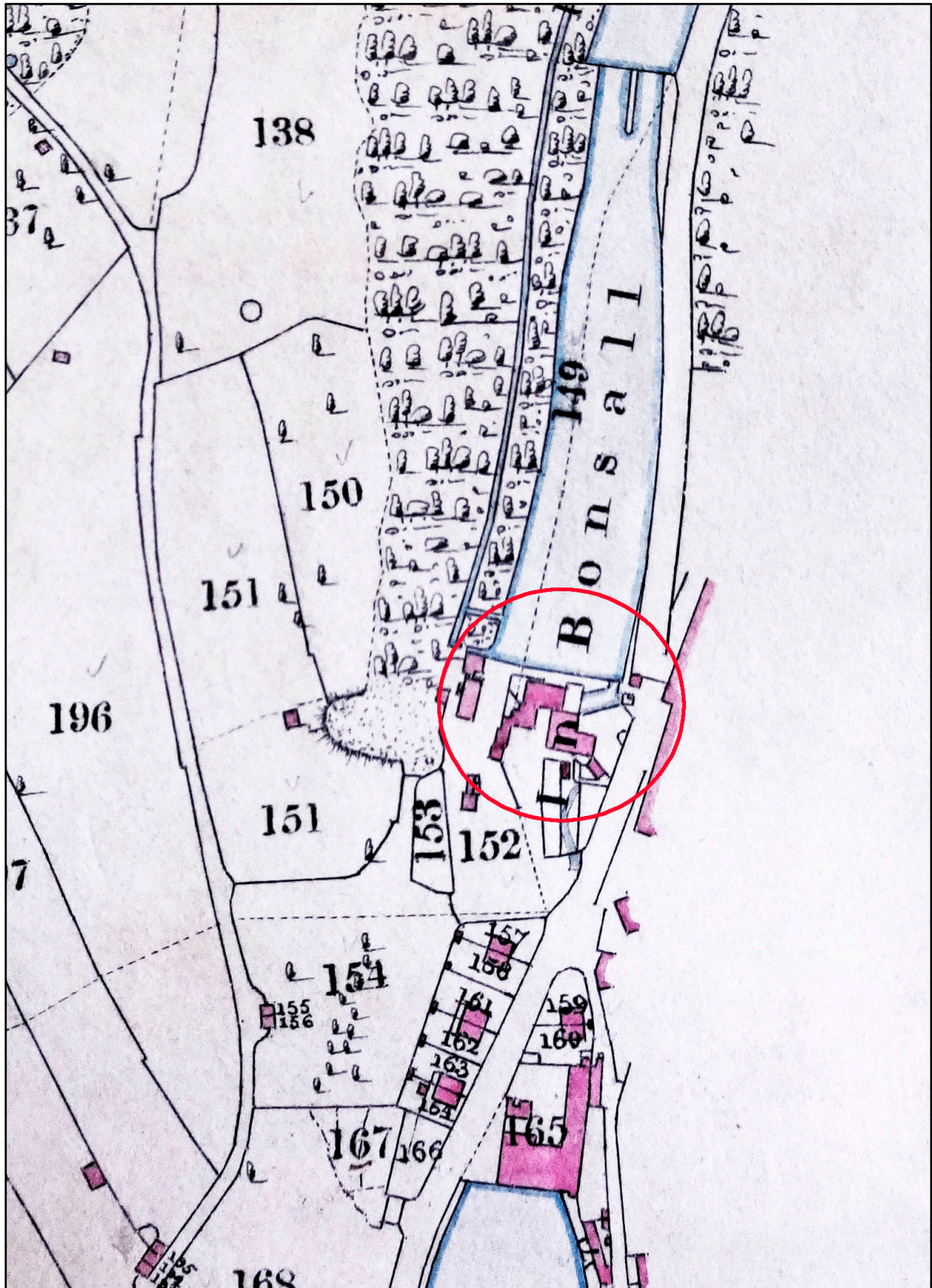
Appendix I:
Historic Mapping



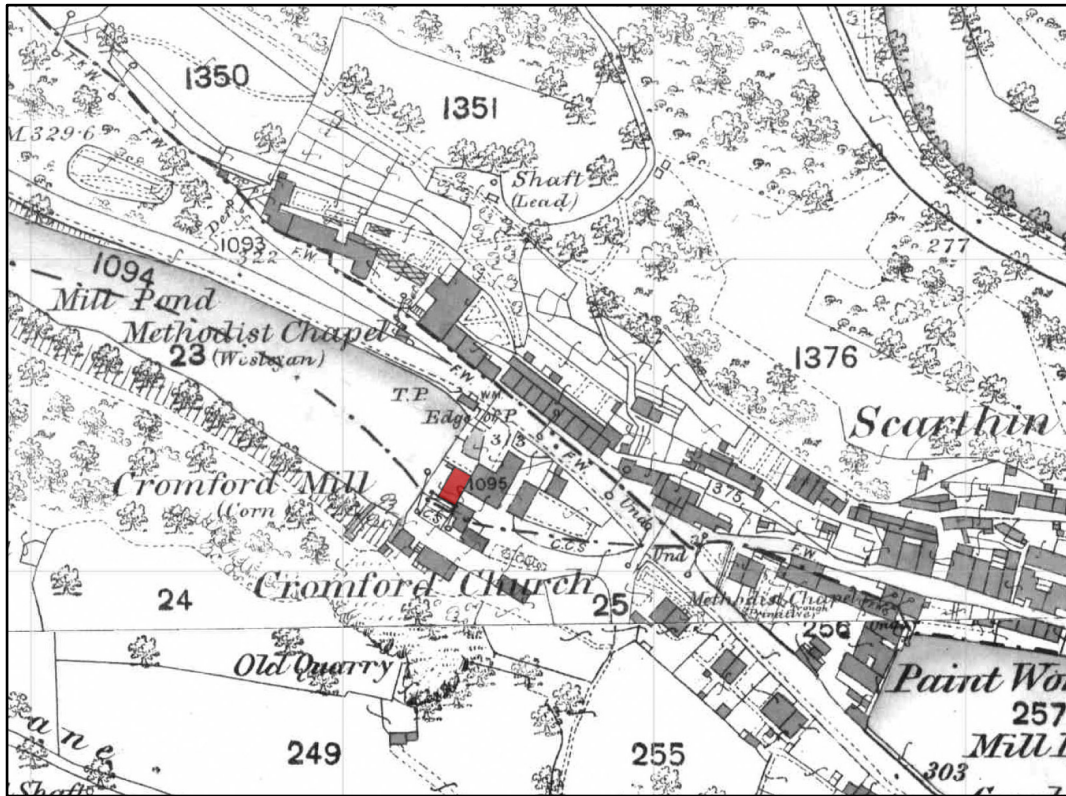
Appendix I.1: Extract from 1776 Enclosure map (site of mill (unbuilt) marked with red circle)
© Derbyshire Record Office



Appendix I.2: Extract from 1848 Bonsall Tithe Map (Mill marked with red circle)
© Derbyshire Record Office



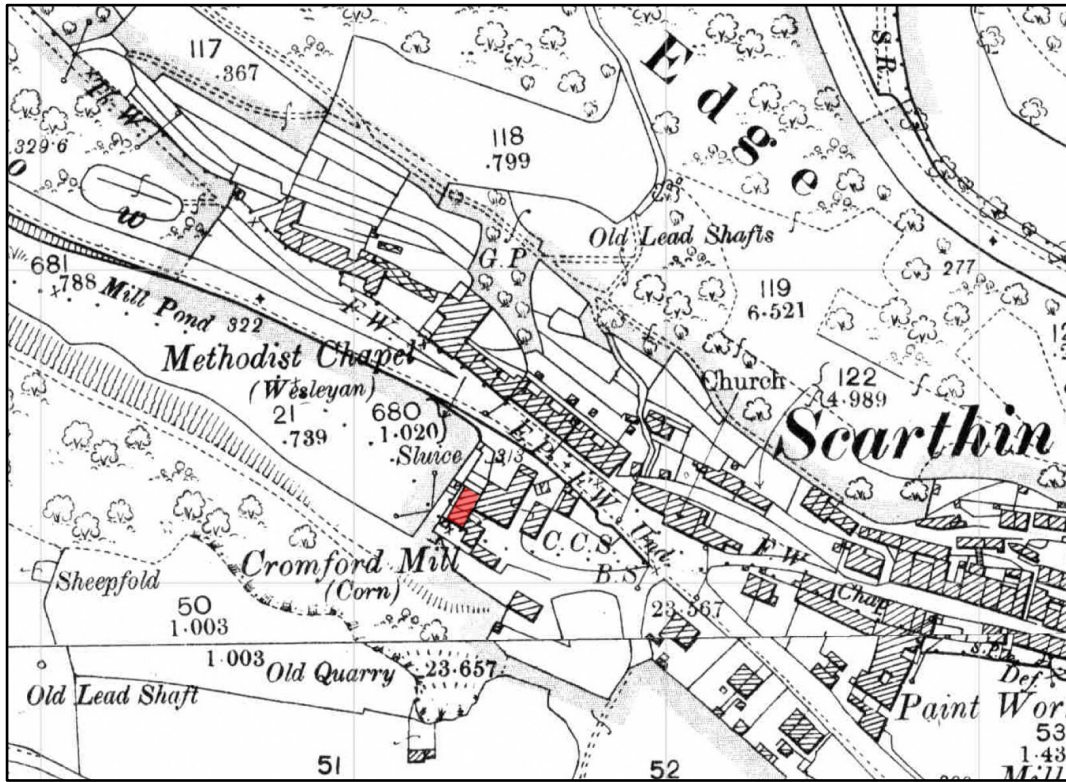
Appendix I.3: Extract from 1841 Cromford Tithe Map (Mill marked with red circle)
© Derbyshire Record Office



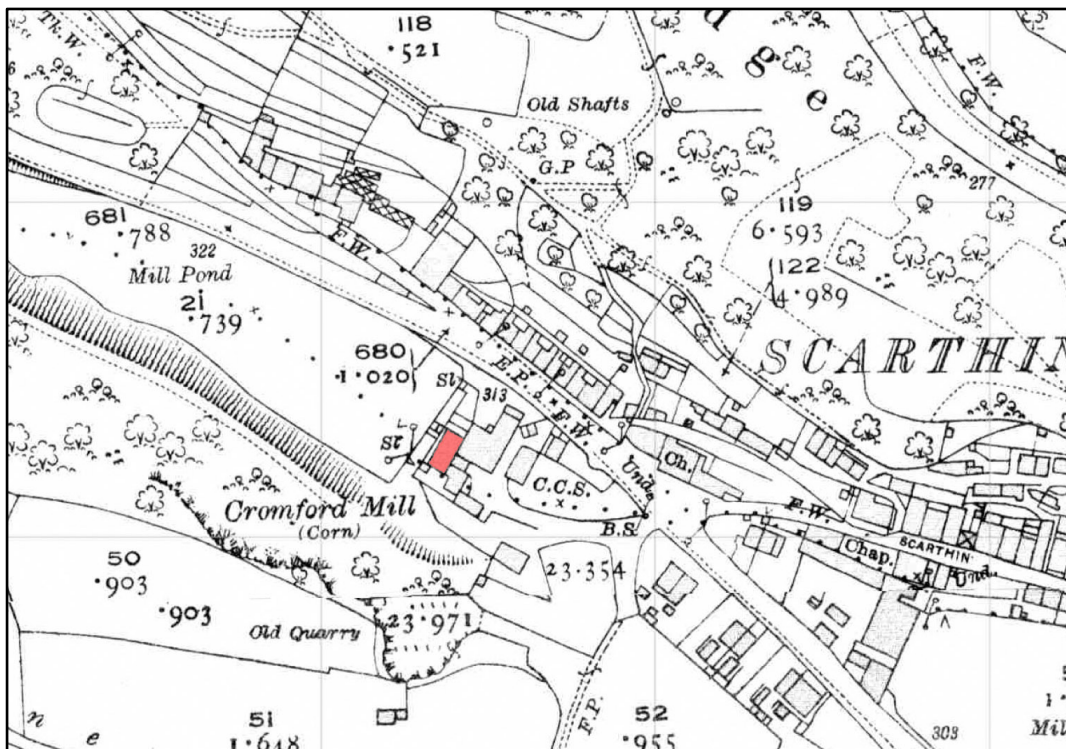
Appendix I.4: Extract from 1880 OS map (Mill coloured in red)
OS map reproduced under Licence No.100056148. Ordnance Survey © Crown Copyright ©.



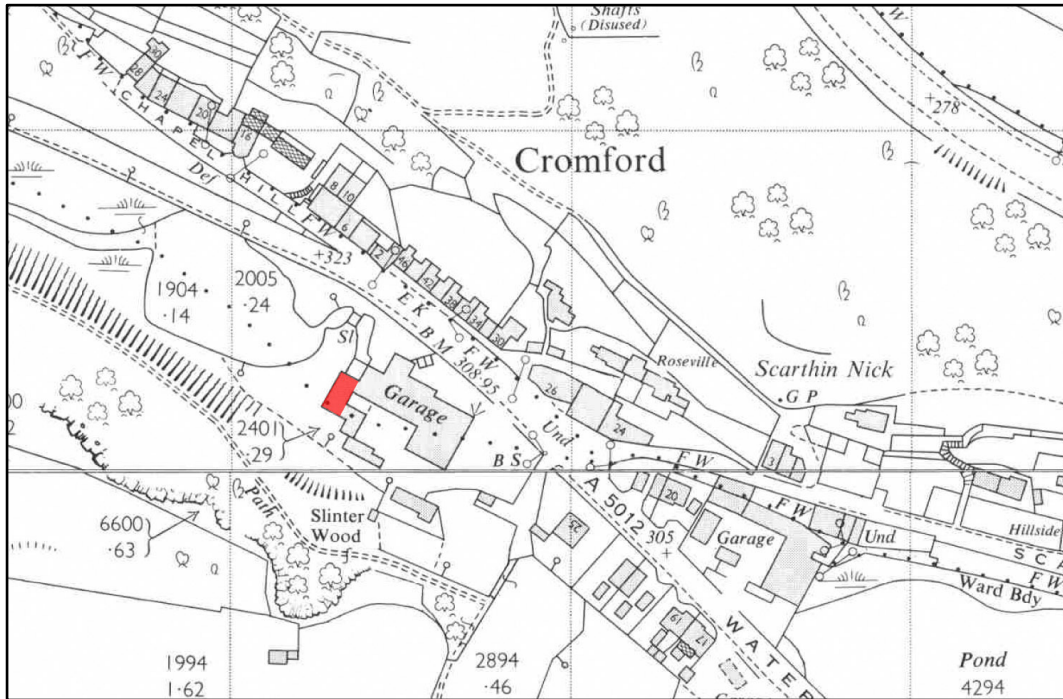
Appendix I.5: Detail from 1880 OS map with colour added (Mill coloured in red)
OS map reproduced under Licence No.100056148. Ordnance Survey © Crown Copyright ©.



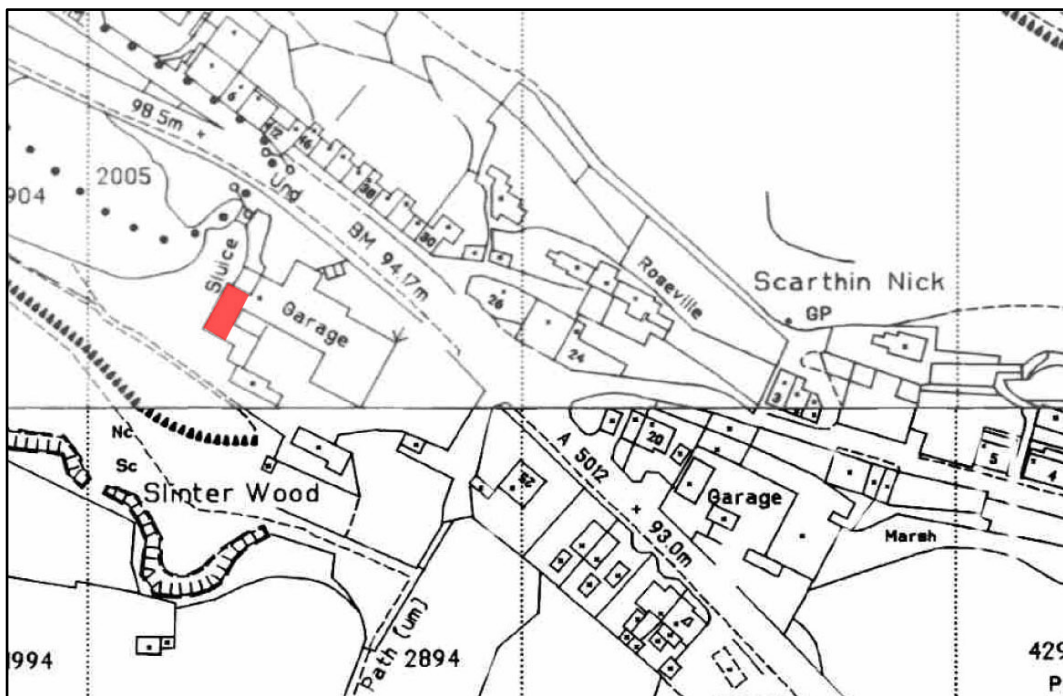
Appendix 1.6: Extract from 1899 OS map (Mill coloured in red)
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Appendix 1.7: Extract from 1922 OS map (Mill coloured in red)
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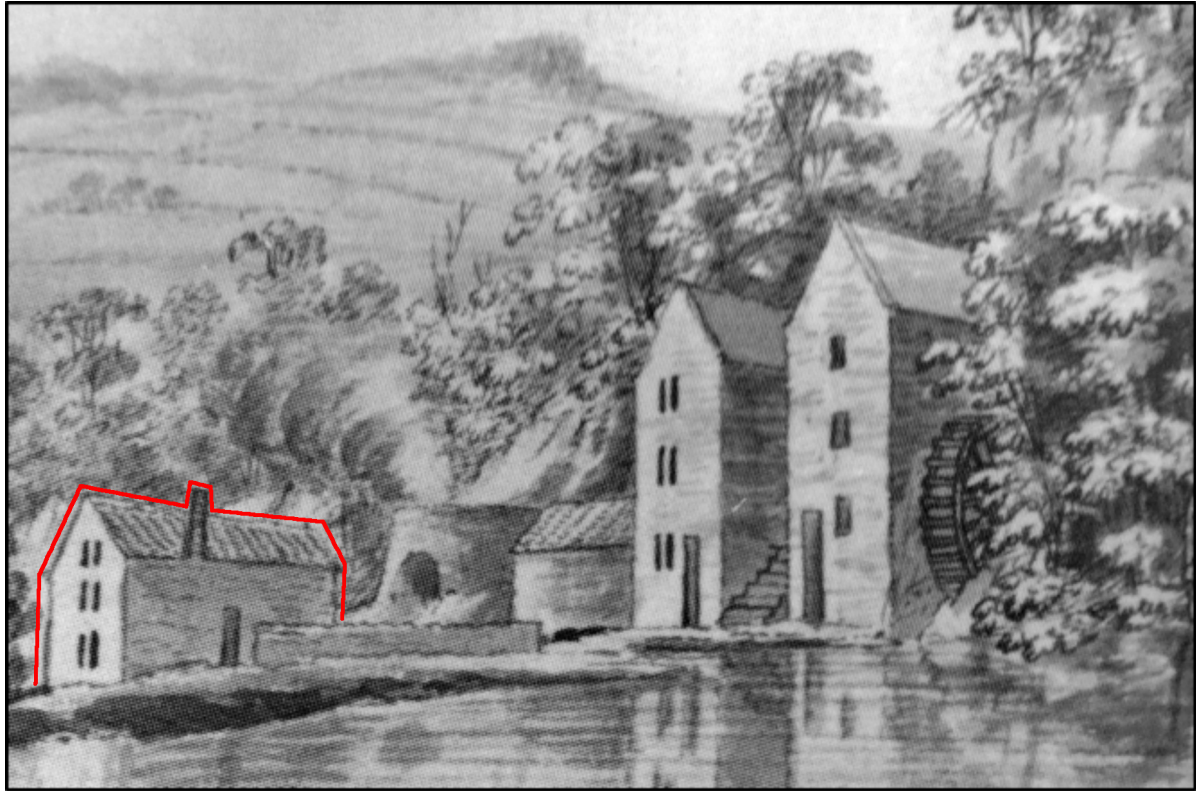


Appendix 1.8: Extract from 1968 OS map (Mill coloured in red)
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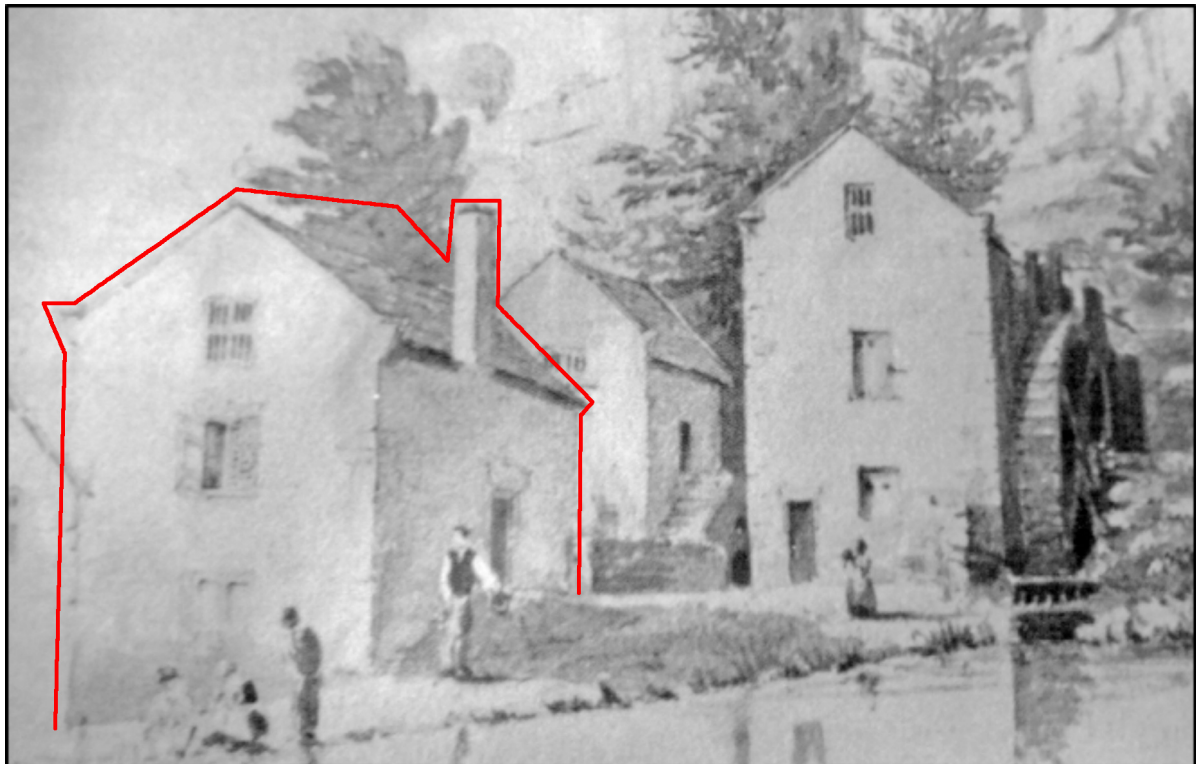


Appendix 1.9: Extract from 1994 OS map (Mill coloured in red)
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Appendix 2:
Historical Sources



Appendix 2.1: 1797 sketch of Cromford Corn Mill by George Robinson (site outlined in red)



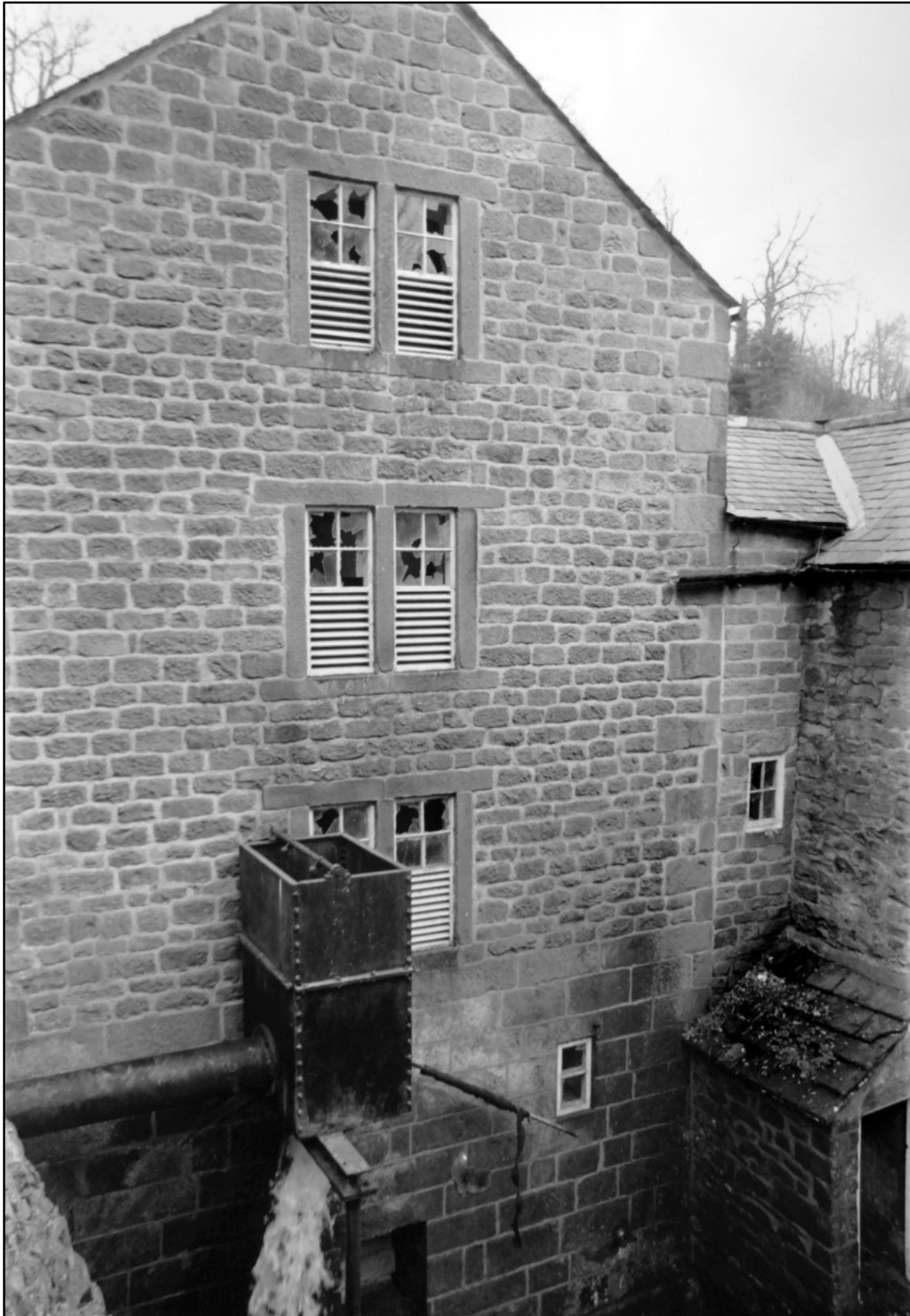
Appendix 2.2: Cromford Mill in 1840, unknown artist (site outlined in red)



Appendix 2.3: External picture of the west elevation of the mill in 1971, after Derbyshire Life



Appendix 2.4: View of east yard during repairs to adjacent buildings in 1994 © R. Freestone and Derbyshire Record Office



Appendix 2.5: View of south gable 1994 © R. Freestone and Derbyshire Record Office

Appendix 3:
Site Photographs



Appendix 3.1: General view of the south gable of the former corn mill, looking north; note roof of adjacent cottage.



Appendix 3.2: General view of south access yard and outbuildings, looking east.



Appendix 3.3: West elevation of mill, looking southeast; note intake sluice to former water wheel (2m scale).



Appendix 3.4: View along dam embankment looking south towards mill; note refurbished kiln building to the left.



Appendix 3.5: View of south gable; note centrally positioned windows with louvers and tank forming pentrough.



Appendix 3.6: Detail of external vertical driveshaft bracket and location of former power drive on west elevation (2m scale).



Appendix 3.7: General view of east yard and adjacent cottages to the left; note inserted double doors at ground level.



Appendix 3.8: Detail of exposed ceiling joists of G1, looking east; note trapdoor opening and rope scars.



Appendix 3.9: Detail of modern insertion of mill machinery in G1, looking northwest (1m scale).



Appendix 3.10: Detail of hearth and staircase in GI, looking north (1m scale).



Appendix 3.11: General view looking west of flagstone floor in GI; note opening for water wheel axel in rear wall (1m scale).



Appendix 3.12: Detail of recessed slot in floor for the pit wheel (removed) against south wall of G1 (2m scale).



Appendix 3.13: Detail of southwest corner of G1; note recently inserted beam and empty joist sockets (1m scale).



Appendix 3.14: General view of north end of FI; note modern floor and raised timber up-stand (2m scale).



Appendix 3.15: Detail looking up winder stair against west wall of building between FI and SI (20cm scale).



Appendix 3.16: Detail of hopper feed from former grain chute on the ceiling of FI (20cm scale).



Appendix 3.17: Detail of hopper feed from former grain chute on the ceiling of FI (10cm scale).



Appendix 3.18: Detail of hopper chute in ceiling of FI, looking east (1m scale).



Appendix 3.19 Detail of hopper chute in ceiling and bevel gear mounting brackets in southeast wall of FI (1m scale).



Appendix 3.20: Detail of underside of trapdoor in ceiling of F1.



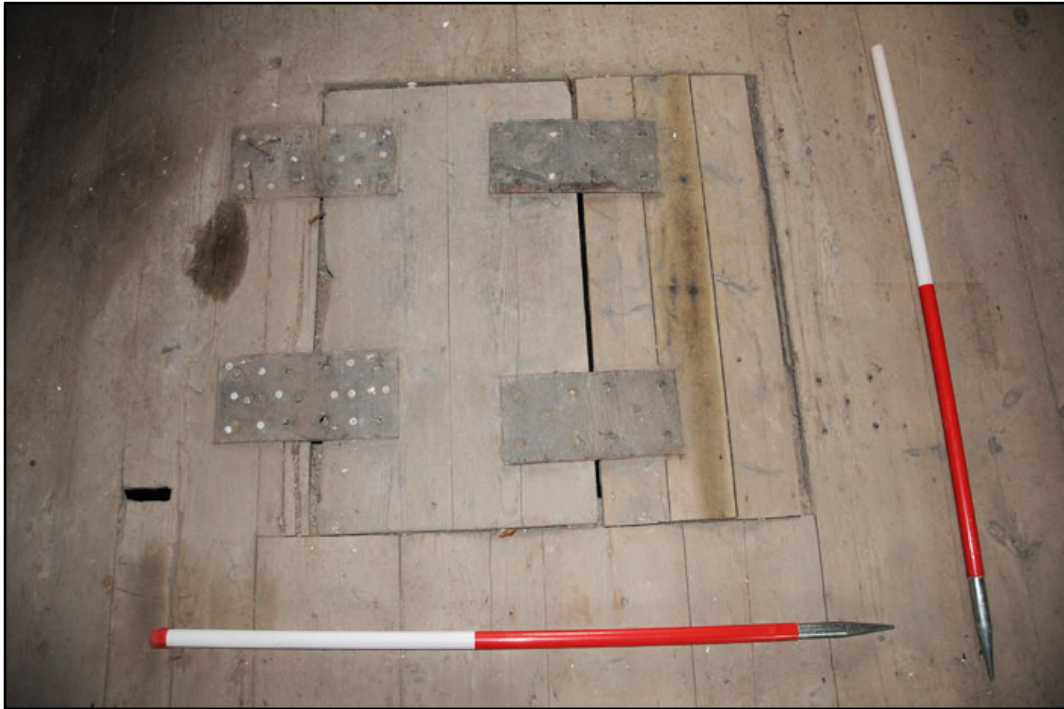
Appendix 3.21: Detail of south wall of F1; note lever for external pentrough and ceiling mounted grain chute (1m scale).



Appendix 3.22: Detail of southern end of SI, looking south; note *in-situ* trap door (1m scale).



Appendix 3.23: General view of SI, looking north; note staircase up to TI and trapdoor in the floor (1m scale).



Appendix 3.24: Detail of trapdoor in S1; note folding door with leather hinges (1m scale).



Appendix 3.25: Detail of trapdoor opening in ceiling of S1; note grooves from rope of sack hoist (1m scale).



Appendix 3.26: Detail of surviving section of former grain chute in southwest corner of S1 (20cm/1m scale).



Appendix 3.27: Detail of scar of former grain chute in northwest corner of S1, and floor opening (20cm/1m scale).



Appendix 3.28: Detail of blocked floor opening in the southeast corner of SI (20cm scale).



Appendix 3.29: Detail of timber lined slot in northwest wall of SI for former horizontal drive shaft (10cm scale).



Appendix 3.30: General view of south end of T1; note ceiling mounted winch for sack hoist (2m scale).



Appendix 3.31: Detail of winch and rope from hoist in ceiling of T1, looking south.



Appendix 3.32: Detail of holes in floor of T1 for the control ropes to operate the winch for the sack hoist (1m scale).



Appendix 3.33: Detail of assembly marks and fixing pegs on roof truss in T1 (10cm scale).



Appendix 3.34: Detail of assembly marks and fixing pegs on roof truss in T1; note through purlins.



Appendix 3.35: General view of TI, looking north; note inserted platform and sawn off tie-beam (1m scale).



Appendix 3.36: Detail of modern water tank against east wall of TI; note raised tie beam secured with iron strap.