NAA

HISTORIC BUILDING RECORDING

EBOR MILL, HAWORTH, WEST YORKSHIRE

prepared for

Skipton Properties Ltd

NAA 19/87
April 2020

NORTHERN ARCHAEOLOGICAL ASSOCIATES

01833 690800
info@naaheritage.com
www.naaheritage.com
Marwood House
Harmire Enterprise Park
Barnard Castle
Co. Durham
DL12 8BN

QUALITY ASSURANCE		
Project Number	1492	
Report Number	19-87	
Manager	Karl Taylor	
Edit 1	Helen Devonshire	
Edit 2		
Draft 1		17/02/2020
Draft 2 – WYAAS Edits		14/04/2020

Author	Karl Taylor
Illustrations	Damien Ronan, Oskar Sveinbjarnarson, Karl Taylor
Data Collection	Damien Ronan, Oskar Sveinbjarnarson, Karl Taylor

Client	Skipton Properties Ltd
Location	Ebor Mills, Ebor Lane, Haworth, West Yorkshire
Planning authority	Bradford
Grid Ref	NGR: SE 03654 37589
OASIS Ref	
Date of Fieldwork	May and June 2019

EBOR MILL, HAWORTH, WEST YORKSHIRE
HISTORIC BUILDING RECORDING

TABLE OF CONTENTS

LIST OF FIGURES

EBOR MILL, HAWORTH, WEST YORKSHIRE
HISTORIC BUILDING RECORDING

Summary

Northern Archaeological Associates Ltd was commissioned by MB Heritage, on behalf of Skipton Properties Ltd, to undertake a programme of historic building recording at Ebor Mill, Haworth, West Yorkshire (NGR: SE 03654 37589).

In June 2018, MB Heritage produced a draft Heritage Statement of Significance in order to inform the consideration of proposals for the re-development of the Site, including the possible demolition of several of the standing buildings. It was acknowledged that the initial survey, which informed the Statement, was limited by access restrictions. Following initial discussions with the City of Bradford Metropolitan Borough Council (CBMBC) conservation office, it was recommended that further, more detailed building recording be carried out once safe access was arranged.

The West Yorkshire Archaeology Advisory Service (WYAAS) were consulted and recommended that archaeological recording be carried out prior to redevelopment and to this end, a specification was issued by them in December 2018. This was produced in order to allow the owners of the Site to meet the terms of any archaeological condition should planning consent be granted.

Following consultation, it was confirmed that the historic building recording be undertaken in accordance with building recording levels outlined in guidance published by Historic England. Within the Heritage Statement of Significance, each building was assigned a significance rating, and it was agreed with WYAAS that differing levels of building recording be carried out. Ebor Mills contains several buildings, including an early spinning mill (Building A), a boiler house (Building B), an economiser (Building C), a chimney (Building D), a warehouse (Building E), weaving sheds (Building F), an engine room (Building 1) and two demolished structures (Buildings 2 and 3). Building A was subject to Level 3 recording, Buildings B, C, D and Building 1 were subject to Level 2 recording and Buildings E and F subject to Level 1 recording.

Evidence revealed that the spinning mill was constructed in around 1819 and was subject to five phases of extension and demolition. Including extension to the east and west, demolition of a north wing and addition of a privy tower. Overall, the complex developed rapidly during the 19th century and was subject to seven main phases of alteration and demolition, including at least three engine houses, two boiler houses, two phases of weaving shed, and three phases of spinning mill.

The data gathered during the survey was commensurate with the required Historic England guidance and most of the fabric of the buildings was able to be inspected. There are, however, areas that require further investigation to in order to provide further clarity on power transmission. This should be carried out during any strip out works or during any demolition and should take the form of a structural watching brief to the same Historic England level. In order to further determine the nature of power transmission from the waterwheel in Building A, the area of Rooms AG3c should be investigated. In order to determine the nature of any surviving engine beds, and the nature of power transmission to the weaving Sheds, Building 1 should be investigated. In order to ascertain power transmission from the third Engine House to Weaving Shed, the relevant area of Building 2 should be investigated. No further work within the remainder of the buildings is recommended.

1.0 INTRODUCTION

1.1 Northern Archaeological Associates Ltd (NAA) was commissioned by MB Heritage (hereafter the 'Client'), on behalf of Skipton Properties Ltd, to undertake a programme of archaeological building recording of Ebor Mill, Haworth, West Yorkshire (hereafter the 'Site'; NGR: SE 03654 37589; Fig 1).

1.2 Ebor Mill lies in the bottom of the valley of Bridgehouse Beck, approximately 1km to the north-east of Haworth town centre along Ebor Lane. The buildings are all located to the north of Ebor Lane, the access point being where the lane turns sharply left to cross the beck, via a narrow but quite long bridge called Ebor Bridge. The bridge crosses both the beck and the former weir and part of the mill pond (Plate 1)

1.3 The complex comprises several structures including (the lettering system follows that used by West Yorkshire Archaeology Advisory Service (WYAAS) (Appendix A, Plates 1 and 2):

- A water powered Spinning Mill of *c* 1819 (Building A);
- A late 19th century Boiler House (Building B), built to support an enlarged mill;
- An Economiser house and narrow range (Building C), adjacent to the Boiler House along Bridgehouse Beck;
- An octagonal Chimney on the west side of the complex (Building D);
- A mid-19th century Warehouse (Building E) and attached Weaving Shed (Buildings F);
- The possible location of an Engine House for a steam powered spinning mill (Building 1);
- A large Spinning Mill (possibly served by Building 1) destroyed by fire in 2010 (Building 2 and 3).

1.4 In June 2018, a Draft Heritage Statement of Significance was produced by MB Heritage (MB Heritage 2018), in order to inform the consideration of proposals for the re-development of the site, including the possible demolition of several of the standing buildings. It was acknowledged that the initial survey, which informed the Statement, was limited by access restrictions. Following initial discussions with the City of Bradford Metropolitan Borough Council (CBMBC) conservation office, it was recommended that further, more detailed building recording be carried out when safe access was arranged. WYAAS, in their capacity as archaeological advisors to CBMBC,

were contacted to determine if the site warranted further archaeological and architectural investigation.

1.5 WYAAS recommended that archaeological recording be carried out prior to redevelopment and to this end, MB Heritage requested a specification for archaeological building recording from WYAAS, which was issued by them in December 2018 (Appendix A). The specification was produced to allow the owners of the site to meet the terms of any archaeological condition should planning consent be granted. The specification was sufficiently detailed to negate the need to produce a written scheme of investigation (WSI).

Aims and objectives

1.6 The aims of the building recording, as outlined in detail in Section 5 of the specification (Appendix A), is to objectively record the buildings by means of photographs and annotated measured drawings and identify and characterise those elements, features and characteristics that determine or contribute to the archaeological, architectural and historic interest of the buildings.

1.7 To achieve these aims, the following objectives were identified and met:

- compile an 'as existing' written descriptive record of the buildings;
- compile an 'as existing' annotated drawn record of specific buildings;
- compile an 'as existing' photographic record of the buildings;
- the preparation of a comprehensive report on the written, drawn and photographic record; and
- prepare a suitably labelled and catalogued digital photographic and report archive to be entered onto the West Yorkshire Historic Environment Record (WYHER) and to be archived with the Archaeology Data Service (ADS).

2.0 METHODOLOGY

Documentary Research

2.1 The Draft Heritage Statement of significance (MB Heritage 2019) contains historical and archaeological background information including a list of heritage assets within 500m of the Site. These include designated heritage assets obtained from the National Heritage List for England (NHLE), records obtained from the West Yorkshire Historic Environment Record (WYHER) and the National Record of the Historic Environment

(NRHE). Cartographic information dating to back to the 1852 Ordnance Survey is also included.

2.2 The historical background was updated in November 2019 and is incorporated within this document in Section 4.

Historic building recording

2.3 The required scope and methodology for the recording is outlined in the specification (Appendix A). Following consultation with WYAAS, it was confirmed that the historic building recording be undertaken in accordance with *Understanding Historic Buildings: A Guide to Good Recording Practice* (Historic England 2016). The recording was also undertaken in accordance with Chartered Institute for Archaeologists (CIfA) *Standard and Guidance for the Archaeological Investigation of Standing Buildings* (CIfA 2019) as well as generally accepted industry best practice.

2.4 There are four main levels of historic building recording set out in Historic England guidance. Level 1 is a basic visual record supplemented by the minimum information needed to identify the buildings location, age and type, Level 2 is a descriptive record, made in similar circumstances to Level 1 but when more information is needed, Level 3 is an analytical record, and will comprise an introductory description followed by a systematic account of the building's origins, development and use and Level 4 which is a comprehensive analytical record and is appropriate for buildings of special importance. Within the draft Heritage Statement of Significance, each building within the complex was assigned a significance rating, and following the consultation with WYAAS, it was agreed that differing levels of building recording be carried out as follows:

- Building A – Level 3
- Buildings B, C, D and location of Engine House 1 – Level 2
- Buildings E and F – Level 1

2.5 Contingency planning included a time reserve for additional recording should any important features be revealed during the survey. The levels outlined in para. 2.4 were not upgraded as outlined below:

2.6 Where individual elements of the building(s) were either inaccessible or obscured, this is outlined in the relevant section. Also, any health and safety restrictions are noted.

Written account

2.7 Written records were compiled on site of all elements of the exterior and interior of the building using NAA pro forma building record sheets. All records were carried out to the relevant standard (Historic England 2016) as appropriate, outlined in para. 2.3. Each discrete internal room and/ or space was given a unique number, specific to its location within the building and floor level, for example Room AB1 is Room 1 within the basement of Building A. The general written account includes the following as required:

- the precise location, using an NGR and postal address;
- any statutory designation;
- the dates of the record, persons compiling the record and location of the archive;
- an analytical/ descriptive account of the plan, form, function, date and sequence of development of the relevant building(s) including descriptions of individual rooms/ discrete spaces and components;
- the past and present use of the building;
- an account of the fixtures and fittings and identification of architectural features, as well as discussion of the relative significance of rooms and/ or areas; and
- an account of the wider context of the building including any relationships to other buildings and places in the local area.

Drawn record

2.8 Drawn 'as existing' records were compiled on site to the relevant level as appropriate. All records were carried out to the relevant standard outlined in para. 2.3.

2.9 Plans of the buildings were provided by the client in both .PDF and .DWG format and were used as base drawings from which 2D plans were created. The plans were checked for accuracy on site and were sufficiently detailed and accurate enough to enable hand annotation of architectural and historical detail using a Leica Disto laser distance measure, which is accurate to +/-1mm over 100m. Site plans were then digitalised in AutoCAD to produce accurately scaled outputs.

2.10 Following gathering of the available data and available access, the final drawn record comprises the following plans:

- a ground floor plan of Building A with the location of the wheel pit marked;
- internal elevations of the wheel pit within Building A;

- a composite section of Building A showing the wheel pit;
- phase plans showing the development of Building A and the complex as a whole; and
- photographic location plans.

Photographic record

2.11 An 'as existing' digital photographic ground-based and aerial record was compiled of the buildings to the appropriate level outlined in para. 2.3. The ground-based record was compiled using Canon digital single lens reflex (DSLR) cameras of 21.1-megapixel resolution and Canon mirrorless interchangeable lens cameras (MILC) of 24.1-megapixel resolution. A range of lenses were used, including standard, wide angle and perspective control or 'shift' lenses. The camera was levelled on a tripod where possible to reduce converging verticals where necessary and increase sharpness. Care was taken to provide well-lit images, but the nature of the building and weather conditions sometimes precluded this. All images were captured at base ISO wherever possible. Discrimination of images was carried out on site and unwanted images were deleted. All images contain a scale ranging from 0.5m to 2m. An aerial images were created using a DJI Inspire drone, which has an inbuilt camera of 11.9-megapixel resolution mounted on a gimbal.

2.12 The images were captured on site as .CR2 and .CR3 files (Canon proprietary RAW formats) and .DNG (DJI Inspire RAW format) and converted to .JPG (for inclusion in the report) and 8-bit .TIFF files for archive purposes as outlined in guidance produced by Historic England (Historic England 2015b). Software used for conversion was either Digital Photo Professional 4 by Canon or Adobe Camera Raw 11.4.1 for Photoshop CC.

2.13 The photographic record consists of:

- general views of the buildings in the wider landscape;
- external views of the building including all external elevations, mainly oblique but right-angle views were captured where available;
- aerial views of the buildings;
- each room/space/element; and
- detail images of structural, architectural and archaeological features were captured as necessary.

2.14 All the work was carried out in accordance with accepted best practice and national guidance (CIfA 2019; Historic England 2015a; 2015b; 2016).

Limitations to survey

2.15 There were several limitations to the survey and access to certain internal and external areas was either not available or was restricted by health and safety issues. For example, all the floors in the Building A had been removed. Detail of specific access restrictions is highlighted in the relevant sections.

2.16 Externally, it was possible to inspect most of the buildings apart from the west elevations of Buildings A, B and C. These faced directly to Bridgehouse Beck and were inaccessible. The upper levels of the north and west elevations of Building E were not visible from the ground but were photographed by drone.

2.17 Internal access to the upper floors of Building A was limited to a narrow gangway down the spine of each floor, and access to certain areas of the basement of Building A was also limited, including the lower levels of the wheel pit, and the east end of the building. Building B was structurally unsound, several areas were either inaccessible or restricted, the floor in this building was covered in rubble and scrap metal. The floor of Building C was also very uneven and was also cluttered with debris and scrap metal. The lower levels of Building 1 were covered and access to the engine base was not possible because it was a confined space. Building E was mostly accessible, but the electricity sub-station at the south-east corner was out of bounds.

3.0 BACKGROUND INFORMATION

Location

3.1 The Site is located approximately 0.5km, as the crow flies, to the north-east of the town of Haworth, West Yorkshire (NGR: SE 03654 37589; Fig 1). Vehicular access to the complex was via a single gateway directly facing Ebor Lane. A pedestrian bridge allowed access to and from the west bank of the beck.

Geology and building materials

3.2 The solid geology is mapped as mudstone, siltstone and sandstone of the Millstone Grit Group laid down 319 to 329 million years ago (BGS 2019). Superficial geology is mapped as Alluvium, formed from clay, silt, sand and gravel laid down some two million years ago (*ibid.*).

3.3 The soils are classified as slowly permeable, seasonally wet, acid loamy and clayey (Cranfield University 2019).

Topography and land use

3.4 The Site lies at approximately 169m above Ordnance Datum (aOD) and occupies a compact site in the bottom of the steep valley of Bridgehouse Beck and despite being very close to Haworth, is relatively isolated from the town (Plates 1 and 2). The mill lies on the east bank of the beck and once took power directly from it via a silted-up millpond to the south. There are limited views from the site because it is in the valley bottom. The Site is relatively level although there is some terracing to the east, most of which is waste ground, being the former site of the east range of the mill complex that burned down in 2010.

Designations

3.5 Ebor Mills is a Grade II listed building (list entry number 128338), described in the following list entry:

Mill. c.1800-later C19. Coursed, dressed stone. Stone slate roofs. Complex of mill buildings around 3 sides of courtyard. South range: c.1800. 2 storeys and basement, 12 bays, right bay breaking forward. C20 glazing. Partly blocked wheelhouse opening to basement. Cill bands. Plain gutter brackets on tabling. Right return: central loading bay with hoist. North range: mid-C19. 2 storeys. Segment-headed openings. Gabled loading bay. Engine House at west end has large, round-headed windows and octagonal chimney stack with elaborate cresting. East range: main block. Later C19. 3 storeys and basement. Plain windows closely set. One set of loading bays. Bracketed cornice, blocking course.

3.6 There are other listed buildings in the immediate vicinity of Ebor Mills, including: the former workers cottages 4 – 8 Ebor Lane (Grade II listed, list entry number 1313901); the bridge over Bridgehouse Beck (Grade II listed, list entry number 1134133); Ebor House, which is the former mill manager's residence (Grade II listed, list entry number 1200122); and a plaque in the garden wall of the House (Grade II listed, list entry number 1313918).

3.7 Ebor Mills has an entry on the West Yorkshire Historic Environment Record (WYHER) (PRN3644). Within 500m of Ebor Mills, the former Lees Mill (demolished) is also recorded on the WYHER (PRN3667).

3.8 Further details of all the designated and non-designated assets within 500m of Ebor Mills are elaborated in the gazetteer contained within the Draft Heritage Statement of Significance (MB Heritage 2018).

4.0 HISTORIC BACKGROUND AND SITE DEVELOPMENT

4.1 This section was collated by MB Heritage and aims to place the Site within its historic context to help inform the work carried out.

Historic background

4.2 Ebor Mill was built in around 1819 on a speculative basis by Hiram Craven a building contractor and stone mason who worked in partnership with his son. They had been involved in the construction of bridges, docks and railroads. Craven was not involved in the worsted trade but locally had purchased, enlarged and rebuilt, Higher Providence Mill and Mytholme Mill (Hodgson, 1879, p153). WYAAS deeds indicate the purchase of land and water rights in 1818 with his address given as Oakroyd, Keighley (GY4141, CIY4342, CIY4443, CY4544).

4.3 The mill was rented out and is recorded in 1830, as being occupied by Townend and Company, listed as 'worsted spinners and stuff manufacturers'. The firm of G and W Townend is listed in the Baines Directory of 1822 as worsted spinners, Haworth although not directly linked to Ebor Mill.

4.4 In around 1834, the firm of Cravens and Sugden was established at Higher Providence Mill where it had its warehouse and office. Yarn was spun there and at Ebor Mill with several power looms at both mills. Weaving included '6qr. Mevinos, orleans and coburgs, besides a very valuable and heavy class of goods called double twills'. It is likely that Hiram Craven built Ebor House, some 0.15km to the south, around this time (Hodgson 1879, p 154-55). The 1841 census transcript records a Hiram Craven, Contractor, of Dockroyd in Keighley Parish with son, also Hiram (born 1816) listed as a Worsted Spinner (National Archives HO107/1316/F). The Haworth Rates of November 1842 (Keighley Town Hall) record Craven as the owner and occupier of Ebor Mill.

4.5 WYAS deeds from July 1853, record the conveyance of Ebor Mill to Edwin Merrall and Brothers for the heirs of Hiram Craven and his widow (RX 426449). The conveyance refers to 'Ebor House and outbuilding plus 18 acres 3r 29p of land. Also, the Ebor Mill

with the close of land covered with water and forming the reservoir to the said mill and the water courses, water wheel, dam stones, steam engine and boilers, gear and shafting, gas apparatus and fixtures. Also 10 cottages nearly contiguous and other cottages situate at Miln Hey'. The Merrall Brothers are indicated as owners prior to this and a valuation of Haworth from 1851 refers to 'Ebor Mill buildings, yards and premises, water and steam power' as being in their occupation.

4.6 The Merrall Brothers ownership of Ebor Mill and associated House, workers cottages, buildings and land is confirmed within the Haworth Tithe Apportionment of 1849 (Table 1).

Table 1: Haworth tithe apportionment 1849

Plot	Owner/ Occupier	Description
578	Merrall Edwin & Brothers (Owner) Edwin Merrall (Occupier)	Ebor House, barn, outbuilding, yard and garden
579	Merrall Edwin & Brothers (Owner) Edwin Merrall (Occupier)	Back of the barn (Meadow)
580	Merrall Edwin & Brothers (Owner) Edwin Merrall (Occupier)	Syke Field (Meadow)
581	Merrall Edwin & Brothers (Owner) Edwin Merrall (Occupier)	Ebor Mill Field (Meadow)
582	Merrall Edwin & Brothers (Owner/Occupiers)	Ebor Worsted Mills
583	Merrall Edwin & Brothers (Owners) William Mitchells and Others(Occupiers)	Cottages
584	Merrall Edwin & Brothers (Owners/Occupiers)	Buildings, Yards
586	Craven, John (Owner/Occupier	Occupation Road
587	Merrall Edwin & Brothers (Owner) Edwin Merrall (Occupier)	Low Brink (Pasture)

4.7 Hodgson (1879, 120) states that the Merrall Brothers business 'greatly enlarged the Ebor Mill, besides the erection of extensive weaving sheds and gasworks to supply both [Ebor and Lees] places of business'. The partnership was dissolved in 1860 following the retirement of Edwin and Stephen Merrall. The company continued under the name of Michael Merrall and Son.

4.8 The following documentary evidence confirms the continuation of the Merrall family association with both Ebor and Lees Mill during the latter half of the 19th century:

- The 1861 census transcript records Edwin Merrall as a stuff manufacturer residing at Ebor House (National Archives RG9/3228/F);
- White's Leeds and Bradford Directory and Kelly's Directory of 1861, both record the Merrall Brothers at Lees and Ebor Mills:
- Jones's Mercantile Directory of Bradford, 1863 records Merrall, Michael and Son as worsted spinners and manufacturers at Lees and Ebor Mills, Haworth.
- Kelly's Directories, 1867, 1877 and 1881, list Michael Merrall and Son, stuff manufacturers, Ebor Mills;
- Craven (1884) lists Merrall and Son, spinners and manufacturers, Ebor and Lees Mills. Alfred Merrall is listed at Ebor House.;
- Kelly's Directory of 1889 lists Merrall and Son, worsted spinners and manufacturers, Lees and Ebor Mills; and
- White's Directory of 1894 lists Merrall and Sons Ltd as worsted spinners and manufacturers at Ebor and Lees Mills and at Bradford.

4.9 In 1966, Merrall and Sons Ltd went into liquidation and was acquired by the Jerome Group of Companies, which continued spinning in the east range mill. Other buildings were disposed of separately and the most recent use of the site was by Airedale Springs which was involved in the manufacture of precision machine components. The earliest mill was adapted for office use and the former weaving sheds used for storage. A fire in 2010 destroyed the east range five-storey mill (Building 3) and engine house.

Site development

4.10 In 1986, the Royal Commission on the Historical Monuments of England (RCHME) undertook a survey of the Ebor Mill site as part of the Yorkshire Textile Mills Survey. A copy of the survey report is held within the West Yorkshire Historic Environment Record (PRN3644). The survey provides a chronology of the development of the site

and was used, in part, to provide the summary below. Descriptions should be cross-referenced to the site plan (Plates 1 and 2).

4.11 The earliest building, dating from around 1819, forms the core of The Spinning Mill (Building A) and was constructed as a water-powered worsted spinning mill. Additions to the west were possibly built by Cravens and Sugden during the 1830s or 1840s. The extension to the north and the gasometer shown on the 1852 Ordnance Survey plan (MB Heritage 2018), which was surveyed 1847-48, was also probably built by the company. Given the survey date, these buildings pre-date the Merrall Brothers' acquisition of the site.

4.12 Following acquisition by the Merrall Brothers, the original mill was retained, still under waterpower and a new steam powered spinning mill was constructed to the north along with Engine House 1 (Building 1). This second spinning mill was relatively short lived, likely reflecting a change of focus from spinning to weaving (worsted) and was largely demolished and replaced by a Weaving Shed (Building F). It is possible that yarn was supplied from Lees Mill which was also owned by the Merrall Brothers. A Warehouse (Building E) was later added to the south of the Weaving Shed which was expanded to the north to create the current Weaving Shed. A storeroom also appears to have been added at that time to the west of the Warehouse and north of Engine House 1. To power the expanded weaving operation, a new Engine House (Building 2), Boiler House (B), Economiser (C) and Chimney (D) were built.

4.13 The final plans for a third Spinning Mill (Building 3) were prepared by the Bradford firm of W and J B Bailey architects in February 1887. These plans are referenced in the RCHME report as being held on site although their location is not known, and no plans were discovered during the survey. The mill comprised five storeys and incorporated an Engine House (Building 2). On completion, the integration of the site was complete and comprised combing, spinning and weaving along with storage and office uses. Links with Lees Mill continued and grease settling tanks, soap works, and two gasometers were constructed on the hillside between the two mill complexes.

Historic mapping

4.14 The 1849 tithe map of Haworth (township in the Parish of Bradford), West Riding of Yorkshire, clearly illustrates Ebor Mill as an L-shaped structure with a circular feature to the north (subsequently annotated as a Gasometer on the 1852 Ordnance Survey

map). Two rows of cottages are shown to the east, together with the mill pond (although for some reason they are called Buildings, Yards on the tithe apportionment (Table 1)), likely weir, beck and headrace. Ebor House is clearly labelled to the south.

4.15 The First Edition Ordnance Survey map published in 1852 (surveyed 1847 to 1848) shows the broad arrangement of the Craven-built mill complex. The earliest mill (circa 1819), is shown, annotated as Ebor Mill worsted, fronting onto Ebor Lane and immediately east of Ebor Bridge. The L-shape plan form suggests an engine shed and/or boiler house has been constructed to the rear of the mill and was possibly internal. This is supported by the annotation of a gasometer to the north confirming a joint steam and waterpower system. The mill pond is shown to the south of the bridge and the weir was probably in place at this point although not annotated. To the east, the long row of workers cottages constructed 1847-1848 (NRHE SE03 NW67) is shown as extending past the relatively confined mill site. The map shows Ebor House to the south and Lees Mill (worsted) is shown to the east with separate gasometer and mill pond. The significance of the textile trade to the 19th century growth of Haworth is reflected in the number of worsted mill operations to the north of Ebor Mill, these including Spring Head Mill, Mytholme Mill, Vale Mill and Lower and Upper Providence Mills.

4.16 The 1894 Ordnance Survey map shows the rapid expansion of the site undertaken by the Merrall Brothers, likely to have been during the period, 1853 to 1887. The original mill has been extended to the east beyond the mill race and pentrough, which previously marked the eastern extent of the building. The headrace is shown entering the building from the south and the weir dam is now annotated to the north side of the bridge. To the north of the mill, the Boiler House and Economiser are shown as having been constructed on the site of the earlier building and gasometer, with the Chimney beyond these to the north. The Weaving Sheds are shown as fully built and extended by this point and fronted to the south by the Warehouse range and first Engine House (Building 1) to the west end. The later multi-storey spinning mill (circa 1887), forming the east range of the complex, is shown and is known to have incorporated the second engine house (Building 2) within the northern section. To accommodate the new mill, the row of workers cottages to south was truncated.

4.17 To the north and east of the main buildings, the 1894 map shows a further range of buildings and tanks extending up the bank towards Lees Mill. Two gasometers are shown and features suggestive of pipe runs indicate that it is likely that these were

shared between the two complexes. Very little change to the arrangement of the principal buildings within the complex is shown on subsequent mapping reflecting the continued operation by the Merrall Brothers' business.

4.18 By the time of the 1980s mapping, most ancillary buildings and structures have been removed. Following the 2010 fire, the multi-storey east range spinning mill was demolished along with the integral engine house, although some elements of the north gable wall may remain where it engaged with the Weaving Shed. Some rebuilding of the Warehouse range also took place where it adjoined the mill structure with a hipped roof added to the eastern end of the building.

5.0 LEVEL 3 BUILDING RECORDING RESULTS

Building A

5.1 The following section provides a summary of the results of the building recording of Building A commencing with the descriptive account.

Date and time of survey

5.2 The survey was carried out in May and June 2019 when the weather was sunny with showers.

General layout

5.3 The building is rectangular, 12 bays long and with three stories, a basement and attic space. There is a privy tower attached to the north-west corner of the building that extends to all floors. The building lies almost on an east/ west axis, and for the purposes of the survey, the building will be discussed using exact cardinal descriptors e.g. north elevation, west end etc.

5.4 At the time of the survey, the first and second floors were accessed via a stair tower at the east end of the building, with access door in the east gable of the first floor. There is no access to the ground floor and basement via the stair tower, although there is a blocked doorway that did once allow access. The ground level drops quickly down toward the west and the ground floor and basement are directly accessible via doorways in the north long elevation.

5.5 All the upper floors, except for the east bay, consist of single open spaces. The ground floor and basement are sub-divided into discrete rooms and spaces. Prior to the survey,

all the flooring material was removed leaving only the main floor frames intact including columns, beams and joists.

Fabric

5.6 The whole building is constructed from variable coursed, pick marked sandstone. All lintols, sills (sill bands) and decorative elements are also of sandstone but with finer finishes. Much of the visible mortar is a either lime or cement, with areas of severe degradation and patching, most of it ribbon pointing.

5.7 Both gutters on the long elevations are of timber but most (except for a single downpipe on the west gable which is cast-iron) of the other rainwater goods are plastic. All the fenestration is single-glazed timber with 20th century casement frames on the long elevations and some examples of earlier, multi-light windows on the gables. All the doors are timber of varying dates and styles. Finally, there is a selection of cast-iron grilles and ventilation bricks. The roof is of sandstone laid in courses diminishing toward the ridge, which is made up of stone ridge pieces. There is a single rooflight

5.8 The internal structural fabric is much the same as the exterior. From internal inspection, it appears that nearly all the internal dividing walls (where present) are of sandstone construction, some of it random rubblestone, some coursed. However, blocking of internal doors and windows has been carried out in varying types of brickwork. Removal of the floor surfaces revealed the frame of each floor, which are all of timber with main beams supported on slender cast-iron columns of varying styles. Removal of the floor surfaces enabled the whole interior to be viewed from basement to roof. Evidence for lath and plaster ceilings is visible on the soffits and the floors and stairs in the stair tower are laid down to large sandstone flags. The visible floors at ground floor and basement levels are laid down to either sandstone flags, concrete or smashed variations of both and/ or bare earth.

Exterior description

5.9 The following account will commence with the south elevation, which in this instance, is taken to be the principal or front elevation as it faces Ebor Lane and is the first elevation seen when visiting the site. The descriptive account will discuss each elevation in turn. The name of each elevation is the direction it faces.

5.10 To avoid repetition, all the elevations should be assumed to have the same construction details, fabric and decorative finishes as the preceding elevation unless otherwise stated.

South elevation

5.11 This elevation faces Ebor Lane and the lower levels are obscured by the bridge over Bridgehouse Beck as well as significant vegetation (0276). The visible parts of the elevation are the first and second floors and these are the only floors visible to full width. Part of the ground floor is visible, but the basement is not.

5.12 The elevation is 12 bays long and for the purposes of this survey, the bays are numbered from west to east, with Bay 1 at the west end. Each bay contains one window on each of the upper two floors, the second-floor windows comprise top-opening casements with two lights below; the first-floor windows are the same but with a single light below. Only Bays 2-7 on the ground floor have window apertures, the glazing consisting of simple whole aperture windows with no openers. The glazing is a mixture of opaque and clear glass of varying types.

5.13 Below the windows is a continuous projecting sill band, one course thick, that spans the whole width of the elevation. Each window aperture has its own discrete lug sill, with bays 1, 3-9, 11 and 12 being identical. The sills of Bays 2 and 10 differ slightly in that the right side of the sill of Bay 2 and the left side of sill of Bay 10 have been vertically cut in line with the jams. This appears to have been done in order to accommodate the sills without cutting into existing fabric when the building was extended. Each window aperture has an identical flush lintol of the same appearance as the sill band. The lintols on the ground floor and Bays 1-9 on the first floor are double, with a half-thickness second lintol above, which is of the same appearance as the general stonework. The second-floor lintels are single. Bay 9 of the ground floor houses the opening (now boarded) into the wheel room.

5.14 The gutter exhibits a cyma moulding, is partially rotted in places and rests on a cornice with paired gutter brackets. This arrangement returns slightly onto each of the gable elevations, although the timber gutter is missing, possibly having rotted off.

5.15 There are three obvious vertical scars in the masonry clearly indicating three phases of extensions at both sides of the elevation. There is a single phase of westward extension that comprises Bays 1 and 2 (0261) and two phases of eastward extension,

firstly consisting of Bays 10 and 11 and then Bay 12 (0275). The stonework and style of the extensions is to all intents and purposes, identical and aligned to the original but Bay 12 differs in that there is a very slight mismatch in the courses.

5.16 Other than the gutter supports and sill band, there is little of decorative interest on the elevation, there being modern signage and dangling cables at the east end. There are five rectangular cast-iron ventilation grilles set between the windows of Bays 1 and 2, Bays 3 and 4, Bays 5 and 6, Bays 7 and 8, and Bays 9 and 10. Each is identical and exhibits quatrefoil decoration.

West elevation

5.17 The west elevation forms the west gable end of the building and encompasses a privy tower that has been added to the north-west corner (0325). It is for the most part, quite plain with a large expanse of un-modified stonework. The elevation is visible right down to basement level, although part of it is obscured by the weir.

5.18 There are six windows, two on the ground floor, one on each of the first and second floors and two lighting the roof space. There are also two small windows on the south-facing elevation of the privy tower and a blocked opening in the basement. The basement window is a wide stone mullion window. This window has been blocked with cinder block internally and bright yellow narrow-coursed rock-faced sandstone externally. There is also a course of modern red brick.

5.19 The ground floor windows are of unequal size, the right window being smaller and placed higher up. The left window was obscured somewhat by vegetation but appears to be of similar appearance and detail to those already described on the south elevation. There is a single lintol and a projecting lug sill. The right-hand window has a similar lintol, but it is doubled (the upper lintol being slightly smaller in length) and it has a flush lug sill. It is glazed with a three-light casement.

5.20 The windows on the first and second floors are identical and internal inspection confirms them to have been inserted into the pre-existing fabric. These windows are mullion type with smooth sandstone sills and lintols, the mullions being timber. They are fenestrated with simple casement frames. There are further two window apertures right at the apex of the elevation that light the roof space. The openings are the same size, both with flush sills and lintols of appearance like those on the south elevation, although the sills are flush. The right window is un-fenestrated, but the left contains a

24-light window frame that may be contemporary with this phase of building. The lower parts of the window appear to have been repaired.

5.21 The left side of the elevation contains the flat-roofed privy tower that extends from the basement to roof level. This has been repointed with wide ribbon pointing that obscures any phasing. It is apparent however, that there is a butt join on both sides where the tower attaches to the gable indicating it is a later phase. The flat roof (which is modern) of the tower extends to a short section of wall that interrupts the roof slope on the left verge. This short section of wall continues up from the main gable wall and was probably added when the privy tower was built. One or two of the blocks of stone are cut betraying the line of the original roof slope. There are two small windows set into the south wall of the tower, on the first and second floors. These have sills and lintols that are identical to the adjacent windows. There are no frames and the windows are boarded.

North elevation

5.22 This elevation faces the inner courtyard of the complex and exhibits the same general construction details as the south elevation (Paragraphs 5.11 – 5.16) . The numbering of the bay is the same as that on the south elevation. All the bays of the ground, first and second floors are visible (although Bays 11 and 12 are partly obscured). Bays 2-5 of the basement are fully visible; Bays 1 and 6 are partly obscured. This elevation exhibits a greater variety of fenestration than the south elevation and there are also several door openings and a dilapidated external iron staircase.

5.23 There are three boarded and three blocked openings visible at basement level (0321). Bay 1 is partially obscured by a single-storey extension to Building B, the Boiler House. However, a blocked doorway with large sandstone lintol and jambs is visible through which several pipes pass. To the left of this is, in Bay 2 is a doorway, which is boarded and has a thin cast-iron plate lintol. This opening may have been inserted, the left jamb coincides with a vertical scar where Bays 1 and 2 were added. To the left of this, within Bay 3, is an area of some rebuilding and the stonework cruder than the rest of the elevation and steps out by a few centimetres. It is apparent that there has been more than a single phase of blocking and modification, the remains of jambs and lintols can be seen.

5.24 The window in Bay 4 is squarer than any of the others and has a projecting sill sandstone lug sill and lintol with chamfer with curved stops at either side. The lower two courses have been blocked with cinder block. This window appears to have been modified from an original that was probably the same as the other fenestration. To the left of this, slightly offset to the left of Bay 5, is a pedestrian doorway with chamfered sandstone surround. The jambs are decorated with horizontal tooth chisel marks, the lintol is undecorated. The lower course has been blocked with cinder block. Further to the left, between Bays 5 and 6 lies the smallest window opening in the building. This has sandstone jambs and sill, the lintol being part of a course of large blocks. Below this course, the space between the doorway and a slope up to the ground floor has been infilled or patched. The window is wholly blocked with cinder block. Above and slightly to the left of the window is a vertical scar in the stonework indicative of a blocked aperture. Remnants of two cast-iron ventilation grilles are visible.

5.25 Set within Bay 7 on the ground floor is a wide double doorway that has obviously been inserted in place of a window (0321). The replaced window appears to have been the same type as much of the fenestration on this elevation. The upper part has been blocked with similar stonework to the rest of the elevation but with heavy ribbon pointing. The sill band has been cut to accept the doorway. The surround has been fabricated using render/ cement to give the appearance of a sandstone surround. The doors are of modern appearance and lead to the ground floor.

5.26 There are two doorways in Bays 8 and 9, that have also been created by modifying windows. The door in Bay 8 has an inserted sandstone surround that incorporates the sill band and a narrow lintol has been inserted to create a window light above. The door is modern. The adjacent door, in Bay 9, is of the same dimensions but it without a surround and inserted lintol.

5.27 Bay 10 also contains a doorway that does not appear to be a modified window and may be original to the first phase of construction. There is a plain sandstone surround and the door is modern.

5.28 The window in Bay 11 is the same type as those on the upper floors of this elevation and the south elevation, apart from being reduced in height by two courses of blocking topped with a narrow sandstone flush sill.

5.29 Bay 12 contains two windows of equal size with a smooth sandstone sill that spans the width of the bay. The windows are separated by a jamb and there is a jamb on the left side. There is no jamb on the right side of the right window.

5.30 Most of the fenestration on the upper floors is identical to that already described on the south elevation. There are several differences, including altered or different apertures in Bays 2, 4 5and 6 and 12 (0321).

5.31 The second floor of Bay 2 and first floor of Bay 4 contain doorways that appear to have been created by extending existing windows below the sill bands. The lug sills have been removed; the lug spaces blocked with the general wall fabric. Each doorway has a sandstone threshold. Both doors were obviously for external access to a flight of iron steps fixed to the elevation. Only a landing on the first floor survives, together with a single tread and tubular handrails.

5.32 Windows within Bays 9 and 10 on both the first and second floors, have been widened and joined to create single wide windows. The sill bands have been retained and plain sandstone lintols have bene inserted. The lintol on the second floor has been inserted below the existing lintols resulting in the reduction in height of the window.

5.33 The window in Bay 12 is set between the first and second floors, in order to light the landing within the stair tower. This window is identical to most apertures already described.

5.34 The north elevation exhibits the same decorative elements as the south elevation. The gutter supports, however, do not extend to Bay 1. The second floor contains five cast-iron ventilation grilles between Bays 2 and 3, 4 and 5, 6 and 7 and 8 and 9. There are vertical scars in the same locations as those described on the south elevation, indicating the same phasing.

East elevation

5.35 This forms the east gable elevation of the building as was last used as the main entrance. Unlike the west gable elevation, this elevation extends to only three floors, the first, second and third (0278). This gable is part of the Bay 12 later phase, the original east gable now being internal.

5.36 There are six apertures, three not quite centrally placed and three in the right side. The three central apertures (one on each floor) have identical surrounds of flush sandstone,

the first and second exhibiting tooth chisel marks. The aperture on the first floor, forms the main entrance and has concrete and modern flag steps. At the top of the jambs, two scars indicate the locations of two brackets. There are modern double doors.

5.37 The second-floor opining has been half-blocked, with slightly different fabric to the rest of the elevation and converted to a window with top hung casement. The third floor contains double doors, each with 15 glazed lights. These appear to be contemporary with this phase.

5.38 There are wooden rollers fixed to the second and third floor surrounds, two on the second and one on the third. These are associated with the hoist, the bracket for which is present at the apex, above the upper door. A wrought iron safety bar is fitted to the top door.

5.39 The three windows within the right side of the elevation all differ in size but have the same lintols. The window on the right lights a small room on the second floor, to which there is now no access. It has a frosted glass casement window. The other windows light the landings within the stair tower and are multi-light frames with top casements. The lower of the two has 15 lights, while the upper has nine lights.

5.40 The gutter brackets continue around from each of the long elevations and there is a cast-iron fire hydrant plate into which, 'M & Son L^{TD} FP N^{o}2 12^{FT} 6^{IN} ' is cast.

Interior description

5.41 The following section outlines each internal room and/or space. Each area has been assigned a room number which commencing with Room AF1, which is the first room encountered upon entering the building from the most obvious main entrance. The rooms will be described in a logical manner, generally following the way they are accessed.

First floor

5.42 To avoid repetition within each room description, all the rooms should be assumed to have the same construction details, fabric and decorative finishes as the preceding room unless otherwise stated. Where details are repetitive, the first descriptive account will apply to subsequent features.

Room AF1

5.43 This is the entrance lobby into the building and forms the lowest accessible level of the stair tower from the east side of the building. Immediately to the right of the main door, a doorway once allowed access to the ground floor (Room AG1) but this was sealed and boarded at the time of the survey. A flight of sandstone stone stairs to the right allows access to and from the upper floors (005), these stairs are the same all the way up to the top floor. The landing of the second floor is visible from below, the large sandstone flagstone being supported on a large corbel (006). The west wall of this room forms the former exterior gable elevation. The walls and ceiling are painted stone, the floor is laid down to stone.

5.44 The left wall of this room is lined with modern panelling but appears to be of cinder block construction creating an additional room (Room AF2) on this floor.

Room AF2

5.45 Room AF2 is mostly modern in appearance, all the walls except the west being plastered. The ceiling and floor are fibreboard and all the surviving fixtures and fittings are modern.

Room AF3

5.46 This space (along with the corresponding second floor and roof space areas) forms the largest room on this floor, covering the whole length of the building prior to the erection of the stair tower at the east end (065). The floors above and below are now visible as all the floor coverings have been removed. On this and the second floor, scaffolding and a walkway has been erected down the centre of each space and access was limited to this central walkway (065). This meant that much of the wall fabric was only able to be inspected remotely. All the walls in this room are of stone, painted and limewashed in areas and bare in other. Most of the pointing appears to be lime, although some patching in cement is visible.

5.47 The windows on both long elevations are set within deep floor to ceiling recesses, the lintols and sills being visible (058). Forming the head and base of each recess flat sandstone flags are visible, these are expressed externally as the upper of the double lintols on both the long elevations. At the east end of the room, below an area of missing ceiling are several joist sockets.

5.48 Both end walls contain features indictive of the former power transmission system together with blocked apertures. There are two cast-iron bearing boxes, set within the south sides of both the west and east end walls (047, 054). There is possible evidence for a line shaft between the two in the form of scars indicating the former positions of line shaft hangers on some of the cross beams. The box on the west wall has been infilled, while that on the east remains open but is not visible in the corresponding wall in Room AF2.

5.49 Below and to the right of the box on the west wall and bolted to it, is the upper part of a large cast-iron bracket that passes through the floor to the ground floor room (para. 5.84, Room AG4) below (054). At the far-left side of the wall is a vertical slender blocked area, there is no apparent reason for this.

5.50 The north side of the west wall contains a narrow doorway that allows access to the privy on this floor (Room AF5, Plate 15). There is a sandstone lintol with vertical claw chisel marks. To the left of this is a boarded window aperture that has clearly been inserted, there being some rebuilding of the jambs in brick.

5.51 To the right of and below the box in the east wall is an area of rebuilding and blocking (Plate 16). Immediately below the bearing box is a blocked door, to the right of which is a blocked doorway with sandstone lintol above. Above the door is an area of rough rebuilding/ infilling, presumably filling some sort of void. There is no evidence to suggest this is an additional bearing box.

5.52 The north side of the east wall contains a doorway that leads to a room (Room AF4), to which there was no other access (048). The doorway appears to be of the same dimensions and is in the same place as that doorway on the south side (Paragraph 5.50). Just to the left of the doorway into Room AF1, at floor level is a square aperture (048). There is a recess all the way around indicating some sort of frame was once in place. There is no evidence suggestive of its use.

5.53 All the cross beams in this room are supported upon slender cast-iron columns of varying types. The columns are discussed in para. 5.91.

5.54 The cross beams enter the walls between the windows and there are no pad stones visible, the beams simply rest on the masonry. The south-east end of the room has no ceiling joists and between Bays 9 and 10, a longitudinal beam is present that is

supported by a cast-iron bracket on one end and is set into the wall on the other. This was done in order to support the joists on the north side.

Second floor

Room AS1

5.55 Ascending from Room AF1, the half landing between the first and second floors is reached. There is a blocked opening set into the wall between this landing and Rooms AF5 and AS5. It is blocked with brick and has a substantial stone lintol. There is no evidence to suggest this was an external window. There is a tubular handrail that carries on up to the half landing between the second and third floors.

5.56 For the most part, Room AS1 is of similar appearance to Room AF1, except that in place of the main entrance door, there is a small casement window, converted from loading doors, visible externally (Para 5.3.7). The south wall of this room clearly butts against the west, former external wall within which is a pintle that has clearly been bent around, probably when the stair tower was added (018).

Room AS2

5.57 Unlike Room AF2, the walls in this room are not plastered and the stonework is visible. There is a clear butt join in the corner where the south wall meets the west, the stonework of the west wall being of clearly better quality, indicating it was formerly the east external elevation. Set high up in the east wall, close to the dividing wall between this room and Room AS1, is square cast-iron bearing box with circular opening (015). Below this, two courses down, is a stone with vertical claw chisel marks that forms the lintol of a blocked opening. Both are visible in the east elevation of Room AS3 (para. 5.60). The floor of this room has been screeded with cement and the ceiling consists of joists and narrow floorboards.

Room AS3

5.58 This room is of the same dimensions as AF1 and much of the description for that room is applicable. The wall spaces between the windows on each of the long walls on this floor have within them a section of brickwork (some angled) that betray the locations of former recesses (078). Some of the bricks are stamped with makers marks but they are difficult to discern. There are also other areas of infilling on some of the jambs.

5.59 The west wall of this room is plain with a single doorway of the same appearance to that on the first floor (para. 5.50) allowing access into the privy tower (Room AS5).

5.60 The south side of the east wall contains the cast-iron bearing box and blocked opening seen in Room AS2 (para. 5.57). The north side of the east wall contains a doorway into Room AS4, to which, in common with the first floor, there was no access (067). Above this doorway were two cast-iron bearing boxes, one was blocked, the other contained a lower bearing shell (068).

Third Floor

5.61 The half-landing between the second and third floors is very much the same as that between the first and second (para. 5.55). There is no ceiling however, and the landing is open to the roof. The tubular handrail seen below is fixed to a simple wooden newel and the timber balusters and handrail continue up to the third floor (029). There is a blocked aperture in the north wall of the landing that is identical to that below. Additionally, there is further blocked aperture set within the west wall (025) that is visible on the other side of the wall within Room AT2.

Room AT1

5.62 The third floor has a different layout than the lower floors in that it forms the roof space and there is a larger room at the east end of the building (Room AT1, 020). There are a pair of loading doors in the east wall (see also para. 5.37) above which, is the internal aspect of the hoist, that contains a concave roller (045). Opposite the loading doors is a further opening with a substantial stone surround, above which is a rectangular hole that may also have accommodated hoist apparatus. To the left of the doorway into Room AT2 is a further blocked aperture of the same appearance to that described in para. 5.61. Both are visible in the east wall of Room AT2.

5.63 The floor of this room is laid down to stone and 30cm (12 inches) wide square edge boards on the south side. There are two small wooden brackets fixed to the boards, each with two holes (028) on the south side of the floor. There is no obvious use for these.

5.64 This room is open to the roof space, which consists of eight purlins and a ridge plank. These are inserted into the cross walls and in turn support the rafters that support the roof covering. The underside of the roof covering was felted, obscuring it. The soffit of

each rafter exhibited scarring suggesting that the whole was once covered by lath and plaster some of which survives at the extreme edges. The east end of each purlin, where it meets the wall is reinforced with a bolted steel channel (026). A cast-iron washer is present close to the east end of the fourth purlin on the south slope; there is a hole through the purlin, and this obviously once held a bolt. This, and the wooden floor brackets are probably associated with winding or lifting gear.

Room AT2

5.65 This room forms the roof space and although the roof is now visible from the lower floors, it was once obviously ceiled from below. There was no access to this area at the time of the survey but much of the roof structure is visible from below and from Room AT1 (030).

5.66 There are nine closed trusses, eight of which are queen strut trusses with straining beams removed. The queen struts are joggled to support a member fixed to the soffit of the principle rafter, and at the base to support raking struts (033). The queen struts are fixed to the principle rafters with a bolted iron strap on each face. The truss at the east end, that between Bays 9 and 10, differs slightly in that there are no raking struts, no joggles and the struts are fixed to the principle rafter via a bolted iron strap that wraps around the principle rafter. There is also a fixing strap at the feet of the east end truss.

5.67 There are four purlins on each roof slope, most of which are staggered and are fixed to the principle rafters with through tenon and face pegged joints, and all span a single bay. The purlins at the east end span Bays 10 and 11 and differ in both scantling and purlin attachment methods. The upper two purlins on either side are through tenoned while the lower two are supported upon cast-iron brackets (031).

5.68 The floor of the roof space was removed prior to the survey but evidence in the form of joist slots cut into the tie beams all the trusses except the east end truss, is visible (031). There are four square scars in the east face of the tie bean on the east truss, indicating the locations of cross beams forming the floor frame in Bays 10 and 11. There are corresponding slots cut into the end wall but infilling obscures some of them. The external roof covering is obscured in the same way as Room AT1, by late 20th century roofing felt. All the rafters exhibited scarring consistent with lath and plaster.

Ground Floor

5.69 At the time of the survey, the ground floor was accessible via either one of four doors in Bays 7 – 10 within the south elevation. Additional access to the east end of the ground floor was also once available via the stone staircase at the east end from Room AF1 (para. 5.43, Plate 32), and through a blocked door in Bay 12. The stairs are well-worn and have been repaired (and subsequently worn). There are nine individual rooms and/ or discrete spaces on the ground floor, some of which were not accessible. The floor at west end of the ground floor (In room AG5), up to Bay 5 had been removed, a central walkway, like that on the first and second floors enabled limited access.

Room AG1

5.70 This room forms a small entrance lobby at the foot of the stairs from Room AF1. The stairs are of the same appearance to those already described and have a tubular handrail (097). The door at the top of stairs, leading to Room AF1 is boarded. The doorway leading to the exterior, has been partially blocked with brick to create a window. To the left of this is a further window. The floor of this room appears to have once been laid down to substantial sandstone flags, these have been partially removed to reveal bare earth. The ceiling comprises large flagstones that form the floor of (the inaccessible) Room AF4 above.

Rooms AG2a and AG2b

5.71 To the south of Room AG1 is a long narrow passage (AG2a) with a very small inaccessible high-level space at the end (Room AG2a). The walls are covered in thick limewash, but it is obvious that the west wall was once the end gable wall prior to the addition of Bay 12 and there is a brick blocked doorway at the south end leading to a space below Room AF1. Opposite this is a doorway allowing access into Room AG3a. The ceiling of this room consists of large sandstone flags supported on various examples of iron and steel I-beams, a stone corbel identical to that in Room AF1 and a short timber beam. A series of modern and earlier pipes feed through into Room AG2b. The floor is bare earth.

Rooms AG3a, AG3b and AG3c

5.72 These rooms form an L-shaped area with brick and rubble stone partition walls forming the individual spaces. Room AG3a is the largest of the areas and access into Rooms AG1 and AG2a is available via unequally sized doorways in the east wall (082). Between the doorways, at ground level is a square-shaped infilled recess. This is not visible on the other side of the wall in Room AG2a, however the thick limewash within Room AG2a may be obscuring this. There is a brick and rubblestone blocked doorway at the north end of the wall dividing this room from Room AG4 (083). This wall has a low plinth around 0.5m high.

5.73 Room AG3b (085) is accessible via a doorway in the partition wall between this room and Room AG3a. there is no other access into this room and space is restricted. There are several features in this small space that are related to the power transmission system of the spinning mill and the former waterwheel. The most obvious feature is large, square iron frame set into the west wall between this room and Room AG4, the former waterwheel house (088).The frame has a lip on the inner edge and five bolt holes are visible on the north side. It is blocked with a couple of courses of squared sandstone at the bottom, followed by several courses of random rubble and then a single course of vertical cinder block at the top. To the right of this, in the same wall an infilled bearing box is present. This has been filled with the same cinder block as the upper course of the large iron frame (091).

5.74 The east wall of Room AG3b also contains features potentially pertaining to the power transmission system. Set into the centre of the wall is a square sandstone block with two protruding bolts and an L-bracket (089). To the left of this, a boarded opening into Room AG3c is visible. There is a smaller opening below it that has a sloping sill, to the right of which are four protruding bolts and an L-bracket (090).

5.75 The floor of this room appears to have been removed and was, at the time of the survey, very uneven. At the south end, a large diameter cast -iron pipe elbow exits the south wall and goes down into the floor.

5.76 At the time of the survey, there was no access into Room AG3c.

Room AG4

5.77 This room was only able to be accessed via a door in the south north elevation and formerly contained the waterwheel, several features associated with it remain. Access to this room was limited, scaffolding and temporary flooring having been erected to enable safe access (122).

5.78 The south wall of this room (Fig 3) contains a round arch with substantial sandstone voussoir that exhibits two phases of blocking and is boarded (0125). This was once open, and water entered from the reservoir via the sluice. There are remnants of an iron grille or screen visible at the top of the inner curve (0125). Below this, the flat surface of the penstock is visible (0127), and below that, the curved masonry apron (0250). At the base of the north wall, the round arch at the entrance to the tail race is visible (0252). The construction of this arch is not as fine as that described above.

5.79 Both side walls contain features associated with the support of the water wheel and power transmission (Figs 4 and 5). The east wall exhibits the other side of features described on the west wall of Room AG3 (para. 5.73). The large square iron frame is revealed to be a large box that once allowed power transfer from the wheel to the east end and upper floors of the mill. Power was probably taken from gear on the rim of the wheel, which was apparently removed in about 1939 (RCHME 1986). The box is surrounded by substantial peck-marked sandstone blocks. A smaller opening on the opposite wall (para. 5.80), probably represents the original appearance of this opening suggesting that modification took place sometime later. To the left of this, roughly in the centre of the wall is a blocked recess with round arched head and substantial sandstone bearing stone that once accommodated the axle of the water wheel. At the north end of the wall a blocked aperture is visible. The remains of the jambs are present, and it corresponds to the blocked door in Room AG3a.

5.80 The opposite wall also contains features associated with the waterwheel that differ slightly from those on the other wall. At the south end, opposite the large iron box, is a smaller blocked opening with substantial projecting sandstone sill, lintol and jambs. It has been blocked with grey brick and is also visible on the east wall of Room AG5. To the right of this at the top of the wall, is a brick blocked rectangular opening. Further to the right, is a vertical projecting 'pilaster' of sandstone; there is no apparent reason for this, but it may have supported the ceiling or a cross-member. In the centre of the wall, directly opposite the blocked recess in the east wall (para. 5.79), is a blocked

recess of similar dimensions but without an arch. There is a similar bearing block but no evidence of any sort of arch. At the northern end of the wall is a blocked opening into Room AG5; this is blocked with the same brick as the opening at the south end.

5.81 Both long walls are constructed from masonry of varying appearance with much of the upper parts of the walls being of random coursed rubble. The lower parts of the walls are more formal in their construction and there is a distinct band of stone on the west wall. The ceiling of this room comprises several joists supported on three I-beams, and a wall plate. It appears that this may have been inserted after the wheel was removed, however, there is no evidence to suggest that the wall continued up to the first floor.

Room AG5

5.82 This room covers Bays 1 – 8 at the west end of the building (099). The floor covering of Bays 1 – 5 (half of Bay 5) has been removed and a central walkway has been installed which affords limited access. The floor of Bays 5 – 8 is partly bare earth with fragments of sandstone flag together with a concrete slab on the south side. The room can be accessed via a double and a single doorway in the north wall. The double door is a modified window.

5.83 The east wall contains three features associated with the wheel room (Room AG4). At the south end of the wall, there is a recess with large projecting sandstone sill. The recess has sandstone jambs and lintol. It is blocked with brick which is also visible within Room AG4. Above and to the left of this is a brick blocked aperture (100). At the other end of the wall, there is a brick blocked doorway that has a timber lintol, as well as a compression timber a few courses down. Above this are several pipes and cables that pass through the wall. Adjacent to the base of the wall, lying almost in the centre, is an opening in the concrete floor (103). This was filled with rubble and there was no indication of its purpose.

5.84 At the opposite end of the room, the internal aspect of the west gable wall was visible. There was the same opening into the privy tower as those on the upper floors along with two window openings one of which was boarded.

5.85 There are two large cast-iron brackets attached to the west wall, both of which provide support to the ceiling frame (floor of Room AF3). The ceiling assembly at this end of the room is quite substantial, unlike the corresponding examples on the upper floors. The left bracket passes through the floor (111) and the top part is visible in Room AF3

(para. 5.49). There is a bearing box set into the wall just to the right of this bracket and is apparent that the bracket was used to house apparatus to transfer power up through the floor, as a further bearing box in the west wall of Room AF3 attests. The bracket to the right appears to have been installed to support the substantial ceiling beam as well apparatus at this end of the room.

5.86 There are several scars visible on certain members of the ceiling frame at this end of the building that are probably associated with power transmission. There is a scar on the north face of the beam supported by the bracket that passes through the floor that probably carried a line shaft coming from the water wheel (107). A further scar is present on a crossbeam located between the two beams (106).

Basement

5.87 The basement is accessed via a doorway within Bay 2, and there does not appear to have been any other way to get down to this level.

Room AB1

5.88 This room extends only to Bay 5 beyond which it appears, there is solid natural ground (apart from the wheel pit in Bay 9, and a smaller room (Room AB2)). The room is plain and is completely lined with brick obscuring any earlier fabric (116). There is a window set into the west wall, which has a stone mullion, stone sill, steel lintol and is blocked with cinder blocks and brick.

5.89 The ceiling of this room appears to have been replaced recently and two of the crossbeams have rotted necessitating the construction of cinderblock columns and the installation of . The floor of this room appears to have been removed at some point and is uneven underfoot. However, there are two large concrete bases at the west end, one of which is L-shaped (119).

Room AB2

5.90 Attached to the north-east corner of Room AB1, is a small rectangular room that contains an oil tank (121). This room has random rubble walls, and a substantial stone ceiling.

Columns

5.91 There are six different types of columns of unremarkable design within this building and each has been assigned an arbitrary type number. Table 2 outlines the different column types by floor in the same order as descriptive account. Note that the column naming system is entirely arbitrary and the columns in this building are not necessarily the same as columns with the same type number label in other buildings, either within this site or elsewhere.

First Floor

5.92 The first floor has nine slender columns, eight of which are 'Type 1' (225) and one (that between Bays 9 and 10), is 'Type 2' (224).

5.93 Type 1 columns have a consistent cylindrical profile with a moulded collar halfway up and four vertical ribs below. There is a circular moulding where the column meets the foot, which is bevelled on the upper face. The capital is fluted above a moulded collar and the top is the same as the foot, albeit with two square bolt holes. There are two packing pieces between the column top plate and the cross beam (225).

5.94 The single Type 2 column is completely different to the Type 1 columns and tapers slightly toward the capital. The top half of the column is cylindrical, while the bottom half is octagonal bellow a collar moulding. The foot of the column was obscured slightly but was observed to be a plain cast-iron plate. The capital is of larger diameter above a moulded collar and the top plate is long with tapering supporting ribs and four bolt holes (two on each long side). (224). There are no packing pieces above the top plate. There is no evidence for any form of transmission bracketry on either of these column types.

Second Floor

5.95 The second floor has nine columns of two different types, Types 3 (223) and 4 (222).

5.96 Type 3 columns are all cruciform type, the lower parts of the columns being hexagonal. The foot of each column sits on a cast-iron plate. The capitals are all identical except for the column at the east end between Bays 9 and 10, which is missing the top plate (221). The capitals are all plain and cylindrical above the collar and the top plates are plain rectangular cast-iron with a both hole on either side.

5.97 The sole Type 4 column on this floor, is non-tapering cylindrical with a hexagonal lower quarter. The capital is plain with a thick collar and has a rectangular top plate with ribs, which is like (but much smaller than) the capital of the Type 2 column (222). There is no evidence of any bolt holes and neither type of column exhibits any evidence for power transmission bracketry.

Ground floor

5.98 There are seven columns on the ground floor of which, five are Type 5 columns (226) and two are Type 6 (227). There are no columns at the east end of the ground floor (Bays 9 – 12).

5.99 Type 5 columns are cylindrical and have an octagonal base with no visible foot plate. The capital comprises a plain section above a moulded collar. The top plate is bevelled and of small dimensions and there are no bolt holes visible. The footprint of the top plate that supports the cross beam has been extended by the addition of two tapering cast-iron plates with ribs. There are a couple of bolt holes visible in the additional plates, but thick paint obscures any others.

5.100 Type 6 columns are also cylindrical, the diameter of which widens at the base below a moulded section. There is a foot plate visible made from a simple cast ion plate. The capital is plain above a simple moulded collar. The top plate appears to be a formed of a sandwich of two separate castings, the column fitting into a socket in the lower plate with simple moulding. There are two ribs that incorporate two bolt holes each fitted with a square headed bolt. There are slight variations in the sizes in the top plate, but to all intents they are the same.

5.101 Neither column type exhibits any evidence for power transmission bracketry. There is a scar in the cross beam above one of the Type 5 columns, but this appears to have been a former joist/ ceiling member.

Basement

5.102 There are four columns in the basement, all of which are Type 6. They are identical to those described in para 5.100.

Table 2: column types in the spinning mill

Column Types	Number of Columns	Floor
Type 1	8	First
Type 2	1	
Type 3	8	Second
Type 4	1	
Type 5	5	Ground
Type 6	2	
Type 6	4	Basement

6.0 LEVEL 2 BUILDING RECORDING RESULTS

Building B

6.1 The following section provides a summary of the results of the building recording of Building B commencing with the descriptive account.

Date and time of survey

6.2 The survey was carried out in May and June 2019 when the weather was sunny with showers.

General layout

6.3 Building B is four bays wide and is cut into a slope, the ground floors lying below the exterior floor level. It comprises the former boiler house and consists of the square structure of the boiler house along with a long, low addition to the west (the rear). This addition is physically attached to the west end of the north elevation of Building A (the Spinning Mill) and the south elevation of Building C (the Economiser). At the time of the survey, the interior of the building was in very poor structural condition, which limited the scope of the inspection.

6.4 The main part of the building is lies generally on an east/west axis (the same as Building A) and is divided into two roughly equal halves by a wall running just off centre of the structure. This wall reaches right to the roof. The southern half of the building extends

to ground and first floors, while the northern half consists of a single space open right up into the roof. It appears that the north side of the building also had an upper floor. Only the ground floor rooms on the southern half and the ground floor of the northern half were accessible and there were four main rooms/ spaces.

6.5 The low structure to the rear, consists of a long single open space with an inaccessible flue level.

6.6 There are four doors on the west elevation, but at the time of the survey, the only access into the building was via a door in the south elevation.

Fabric

6.7 The boiler house structure is constructed from regularly coursed sandstone that exhibits varying styles of pick marks. As with Building A, decorative elements, bands, sills and lintols are more finely finished. There is some rock-faced sandstone on the principal, east facing elevation. Both the north and south elevations are not as finely built as the east elevation, the south elevation in particular, being of lesser quality and there is some red brick patching.

6.8 All the windows, except the oculus on the east elevation have been blocked with cinder block. The oculus is fenestrated with a timber frame without glazing. There are four wide doors in the east elevation, each of which is of substantial construction.

6.9 The roof is covered with Welsh slate, which is in very bad condition and the visible gutters are of cast-iron. There are three metal-frames rooflights on the south roof slope. The roof ridge is of sandstone.

6.10 The interior aspects of the external walls are of random rubble with lime mortar. All the internal dividing walls are of brick, including the east/west dividing wall. There are some internal windows with timber frames. The ceiling in the south part is of substantial timber construction albeit partially collapsed. The ground floor surfaces are obscured with rubble and other ephemera, but most appear to be bare earth.

6.11 The roof frame is of both iron and timber construction, with iron trusses, timber purlins and both timber and iron rafters.

6.12 The long low building to the rear was formed by the roofing over of an area between the rear of the boiler house and a rubblestone wall along the bank of the river. The

roof is a simple timber framed single pitch supported by an iron I-beam and three cast-iron columns. The floor is partially formed by a brick flue.

Exterior description

6.13 The following account will commence with the east elevation, which is taken to be the principal or front elevation as it is the most decorative and contains the main doors to the former boilers. The descriptive account will discuss each elevation in turn. The name of each elevation will be the direction it faces.

East elevation

6.14 This gable elevation faces the cobbled courtyard and contains the main access into the area of the former locations of the boilers (344). The elevation comprises the upper floor of the building, the lower ground floor only being visible from inside. It has four bays (Bays 1 – 4) each divided from the other by a rock-faced rusticated square column with substantial sandstone blocks and plain capitals. At each end of the elevation, is a column with rock-faced coursed masonry, capitals and substantial block on top of the entablature. The entablature itself is plain.

6.15 Each of the bays is fitted with double doors of matchboard and frame construction, the doors of Bays 1 and 2 have been altered, fitted with smaller pedestrian doors and partially boarded. The door of Bay 4 is shorter than the others and has a timber lintol. The top part of the gable forms a large pediment with an oculus set into the tympanum. The oculus has a sandstone surround with four rock faced keystones. Each raking slope of the pediment is missing all or most of the copings. At the apex of the pediment is a projecting peak. An iron bracket is fixed to the apex that once anchored a telephone/ electric cable.

South elevation

6.16 This elevation is partially obscured at the east end by the slope and steps leading down from the cobbled courtyard. The elevation is plain and contains the only accessible entrance into the building. There is a single door at the foot of the steps above which is an opening blocked with cinder block. The doorway has substantial quoins those on the right-side projecting and being chamfered. To the right of the doorway is a small blocked aperture with flat sandstone sill and lintol. There is a further blocked door at the west end of the elevation, which is blocked with the same stonework as the rest of

the elevation. At the extreme west end of the wall, is a brick blocked opening with sandstone lintol. Below this there is an opening from which, piping emerges. At eaves level there is a cast-iron gutter like that on Building A, supported on regularly spaced sandstone gutter brackets.

North elevation

6.17 Ostensibly of similar construction details as the south elevation, only the upper part is visible. There are three blocked windows with sandstone lintols and projecting sills along with a blocked door with sandstone surround. All of these are blocked with cinder block. At the west end of the elevation a window of the same appearance to the others has been modified to create a doorway. This has a modern plywood door. To the right of this is a boarded opening.

West elevation

6.18 The west elevation is partially obscured by the low structure to the rear of Building B. it appears from limited external inspection, to be of similar general construction details as the east elevation without the wide doorways. Inspection of this elevation from within the low structure to the rear of the Boiler House reveals several open and blocked windows and apertures. The tympanum contains an oculus which is visible from Room BG4.

Interior description

6.19 The following section outlines each internal room and/ or space. Each area has been assigned a room number, commencing with Room BG1, which is the first room encountered upon entering the building from the accessible entrance.

6.20 As in previous section, to avoid repetition within each room description, all the rooms should be assumed to have the same construction details, fabric and decorative finishes as the preceding room unless otherwise stated. Where details are repetitive, the first descriptive account will apply to subsequent features.

Room BG1

6.21 At the time of the survey, the only access into the building was via a doorway at the base of the steps on the south elevation. The first room encountered forms the largest space in the south side of the building (191). The room has a very low ceiling

constructed from substantial beams and joists (although it is very rotten). The planks of the floor above are visible. There are no scars or other distinguishing marks on any of the beams.

6.22 The north and east walls are of brick that appear to have been inserted during a later phase. The other two walls are of random rubble construction. A doorway at the south-east corner of the room leads to a small room (Room BG2), to which there was no safe access. A further arched doorway leads to Room BG3 (192).

6.23 Set within the opposite wall, is a brick blocked aperture together with a window opening that forms the sole access into the low building at the rear of the boiler house (Room BG5). To the left of the window, set within the south wall, is a recess with an iron lintol. A wide doorway set into the north wall allows access to Room BG4.

6.24 The floor is bare earth and rubble, the original floor covering appearing to have been robbed out some time ago.

Room BG2

6.25 This small room was inaccessible, partly due to a collapsed ceiling and party due to the large amount of clutter (190). A cursory inspection revealed there to have once been an upper floor together with some sort of inserted entrance lobby. A large diameter pipe crosses the east end of the room. Among the ephemera was a pair of wrought iron gates one of which, exhibited the name 'MERRALLS'.

Room BG3

6.26 This is a small room through which access to Room BG4 is available. Three of the walls are of brick construction, the east being of coursed sandstone. The ceiling is of substantial sandstone flag construction supported by an iron frame.

6.27 There is an arrangement of stacked sandstone blocks supported on bricks in the middle of the room gradually diminishing in dimensions from large rectangular to smaller and round at the top (193). The top stone is fixed to an iron beam via a vertical rod.

6.28 The large diameter iron pipe crossing Room BG2, continues into this room where there is also some valve gear (194).

Room BG4

6.29 This is the largest room within this building and takes up the whole northern half of Building B (198). It is apparent that this room was once sub-divided and there was an upper floor covering some of the area. This room contains a large amount of clutter obscuring much of the floor, which was very uneven.

6.30 The backs of two of the wide doors (Bays 3 and 4) in the east elevation (para. 6.15) are visible in the east wall together with part of one of the others (203). A third door (Bay 2) is partly visible providing clear evidence that the dividing wall between this room and Rooms BG1 and BG3 was inserted later and simply butts against the door. The doors are of substantial construction with robust frames, the rails and stiles exhibiting chamfers with run out stops. There has clearly been some repair with scarfing evident. The door of Bay 4, as noted from external inspection, is shorter than the rest and has a timber lintol. Each of the doors is hung on iron pintles via long iron strap hinges bolted to the top and bottom rails and there are substantial lock bolts. All the doors appear to be contemporary with the first phases of construction.

6.31 Between the doors, the internal aspect of the columns dividing each of the bays is visible, together with the interior face of the tympanum, which is constructed from coursed squared rubble. The interior of the oculus is also visible. Below door sill level, the wall steps out slightly and is constructed from random coursed rubble with some brick patching and repair.

6.32 The opposite wall is constructed in similar fabric to the upper section of the east wall but with slightly more square rubble (204). Much of the wall is covered with smeared lime mortar. There are two tall windows each deeply pick marked lintols and a flat smooth sill. Both are blocked with brick. There is an iron bracket/ tie rod end set into the right jamb of the right window with a corresponding infilled slot to the right of the window. Above and to the right of this are two further small iron brackets. Between the windows at sill level, and carrying on to the south wall, is a hacked out horizontal slot presumably to accommodate some sort of pipework (there are several iron pipes laying around). At the top of the wall the oculus is visible.

6.33 At the base of this wall are three blocked and two open apertures (206, 207). These open out into the brick flue on the other side of the wall within Room BG5. There is obviously more than a single phase of these apertures possibly due to changes and alterations to the boiler system. Four are tall and thin with slate and/ or thin sandstone lintols and a single smaller brick lined arched opening. They were used to transfer

boiler exhaust gasses to the flue and then onto the Economiser building (Building C). There are extensive soot deposits in all of them.

6.34 The north elevation of this room has the same general construction details as those already described and there are three cinder blocked windows together with a doorway, the threshold of which is well above ground level. At the west end of the wall is a further partially blocked opening with large sandstone lintol that is also visible externally (para. 6.17).

6.35 The south wall of this room was added during a later phase and is wholly of brick construction (201, 202). In addition, there are several features within the wall pertaining to previous phases of sub-division within this room.

6.36 There are several windows in the wall, blocked and open the open windows retaining fenestration consisting of timber casement frames. There is a blocked window at the east end obviously pre-dating a pair of pulleys that are attached to the wall in this location. To the right of this window is a partially blocked window that is overlain by the remains of a brick partition wall. Within the western half of this wall there is a wide opening into Room BG1 with I-beam lintol. Above this is an area of blocking below one of the windows.

6.37 There is evidence for a former floor at the level of the doors in the east wall. There are the visible ends of regularly spaced I-beams in the wall along with obvious horizontal scarring at the west end. It is obvious that the west end formed flues for gasses to exit into Room BG5. There are several pipes fixed to this wall.

Room BG5

6.38 This room was created by the roofing over of the gap between the west wall of the Boiler House and a boundary wall on the east bank of Bridgehouse Beck. The room is long and narrow and stretches from the north-west corner of the Spinning Mill (Building A) to the south-west corner of the economiser (Building C) (209, 211, 212, 213). The external wall of the boiler house is clearly visible, with several blocked openings as already described internally. The boundary wall on the west side had obviously been extended upwards with higher quality stonework below a sill band. There are also several blocked windows in the upper part.

6.39 At the south end of the room, there is a slight overlap of the north-west corner of Building A and some blocking and rebuilding is evident. The base of the privy tower is visible here and forms an overhang. To the left of this is a blocked vertical slot with slightly larger brick-blocked opening above. There are no visible corresponding features in the interior of the basement (Room AB1).

6.40 Almost the whole of the northern half of this room is occupied by a low brick flue that follows a course to the Economiser. The openings and blocked openings within the west wall of Room BG4 correspond with this flue and they were just about visible through an access hatch at the south end of the flue (213), although there was no internal access through this.

6.41 The roof of this room comprises a single pitch common rafter roof covered with slates. It is supported on the west side by the boundary wall and on the east side by an I-beam running the whole length of the room. The I-beam is carried upon three identical cast-ion columns that have plain capitals with flanges (214).

Building C

6.42 The following section provides a summary of the results of the building recording of Building A commencing with the descriptive account.

Date and time of survey

6.43 The survey was carried out in May and June 2019 when the weather comprised sunshine and showers.

General layout

6.44 Building C, the Economiser is square in plan, but the north-east corner is canted to allow a wider access between this building and Building E. It is attached to the end of Room BG5. At the time of the survey, it was accessible via a plywood door in the south elevation. Internally, the building comprises a single room, open right up into the roof space.

Fabric

6.45 The whole building is constructed from regularly coursed sandstone that exhibits varying styles of pick marks and is very similar to the Boiler House. As with the Boiler

House, decorative elements, bands, sills and lintols are more finely finished. There are several blocked windows, blocked with either cinder block, steel sheet or similar stone to the main fabric. Most of the pointing is cement based and the roof is slate covered, with a sandstone ridge and cement slab verge copings. There are no gutters or rainwater goods at all but there are stone gutter brackets.

6.46 Internally, the whole structure is brick lined with cement mortar. The roof is wholly of timber construction.

Exterior description

6.47 The following account will commence with the south elevation, which in this instance, contains the main access into the building. The descriptive account will discuss each elevation in turn in a clockwise manner. The west elevation, however, was not able to be viewed. The name of each elevation will be the direction it faces.

South elevation

6.48 This gable elevation is partly obscured by the north end of Room BG5 (351). The gutter support returns around from the east elevation and comprise curved brackets supporting a sandstone platform all on a slightly projecting base. Close to the apex of the gable are three parallel vertical ventilation slits, the middle one being slightly taller. To the right of this is a tall aperture divided into two unequally sized sections by a horizontal sandstone member. The upper section is blocked with similar fabric to the rest of the building, while the lower is blocked with cinder block. The sill projects slightly while the lintol lies flush. There is a similar but slightly wider opening on the right side of the elevation that incorporates the current access, which has a plywood door. The upper section is blocked with sandstone. To the left of the door a horizontal I-beam is built into the wall. Iron pipes cross between this elevation and Building B.

North elevation

6.49 The north elevation is of the same fabric and construction as the south elevation, with the same detailing such as returning gutter supports and vertical slits (356). There are two windows, one tall and rectangular (the same type as that on the south elevation) and one square. The rectangular window is partially blocked with stone and cinder block and traces of timber fenestration are visible. The square window is covered with

a steel sheet. To the right of the square window, there is evidence for some rebuilding/ alteration.

6.50 The bottom section of the elevation below a steel plate, exhibits evidence for rebuilding and/ or modification (357, 358, 359). There is more than one blocked aperture, one on the right side of the elevation appears to be where the flue exiting to the chimney is located. The flue is partly visible above ground and is brick-built.

East elevation

6.51 This elevation is plain and contains a single window and limited decoration (354). The right side of the elevation is canted to allow easier access to the gap between this building and Building D towards a footbridge over the beck. The top part of the elevation contains the gutter bracket described previously; this also continues around onto the canted section. There is a single window situated in the centre of the elevation that has a flush sandstone lintol with a segmental arch and a slightly projecting sill like those on Building B.

Interior description

6.52 The interior of Building C consists of a single open space (Room CG1; 218, 219, 220). Access to this room was limited by the very uneven floor, which was covered in a significant amount of rubble and scrap metal.

6.53 The walls were all brick and there was evidence in the form of a brick lip, I-beam and scarring to suggest that there was once a floor surface around 0.8m high. This presumably surrounded the Economiser which has since been removed. A doorway set into the south at this height allows access to Room BG5.

6.54 Evidence for the former economiser is present in the form of flues entering and exiting the building, at ground level in both the north (217) and south walls (215). The flue set within the north wall dips down and carries on underground towards the direction of the Chimney (Building D). There is no evidence for any additional flues or any steam pipes.

6.55 The roof of this building appears to be original and consists of two queen post trusses with two tenoned purlins on each slope that support the common rafters and battens.

The original tie beam of each truss has been cut off and replaced by parallel beams a little further up and bolted to the principal rafter (220).

Building D

6.56 The following section provides a summary of the results of the building recording of Building D commencing with the descriptive account.

Date and time of survey

6.57 The survey was carried out in May and June 2019, when the weather was sunny with showers.

General layout

6.58 The Chimney (Building D) is approximately 62.2m (204 feet) high. It is octagonal with a square base, the transition between the octagonal main body and square base taking the form of run out stops (488).

Fabric

6.59 The structure is mainly built from sandstone of almost identical appearance to that used on Building C. The very top of the chimney has a brick cap bound with iron straps (468).

Description

6.60 The chimney is generally plain, only the very top exhibiting any sort of decoration (Plate 88). There is a projecting sandstone moulding with 16 vertical brackets supporting an octagonal coping above which are 16 shorter scroll brackets, into which sits the brick cap. The very top surface has been cement rendered but is in poor condition.

Building 1

6.61 The following section provides a summary of the results of the building recording of Building 1 commencing with the descriptive account.

Date and time of survey

6.62 The survey was carried out in May and June 2019, when the weather was sunny with showers.

General layout

6.63 Building 1 is the possible location of Engine House 1 as identified in the RCHME survey of 1986 (RCHME 1986). It is a two-storey building, two bays wide with basement, lies at the west end of Building E (The Warehouse) and forms a slightly sloping flat-roofed 'extension' to Building E. It is square in plan and has obviously been extended itself to the north with the addition of a storeroom. The only access into the structure is internally via Building E.

6.64 Internally, there is a ground floor together with an upper floor accessed via a staircase at the west end of Building E. Each storey is comprised of a single room (Room 1G1 and 1F1) with modern partition walls forming a short corridor on the first floor. At the time of the survey, a basement was visible via partially removable flooring but was not accessible on health and safety grounds.

Fabric

6.65 The visible external elevations (west and south) of the building are constructed from squared coursed rubble with deep pick marks. Sills and lintols, in common with the other buildings in the complex, are of more finely finished sandstone and there are two concrete lintols on the east facing elevation. There is some blocking and infilling using similar fabric to the main body of the building and most of the pointing is cement, some of it ribbon. The south-west corner of the ground floor contains long and short work quoins of similar sandstone to the sills and lintols and there are some very large sandstone blocks in the south elevation. The fenestration is all timber casement and the rainwater goods are plastic.

6.66 The roof of the building is modern and covered with waterproof sheeting. The internal structure of it was not visible internally.

6.67 Inside the building, much of the fabric was hidden by modern finishes but the bulk of it appeared to be like the external appearance. There are some very large sandstone blocks in the east wall which are visible from within the ground floor of Building E.

the ground floor room (Room 1G1) was completely lined with cinder block, obscuring any earlier detail, while Room 1F1 was completely plastered. Floors were laid down to plywood sheets and carpet.

Exterior description

6.68 The following account begins with the west elevation. The name of each elevation will be the direction it faces.

South elevation

6.69 This elevation faces the narrow passage between Buildings C and E and photographic access was limited (372, 372, 374, 375). The main fabric is as described in Paragraph 6.65, and there are two blocked openings, each surrounded by large sandstone blocks. There is an opening on the ground floor that has a chamfered sandstone surround but no sill. The opening exhibits two phases of infilling, part of which continues up through a slot cut into the lintol, to around three quarters of the height of the elevation. To the right of this is a much smaller aperture with substantial sandstone surround. To the right of this elevation, there is later privy tower (attached to Building E) that clearly butts against this building. Below the privy tower is a recess that clearly shows the south elevation continuing to the east (491, 492, 493, 494).

West elevation

6.70 The west facing elevation has been extended to the north by the addition of storeroom of visibly differing construction. Only the elevation of Building 1 will be discussed.

6.71 The elevation is two bays wide and two storeys high and contains no decorative elements. Each bay contains two window apertures with casement windows of 20th century appearance (464). The window apertures are unequal in size, the upper floor ones being taller than the ground-floor. Each of the windows appears to have been created by partial blocking of two tall openings each spanning almost the full height of the elevation. The two ground-floor windows have projecting sandstone sills that appear to be original, but the upper-floor windowsills, while of similar sandstone appear to have been inserted later. The lintols of both windows are concrete.

6.72 Below the left window, an area of infilling suggests that the tall opening continued down to ground level and possibly below. Below the right window, is evidence for a

blocked window with substantial sandstone lintol, that continues below ground. There are four ventilation bricks here, suggesting a below ground room/ basement.

6.73 Attached to the right side of the elevation, at ground floor level, is an iron bracket.

East elevation

6.74 This elevation was only partly visible from the ground floor and top floor internal space of Building E (154, 179, 180). The fabric was heavily limewashed/ painted which obscured much of the detail but there appears to be a doorway clocked with similar fabric to that on the other (external) elevations. Surrounding the doorway are very large sandstone blocks, obviously part of the engine/ flywheel support apparatus. There is a projecting bolt to the right of the door.

6.75 At the top of the elevation and only visible from within Building E, is a projecting sandstone moulding (179, 180). It is possible that this represents the original height of the upper parts this building, the rest having been reduced in height and re-roofed with a sloping roof. It is possible that this building was freestanding and separate from the second Spinning Mill.

Interior description

6.76 This building covers two floors, together with a basement/ below ground floor. The following section outlines each internal room and/ or space. Each area has been assigned a room number which commencing with Room 1G1, which is the first room encountered upon entering the building from Building E.

Room 1G1

6.77 This room is accessed via a short passage also leading to the privy on this floor from the ground floor of Building E. All the walls have been lined with cinder block and the ceiling has been lined with panelling that obscures all previous detail/ phasing. All the fixtures and fittings are modern (156). The floor is laid down to plywood beneath which is a further inaccessible void.

Room 1F1

6.78 There is no staircase within this building, the only way to access the upper floor is via the staircase at the west end of Building E. There is a short corridor formed by a modern stud wall.

6.79 This room has been completely plastered with what appears to be cement based plaster, obscuring all former detail (166). The floor is laid down to carpet and the ceiling is also plastered, with egg and dart cornice (probably modern).

7.0 LEVEL 1 BUILDING RECORDING RESULTS

7.1 Level 1 building recording was carried out for Buildings E, Warehouse and Building F, Weaving Sheds. Interior and exterior images were captured. The following section provides a summary statement of the results of the Level 1 building recording of Buildings E and F commencing with Building E.

Date and time of the survey

7.2 The survey of Buildings E and F was carried out in May and June 2019 when the weather was sunny with showers.

Building E summary statement

7.3 Building E is a two-storey, 14-bay structure with attached privy tower at the west end (360). The building is constructed from sandstone of similar appearance (including gutter brackets) to Building C. The building has been described in some detail in the RCHME report (RCHME 1986).

South Elevation

7.4 The south elevation is quite decorative, and Bay 8 contains a wide ground-floor doorway with segmental arch and keystone, above which is a loading door, also with segmental arch and keystone (obscured by plywood sheet). There is a pedestrian door in Bay 13, that also exhibits a segmental arch, and all the windows on this elevation (despite being obscured) have the same treatment.

North elevation

7.5 The north elevation of this building is obscured by the Weaving Shed (Building F) but photographs captured by unmanned aerial vehicle show it (the upper floor at least) to be of similar appearance to the south elevation.

7.6 West elevation

7.7 The west elevation is obscured by the Engine Room (Building 1) but the upper parts of the gable are visible and are plain. It is likely that this end of the building, except for the very apex of the gable, is formed from the east elevation of Building 1. The internal aspect of it contains features consistent with the use of Building 1 as an engine room.

East elevation

7.8 The east elevation has been partially rebuilt along with two blocked windows. This elevation was rebuilt following the fire in 2010.

7.9 The roof of this building is a late-20th century addition.

Interior description

7.10 The following section provides a summary description of the interior of the building commencing with the ground floor.

Ground floor

7.11 The ground floor was divided into several different areas and rooms by modern partition walling. Much of this was cinder block except for the entrance lobby and there was little in the way of visible detail (0130, 0131, 0145-0150). The floor was laid down to concrete. The north wall of the Warehouse incorporates the south wall of the Weaving Sheds.

7.12 This wall is, according to the RCHME, the reused south wall of the Spinning Mill 2 (RCHME 1986). The stonework differs slightly from the rest of the Warehouse and there are blocked windows within each bay that have flat rather than arched heads. These windows served no apparent purpose for the Weaving Shed prior to the erection of the Warehouse. They have however, apparently only recently been blocked, with cinder block. It is possible, that they were open prior to the construction of the Warehouse.

First floor

7.13 The first floor was accessible via two staircases located at either end of the building (0130, 0159, 0160). Neither of these are assumed to be original, the east staircase being of quite modern appearance.

7.14 For the most part, the upper floor comprises a single large open space (0161, together with smaller rooms at the west end, all of which are modern). The room is plastered, except for the east wall and the eastern two bays, which were bare stone (0163). This wall contains two blocked windows that are visible externally. There is a makeshift staircase allowing access to the roof space (0163). The ceiling is panelled and has substantial chamfered crossbeams with two bolts each side betraying the locations of roof braces (0164, 0165).

7.15 The RCHME report (RCHME 1985), states that power from Engine Room 1 (Building 1) was taken along the west half of this room to drive the crane of the south taking in door, however, no visible evidence for this remains.

7.16 As already mentioned, the east wall and the two east end bays were bare stone, revealing the characteristics of the window openings (0163). There are two blocked windows in the east gable wall, internally blocked with cinder and externally with stone (0376). This gable was rebuilt (eternally at least) following the fire that destroyed the third spinning mill (Building 3) and the Engine House (Building 2).

Attic space

7.17 The attic space is reached via temporary looking staircase at the east end (0163) and the continuation of the stairs up at the west end (0160). There is no evidence to suggest that the east stairs are original. The attic is divided into several rooms by modern partitions with a longitudinal corridor on the northern side (0172). For the most part, nearly all the fabric is concealed with 20th century additions, the east end has obviously been rebuilt following the fire (0171, 0178) the join between cinder block and stone being obvious. The roof structure differs slightly to the original and is now hipped.

7.18 All the trusses (including replacements) are supported on each side by cast iron curved knee braces (0171, 0172, 0173, 0174, 0715). These are bolted to the beams in the room below and hold the principal rafter in a channel formed by triangular flanges.

7.19 There is a massive cast iron beam set cross ways adjacent to the east gable (0177, 0178). It comprises two separate parallel I-beams joined top and bottom by rivetted plates. This beam is not visible externally and as the east end has been rebuilt, it is not known if the beam is in its original position.

Building F summary statement

7.20 Building F consists of a large single storey Weaving Shed extending to six bays north/south and 18 bays east/west. The building has been described in some detail in the RCHME report (RCHME 1986) and consists of two separate phases, an initial four bay by 12 bay structure, increased in size to its current form (some 125%). Both phases are of different fabric treatment, however, the roof treatment is the same as Building E.

7.21 Two structures have been added to the building, including, a toilet block (stone) attached to the north elevation, and an electricity plant room (brick) at the south-east corner.

7.22 The building has the distinctive profile of saw-tooth weaving sheds, the east elevation being the most visible (405). There are windows with round arches and keystones in each of the gables with bands at sill and impost level. The west elevation (part of the earlier phase) has plain windows, with no bands and exhibits a rock-faced plinth (427).

7.23 Most of the south elevation of this building is obscured by Building E but the east end, where it was formerly attached to the burnt down east range, is visible (387). Here is visible a large iron box that once obviously carried power into the weaving shed from the now gone third Engine House (Building 2). There is also a further, much smaller, bearing box to the east. The south wall of the (pre-extension) Weaving Shed is the remaining only fragment of Spinning Mill 2.

Interior description

7.24 The interior of the Weaving Sheds is repetitive, consisting of rows of iron columns supporting the roof structure (0181-0185). There are slight differences in the columns, betraying the limits of extension of the shed, the original columns (0186, 0189) being less elaborate than the latter (0187, 0188).

7.25 The south bay contains several features pertaining to power transmission, all of which originated from the third Engine House (Building 2). There is no visible evidence for

the previous power transmission from Building 1 other than the columns and ashlar blocks set into the south wall. There is also evidence for line shafting perpendicular to the input power. The bearing boxes visible on the south external wall (para. 7.23) are also visible internally (0138, 0139), together with columns and scars revealing power transmission from here along the bay and then to the rest of the shed (0135, 0140, 0136). All the transmission evidence (other than the original columns) relates to the extended phase.

8.0 DISCUSSION

Introduction

8.1 The following sections aim to outline the development and phasing of the Ebor Mill in its local and historical contexts and will deal with each individual structure, along with the complex as a whole. The discussion will commence with Building A, the original water powered Spinning Mill and follow through in the same order as the building description followed by a discussion of the complex.

Building A

8.2 It is well documented that Ebor Mill was constructed *c.*1819, and this along with cartographic and building survey evidence, confirms, that the original building was seven bays long (Bays 3-9), probably three storeys high (as it remains) with basement and attic, and contained a water wheel within the then end bay (Bay 9). The long elevations exhibit clear evidence of extension in the form of vertical butt joins described in para. 5.15 and, as also outlined, the fabric of the extensions is very similar, there only being a slight mismatch in the courses. The RCHME (RCHME 1986) report states that the mill was extended westwards by two bays before 1847 - 1848 and eastwards in two phases between then and 1886. There is no reason to doubt this by physical analysis of the building. The date of the addition of the privy tower is unknown but it must obviously be later than the westward extension in 1847 – 1848.

8.3 The 1849 Tithe and 1852 Ordnance Survey maps, both show the structure to be L-shaped, with a northward projecting wing about a quarter of the length of the main building. This northward part has gone by the time of the 1894 Ordnance Survey map and partly built upon by Building D. There was limited visible evidence for this northward extension, and no remains of the probable power systems were present, but

some remodelling and blocking within Bays 3 and 4 on the ground floor of the north elevation may be testament to its location.

8.4 The eastward extensions were of two phases, culminating in the addition of a dedicated stair tower in Bay 12, together with office space. This stairs were once able to be accessed from outside via a door in the north elevation at ground floor level and the current access in the east elevation at first floor level was probably a loading door. This arrangement was obviously altered when the yard ground levels were raised due to the construction of Mill 3 to the east (RCHME 1986). There is no obvious evidence for any previous staircase within the building and it may have been internal through each floor. There is however, a very dilapidated external staircase attached to the north elevation that serviced all the upper floors.

8.5 The waterwheel pit occupies Bay 9, the original east end bay of the building which covers both the basement and ground floors. The location of this was never altered and remains there to the present. The wheel, long since removed, was probably less that 7m (23′) in diameter and judging by the construction details outlined in Paras. 5.77 – 5.81, was probably a breast shot wheel. The likely position of a wheel measuring some 6.86m (22′ 6″) in diameter has been superimposed on Figures 4 and 5. The water flowed from south to north from a pentrough on the south wall, and out of an arched opening low down in the north wall. The water followed a course under the yard and back to the beck.

8.6 There was no evidence to suggest that the wheel pit was open to the first floor. Despite the removal of the floor of the first floor (Room AF4), joists remained, and the wheel pit was obviously ceiled. Both cross-walls forming the east and west walls of the wheel pit terminated at first floor level and there was no evidence such as scarring in either of the long elevations. The diameter of the wheel as indicated by the curve of the apron suggests the diameter of the wheel was less than 7m (23′), which would fit within the height of the wheel pit room.

8.7 Originally, power was taken from the wheel westwards, via apparatus through an aperture at the south end of the west wall of the wheel pit. The north side of the building from the ground floor up through the first to the second floor contains some evidence for former power transmission. The whole system has been removed, but there are line shaft hanger scars on some of the beams along with two large brackets attached to the west wall of the ground floor as well as bearing boxes set into the walls.

There is no firm surviving evidence for vertical power transmission prior to the westward extension. No power appears to have been transmitted to the basement or through any of the long walls.

8.8 Following eastward extension, transmission of power into the new parts of the building was obviously required and evidence for this is visible in the form of the large cast-iron box set into the east wall of the wheel pit. Power was taken off the wheel through this box and then probably upwards to the south side of the building and then upwards to all the upper floors. There is no visible evidence for vertical power transmission and certain areas of the building potentially containing this evidence (Rooms AG3b and c), were inaccessible at the time of the survey.

8.9 There are bearing boxes set into the east wall of the main rooms on each of the floors (on both the north and south sides) indicating power transfer from the south side of the building to the north, on all the upper floors except the attic space. Allied to this, there is also reasonable evidence in the form of bearing boxes within Rooms AG3b and c, to suggest that following at least the first phase of eastward expansion, power transmission systems were extended east also. Although Room AG3c was inaccessible, a bearing box was partly visible in what was formerly the east exterior gable wall of the first eastward extension. It seems likely that power was only transmitted into the first phase of eastward extension, as the bearing boxes set into the wall between Bays 11 and 12 appear to have only been for transmission shaft ends. This makes sense, as it seems unlikely that any machinery requiring power was located within the second phase of eastward extension and that this solely accommodated offices, taking in areas and the stair tower.

8.10 As power was obviously extended into Bay 11 at least, it seems unlikely that the waterwheel became disused before at least the mid-19th century when it is apparent that a northward extension was added to the west end of the building (first illustrated shown on the 1849 Tithe map), presumably to house an engine and boilers. It is possible that water and steam operated side by side, as both a steam engine and water wheel are mentioned in the conveyance of 1853. There is no physical evidence within the building to deduce how both types of power were incorporated into the building and whether they were kept separate or combined. The limited evidence for power transmission in the building easily could apply to either or both types of power generation. The type and power output of any steam engine powering Building A is unknown, and it may be that both steam and water was required when the building

was extended, the waterwheel relegated to powering the east side. In any event, it seems likely that construction of Building B effectively removed all steam power available to Building A. It is plausible to suggest, that owing to the erection of new spinning mills, this building became redundant and changed use.

8.11 Each of the beams in the mill is supported upon an iron column and there is no evidence that any power transmission systems were fixed to any of the columns on any of the floors and they are purely structural. For the purposes of this building alone, each column was assigned to a type (Types 1 – 6).

8.12 The basement columns and the columns supporting the beams in Bays 1 and 2 of the ground floor are all Type 6. It is probable that these were installed during the western extension of the building, although no specific date can be assigned to them. Only Type 6 columns are carried through on more than one floor, the remaining column types are limited to their respective floor, although each floor contains more than one column type.

8.13 While the different types of ground floor columns appear to reflect the extension of the mill to the west, it is interesting to note that the columns on the upper two floors do not. Different columns are only present between Bays 9 and 10 on the first floor and Bays 8 and 9 on the second floor. Eastward expansion of the mill took in Bays 10 to 12 and the differences in columns may have no association with the extensions at all merely replacing failed columns or accounting for excessive movements.

Building B

8.14 Building B was constructed in the location of the northward projecting arm of the L-shaped 1819 mill, depicted on the 1849 Tithe and 1852 Ordnance Survey maps. By the time of the 1894 Ordnance Survey map, both the boiler house, (this building), the economiser (Building C) and the chimney are all present, indicating expansion.

8.15 Outwardly, the construction details of this building support an obviously later date of construction than Building A, but it is likely that some of the fabric of the earlier northward extension of Building A is incorporated into it, particularly the rear parts. It seems that the earlier building was demolished, the stonework being simply reused.

8.16 The intended use for this building is obvious in its name, but this building (the main elevation at least) is quite decorative, unlike many other examples in the region

(RCHME and WYAAS 1992, 145). By this date, Lancashire boilers (a development of the Cornish boiler but with two flues) had become the most widely used in most mills during this period.

8.17 The building is 14.6m (48 feet) long internally, enough space for a Lancashire Boiler (the maximum lengths of these was around 30 feet) and a loading floor. There is a step down from the yard to the boiler floor, which allowed easy offloading of coal to the loading floor. All apparatus and supporting casing structures for the boilers has been removed and the floor, particularly in the north side has been dug out and is very uneven. The lower part of the east end of the dividing wall, however, may be the remnants of brick casing. The roof of this building is iron framed, common to boiler houses where a timber roof may have warped or been heat damaged and is an attempt to fireproof the building.

8.18 This building has the capacity to house four boilers, each with an individual loading door, but there is limited evidence for the actual number installed. The covered brick flue in Room BG5 covers the northern half of the building and there are obvious flue openings in the west wall of Room BG4, so there were probably at least two boilers present in the northern half of this building. Boiler Houses were often constructed with expansion in mind but there is no evidence to suggest that more than two boilers existed. It is possible that the central dividing wall was erected during the time the boilers were in service and that the southern half of the building had upper floor rooms earlier rather than later.

8.19 The large diameter pipe and valve gear in Rooms BG2 and BG3, are probably the remains of the water feed which was taken from the mill pond. There is no direction evidence for steam pipes but blocked openings in the north wall probably accommodated these.

Building C

8.20 Building C is a single-phase structure that accommodated the economiser and there is evidence for entry (from Building B) and exit (to the Chimney) flues in the south and north walls respectively. The building is relatively tall and there may have been an upper floor above the level of the economiser. The Economiser was a feed water heater and heated the feed water to the boilers (and reduced flue gas temperature). They usually consisted of banks vertical pipes containing feed water through which flue

gasses passed. Normally, flue gasses and feed water flowed in opposite directions so there may have been a complex arrangement of feed and steam pipes. Production of economisers was dominated by Edward Green of Wakefield (RCHME and WYAS 1992) and it is likely that one of their apparatus was used here. Vertical openings in both the north and south walls probably accommodated these, one of which fed steam to the adjacent Engine House (Building 1).

Building 1

8.21 Access was limited to this building but there is enough visible evidence to support its interpretation as an engine house. The RCHME survey (RCHME 1986) provides an outline of the particulars of Building 1 and no changes are apparent. The lower levels were not accessible at the time of the survey but the engine bed that was present in 1986 and measures some 4.32m by 0.80m by 0.18m high may still be present (RCHME 1986, 7). It is probable that steam was fed into the building via the blocked aperture in the north wall of Building C.

8.22 Power from this building must have been taken through either the east or north wall through and into the Weaving Sheds, the south wall of which, was formerly the south wall of the second Spinning Mill added prior to 1860. It is likely that this building was partially free-standing.

Building E

8.23 The Warehouse contained no evidence for power transmission. It is probable that the hoist was powered but the was no visible evidence for this. The north wall of the ground floor contains fabric relating to the south wall of the second Spinning Mill. The Warehouse, of the grandest building within the complex and probably contained much of the office space. All the power transmission from the later Engine House (Building 2) was directed straight into the Weaving Sheds.

Building F

8.24 The Weaving Sheds were built following removal of the second Spinning Mill and still incorporate fabric of that mill as the south wall (ground floor only). Prior to the construction of the Warehouse, the south wall formed the external aspect of the building and retained the ground floor windows that are now blocked. It is not known if these windows were ever open prior to the erection of the Warehouse and there is

no evidence that the south bay of the Weaving Shed was used for any purpose other than weaving. It is of course possible that internal rooms were present during the first phase of Weaving Shed, removed following extension.

8.25 The sheds were initially powered from Building 1 but following extension, power seems to have been solely obtained from the third Engine House (Building 2). Prior to the erection of the third Spinning Mill (Building 3), it is possible that both phases of Weaving Shed were powered from Building 1, potentially by an upgraded engine as evidenced by the construction of Buildings B, C and D. It is also entirely possible that power was divided between the two engines.

Building 2

8.26 This is the site of the third Engine Room, of which, no upstanding remains are present. It is however, described in some detail within the RCHME report (RCHME 1985). It is suggested that there were two engines, an earlier one powering the enlarged Weaving Shed and a later one powering Spinning Mill 3 (Building 3) as well. The proportions of the building apparently suggested a horizontal, rather than vertical engine. Other than the ground floor aspect of the north wall (south wall of the extended Weaving Shed), there no surviving traces of this building.

8.27 There is no mention of steam supply to this Engine House and it must be assumed that steam was obtained from Building D.

Evolution of the complex

8.28 Historical, cartographic and building survey evidence have been combined to provide an outline sequence for the development of Ebor Mills (Fig 7). The following is an account of the development commencing with Phase 1.

Phase 1 (201sqm)

8.29 The earliest phase begins with an 1819 Spinning Mill, The remaining row of houses to the south-east of the current mill also date to this phase. It is likely that some modification to the bridge carrying Ebor Lane over the beck was made.

Phase 2 (122sqm)

8.30 This phase entailed the first extension of the mill building, which was by two full bays to the west before 1847-1848 (RCHME 1986, P4). The mill is first illustrated on the 1849 Tithe map, along with a gasometer (not labelled until 1852) and the mill pond, there must have also been some sort of weir. The tithe map shows the mill as L-shaped, which was probably built during this phase to house steam power and may have incorporated an internal engine house and boiler. The original mill thus became both steam and water powered but there is limited evidence for the steam power element. In 1853, the mill was conveyed to Edwin Merrall and the whole complex is described in some detail including water wheel, steam engine and boilers amongst others. The valuation from 1851 lists the Merrall Brothers as owners of 'Ebor Mill buildings, yards and premises, waterpower and steam power'.

8.31 Phase 2 also encompassed the eastward extensions to the mill building, in two separate, but probably closely timed stages necessitating internal alterations. First by two and then by one bay. This was likely after the late 1840s and before 1886 as outlined by RCHME (ibid) but was probably well before this date and probably not long after the westward extension. This was certainly prior to the building of Spinning Mill 3 which necessitated levelling of the yard, cutting off access to the ground floor of the east bays of Building 1. It is likely that the mill was still partly water powered at this time evidenced by internal power transmission features.

8.32 It is possible that the privy tower attached to the north-west corner of the mill was added during this phase.

Phase 3 (33sqm)

8.33 Between 1853 and 1887 the site underwent rapid expansion. Hodgson (1879, p 120) described the Merrall Brothers business, who acquired the site in 1853, as greatly expanding Ebor Mill including the erection of weaving sheds and gas works. This may have happened prior to 1860 as the partnership was dissolved at this time and the business continued as Michael Merrall and Son. The first of the additions was a second Spinning Mill and Engine House (Building 1). The engine room may have been supplied by steam generated from the north wing of the original Spinning Mill.

Phase 4 (1886sqm)

8.34 The second Spinning Mill was demolished and replaced with the first phase of Weaving Shed (Building F) probably before 1860. Part of the south wall of the Spinning Mill was however, apparently incorporated into the north wall of the Warehouse/ south wall of the Weaving Shed. The Warehouse (Building E) was added to the south of the first phase of Weaving Shed. The Storeroom to the north of Building 1 was also probably added during this phase.

Phase 5 (1688sqm)

8.35 It is during this phase that the north wing of the original mill was probably replaced by improved steam generation in the form of a new Boiler House (Building B), Economiser (Building C) and Chimney (Building D). No evidence survives for any previous chimney. The new steam generation was probably required due to the expansion of the Weaving Sheds requiring more horsepower.

Phase 6 (3.5sqm)

8.36 In 1887, Spinning Mill 3 (Building 3) was built (RCHME 1986, p 10). It is also at this time that a further Engine Room (Building 2) was added to the south of the Weaving Shed. Also during this phase, a privy tower (3.5sqm) was added to the end of the Warehouse (following disuse of Engine Room 1).

Phase 7

8.37 The final phase involves demolition of most of the smaller ancillary buildings in the 1980s and the destruction by fire of the Spinning Mill 3.

9.0 CONCLUSIONS

9.1 All the structures at Ebor Mill have undergone significant alteration, most of which are internal, resulting in particular, significant loss of evidence of power transmission systems, steam generation and management. Many of the ancillary buildings were removed in the 1980s, but there remains enough evidence to provide an outline of the phasing of the complex to determine that there were at least three engine rooms that were brought into and taken out of service as the mill expanded, two phases of steam generation, three phases of mill, two phases of weaving sheds and two phases of sanitary arrangements. Ebor is a good example of how a mill such as this developed from being a water powered small enterprise to a large-scale advanced complex.

9.2 The siting of the mill, in the bottom of the valley was determined by the requirements for power in the early nineteenth century but provided enough usable flat land to enable the expansion, somewhat rapidly, as new technologies became more widely available.

10.0 RECOMMENDATIONS

10.1 Inspection of most of the fabric within all structures of the complex was available at the time of the survey and a record commensurate with the required Historic England guidance was achieved. There are, however, areas that require further investigation to in order to provide further clarity on power transmission. This should be carried out during any strip out works or during any demolition and should take the form of a structural watching brief to the same Historic England level. In order to further determine the nature of power transmission from the waterwheel in Building A, the area of Rooms AG3c should be investigated. In order to determine the nature of any surviving engine beds, and the nature of power transmission to the weaving Sheds, Building 1 should be investigated. In order to ascertain power transmission from the third Engine House to Weaving Shed, the relevant area of Building 2 should be subject to watching brief.

10.2 No further work within the remainder of the buildings is recommended.

REFERENCES

British Geological Survey (2019) *Geology of Britain Viewer*. [Online] Available at: http://mapapps.bgs.ac.uk/geologyofbritain/home.html (accessed on 04/09/2019)

Chartered Institute for Archaeologists (CIfA) (2019) *Standard and Guidance for the Archaeological Recording of Standing Buildings or Structures.* Reading: Chartered Institute for Archaeologists.

Cranfield University (2019) *Cranfield Soil and Agrifood Institute Soilscapes*. [Online] Available at: http://www.landis.org.uk/soilscapes/ (accessed on 04/09/2019)

Giles, C. and Goodall, Ian H. (1992) *Yorkshire Textile Mills 1770 – 1930.* London: HMSO.

Hatcher, J. (1985) *The Industrial Architecture of Yorkshire.* Chichester: Phillimore

Hodgson, J. (1879) *Textile Manufacture and Other Industries, in Keighley.* Keighley: Hey.

Ingle, G. (1997) *Yorkshire Cotton: The Yorkshire Cotton Industry, 1780 – 1835.* Lancaster: Carnegie

Historic England (2015a) *Management of Research Projects in the Historic Environment: The MORPHE Project Manager's Guide.* Swindon: Historic England.

Historic England (2015b) *Digital Image Capture and File Storage: Guidelines for Best Practice.* Swindon: Historic England.

Historic England (2016) *Understanding Historic Buildings: A Guide to Good Recording Practice.* Swindon: Historic England.

MB Heritage (2018) *Ebor Mill, Haworth: Heritage Statement of Significance (Draft).* Unpublished report

RCHME (1986) *Yorkshire Textile Mills Survey, Ebor Mill, Haworth (H.319).* Survey report.

RCHME and WYAS (1992) *Yorkshire Textile Mills 1770 – 1930.* London: HMSO.

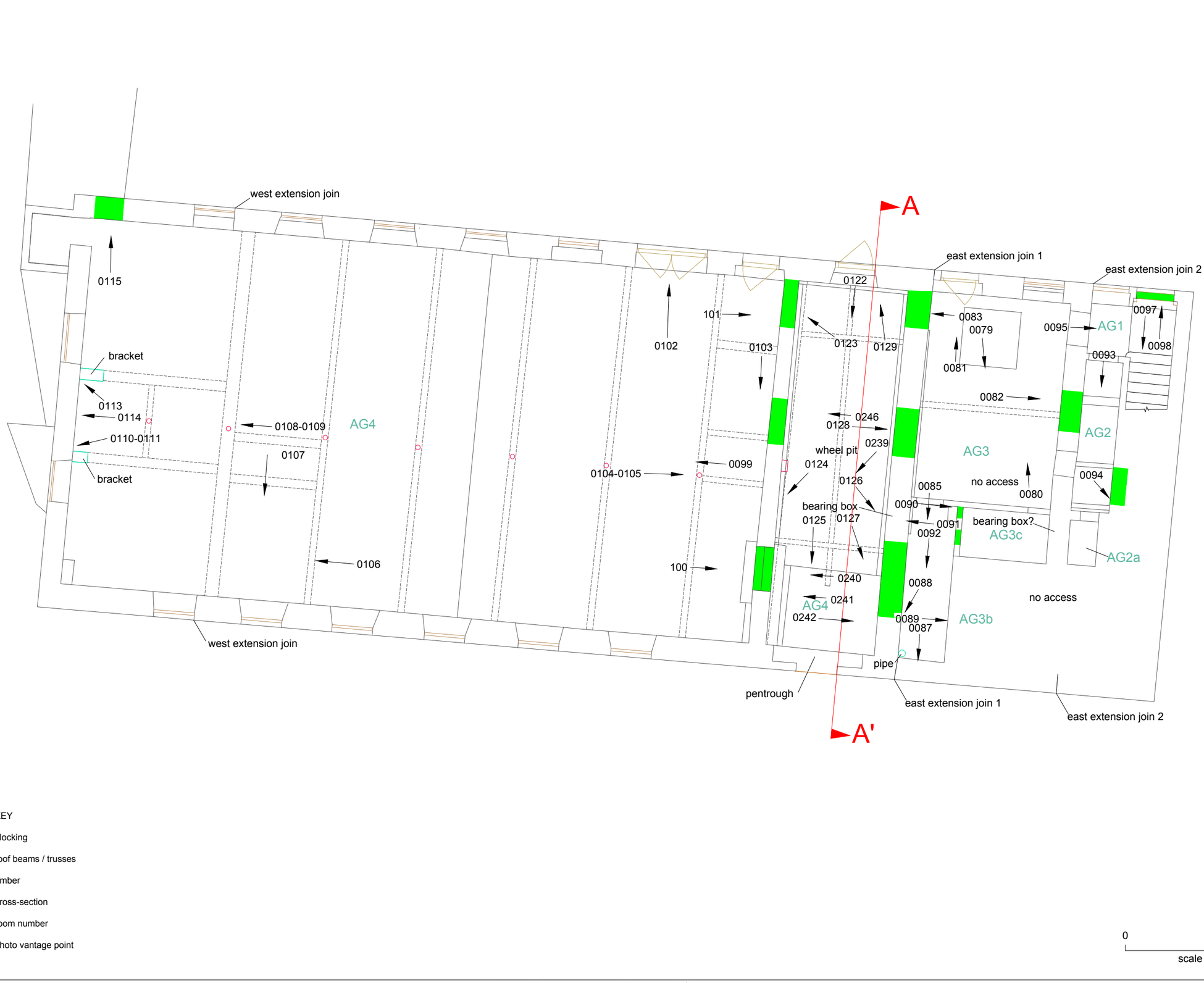
Watkins, G. (1999) *The Textile Mill Engine,* 2nd edn. Ashbourne: Landmark

Trade Directories

Kelly's Trade Directories 1901 & 1912

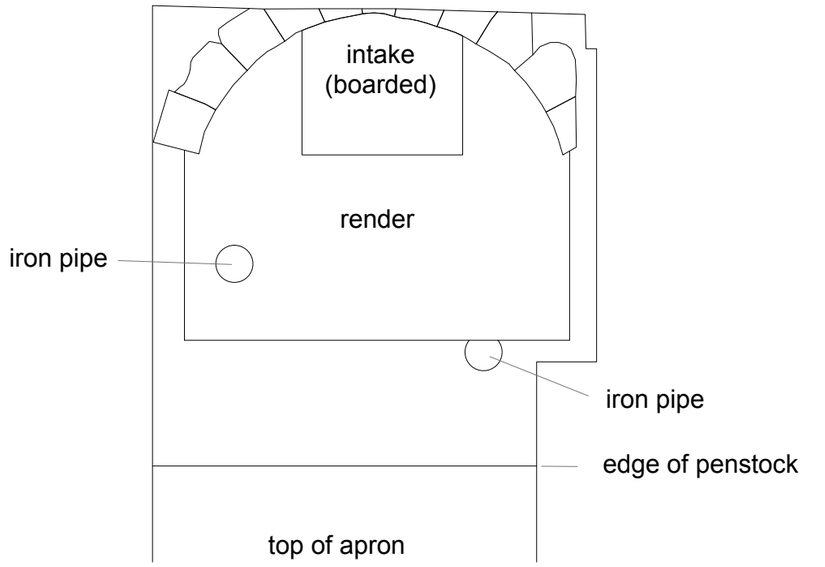
Whites Trade Directories 1870 & 1881

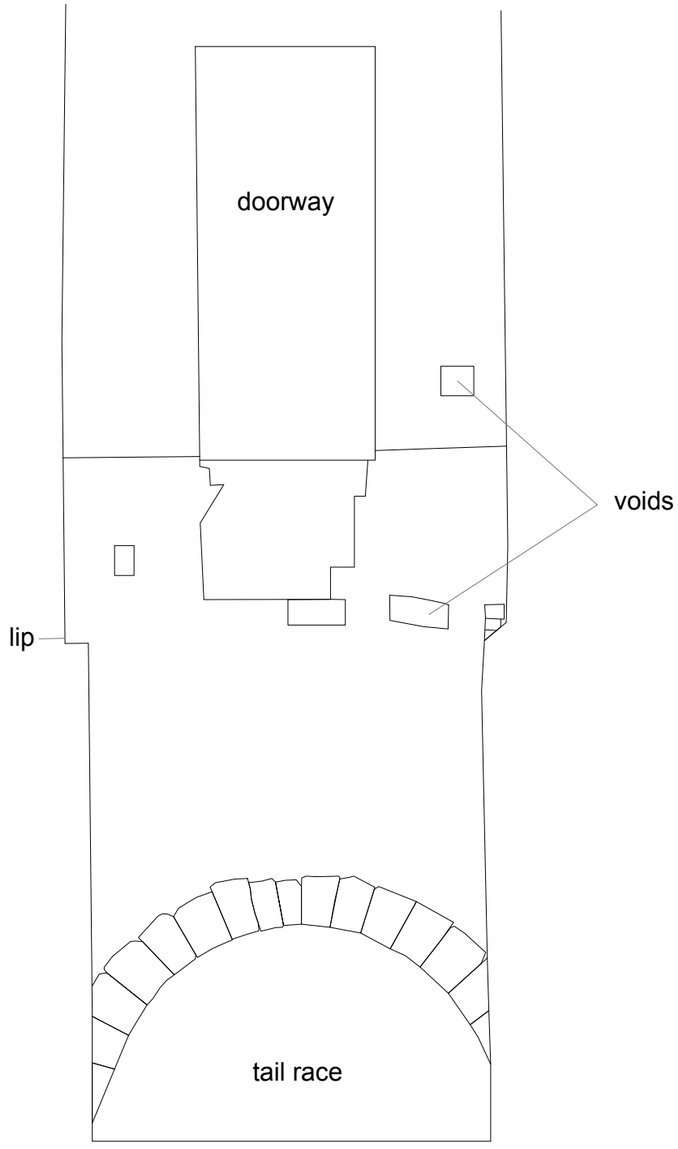
Ebor Mill: site location *Figure 1*



Ebor Mill: spinning mill ground floor

Figure 2



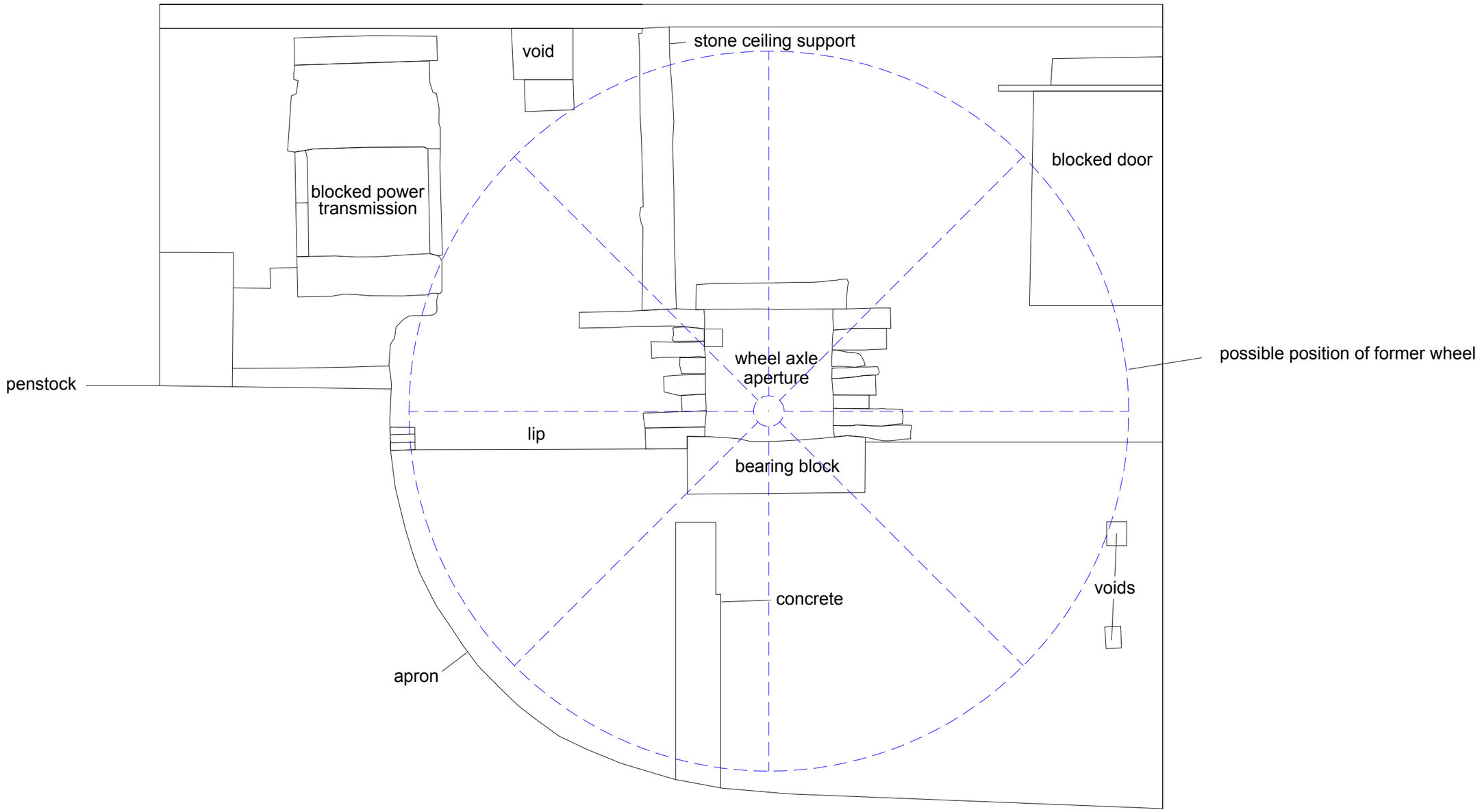


0 2m

scale 1:40 @ A3

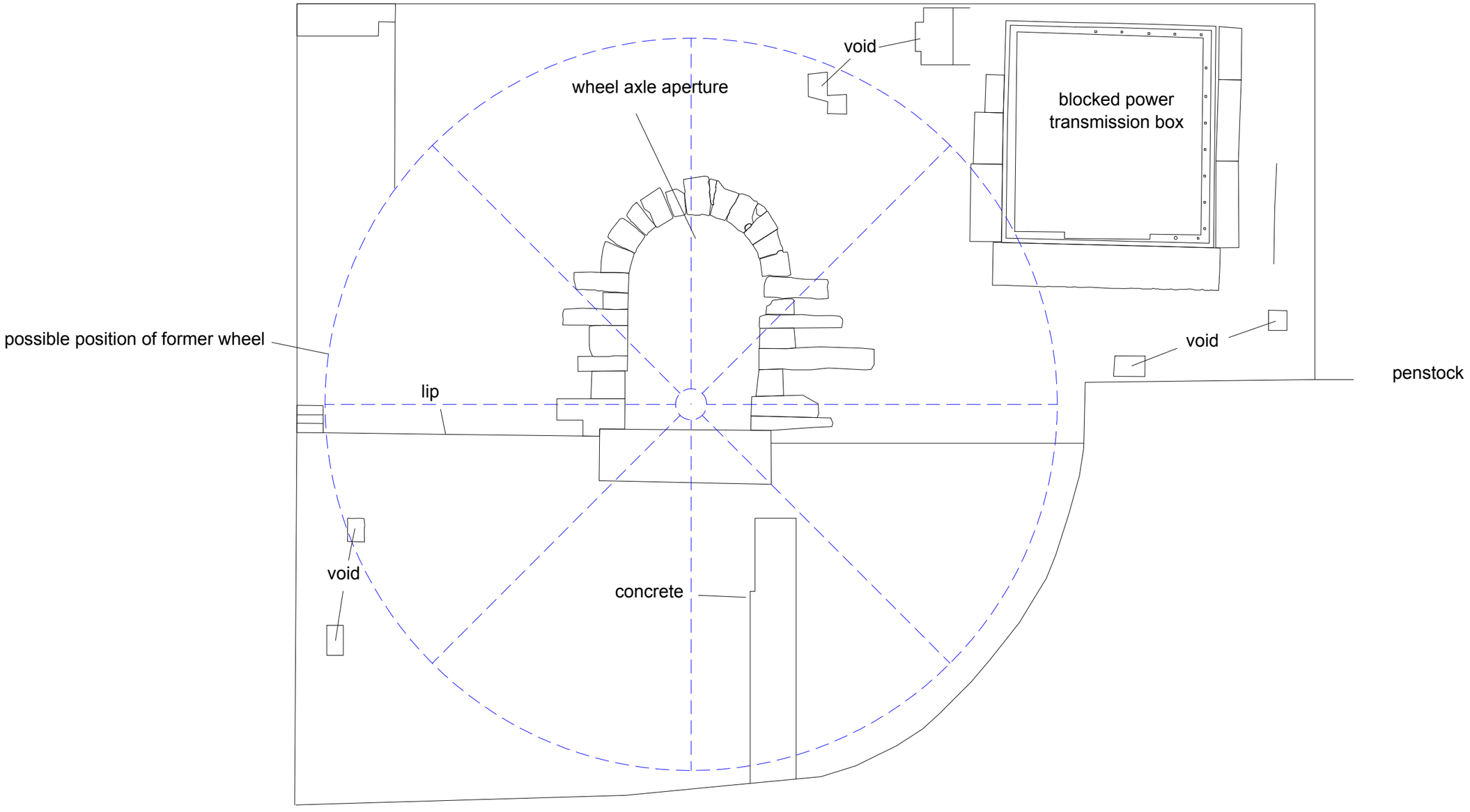
Ebor Mill: wheel pit - south wall (left) and north wall (right)

Figure 3



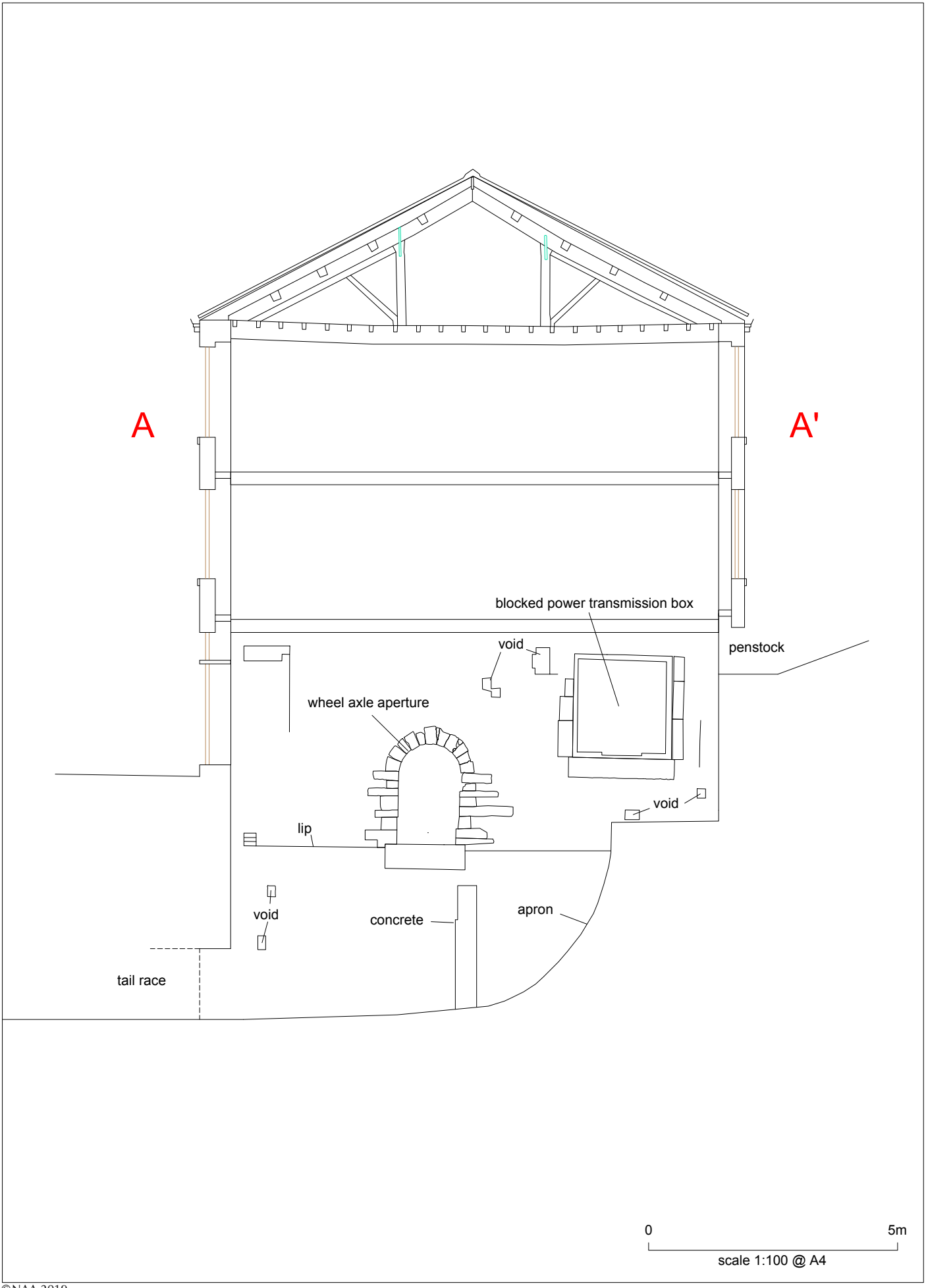
Ebor Mill: wheel pit - west wall

Figure 4

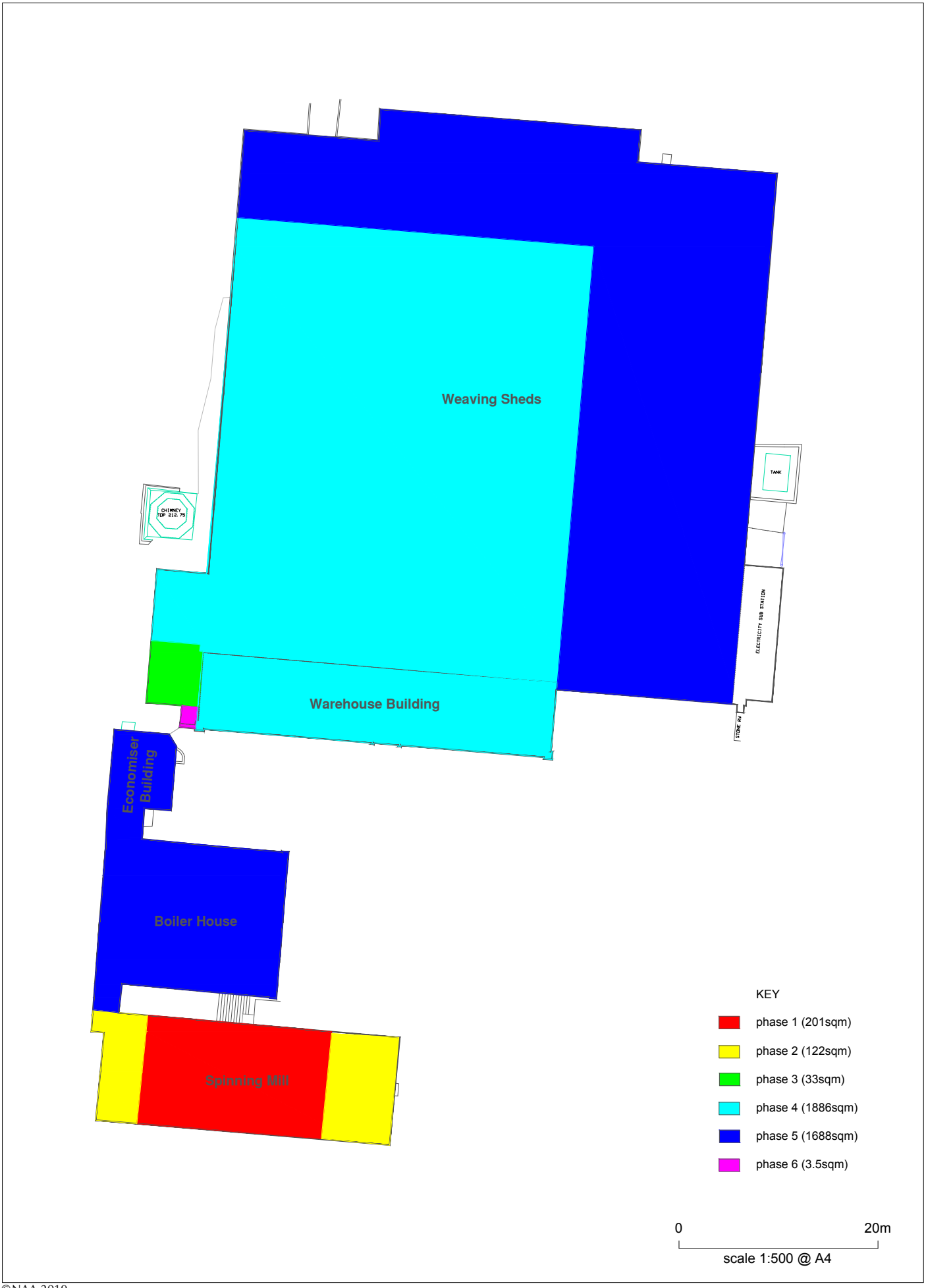


Ebor Mill: wheel pit - east wall

Figure 5

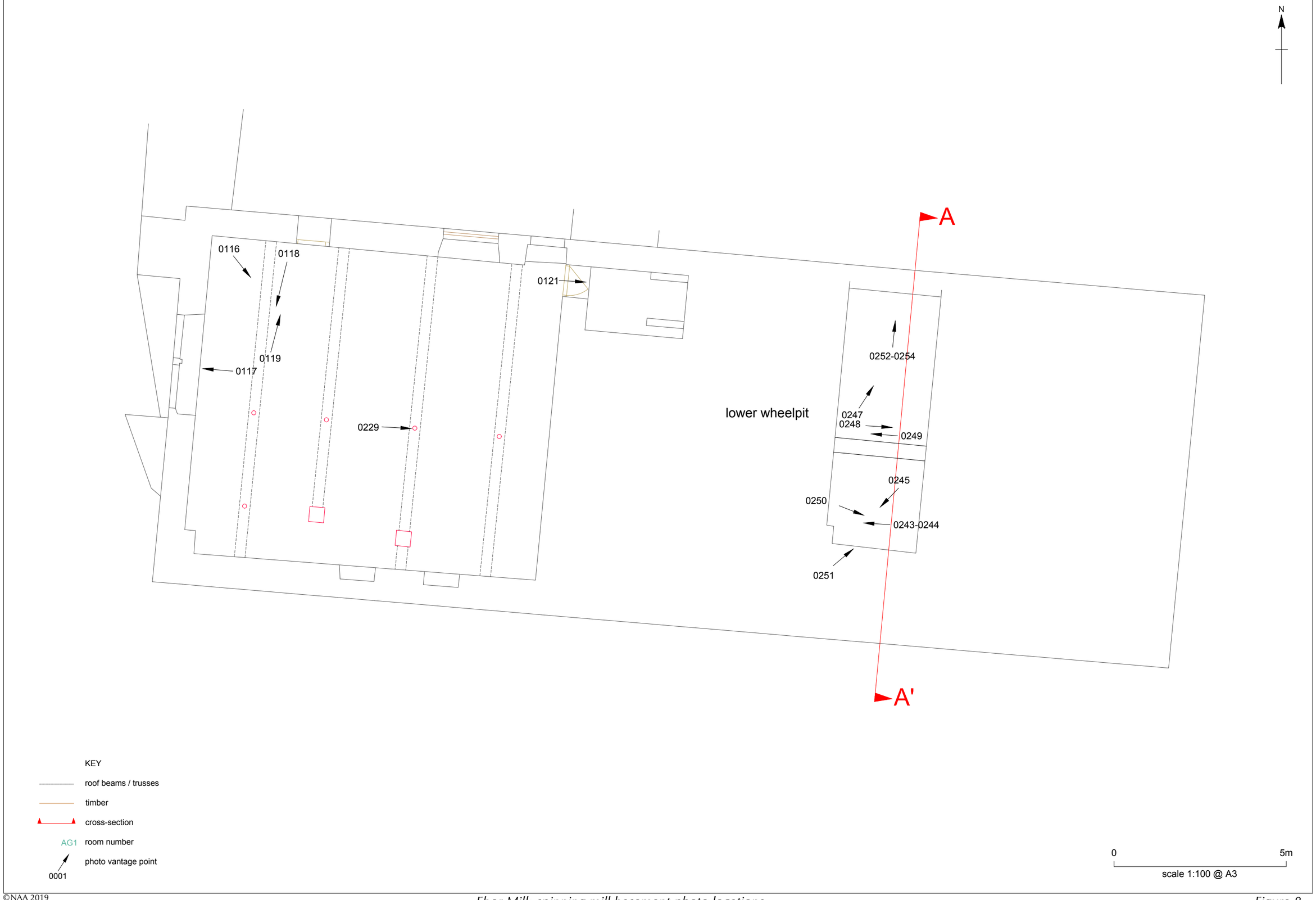


Ebor Mill: cross section through spinning mill *Figure 6*



Ebor Mill: phase plan

Figure 7

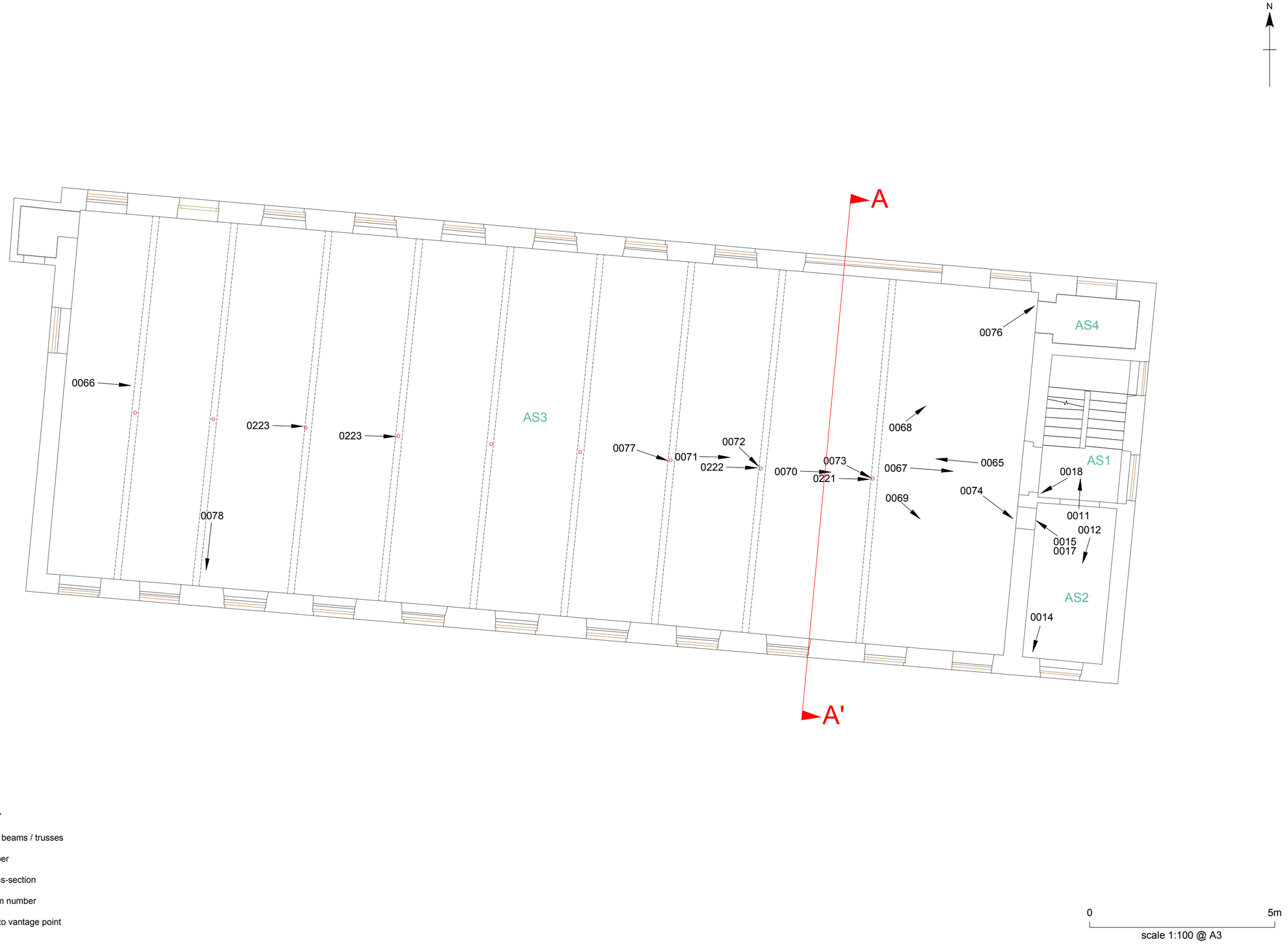


Ebor Mill: spinning mill basement photo locations

Figure 8

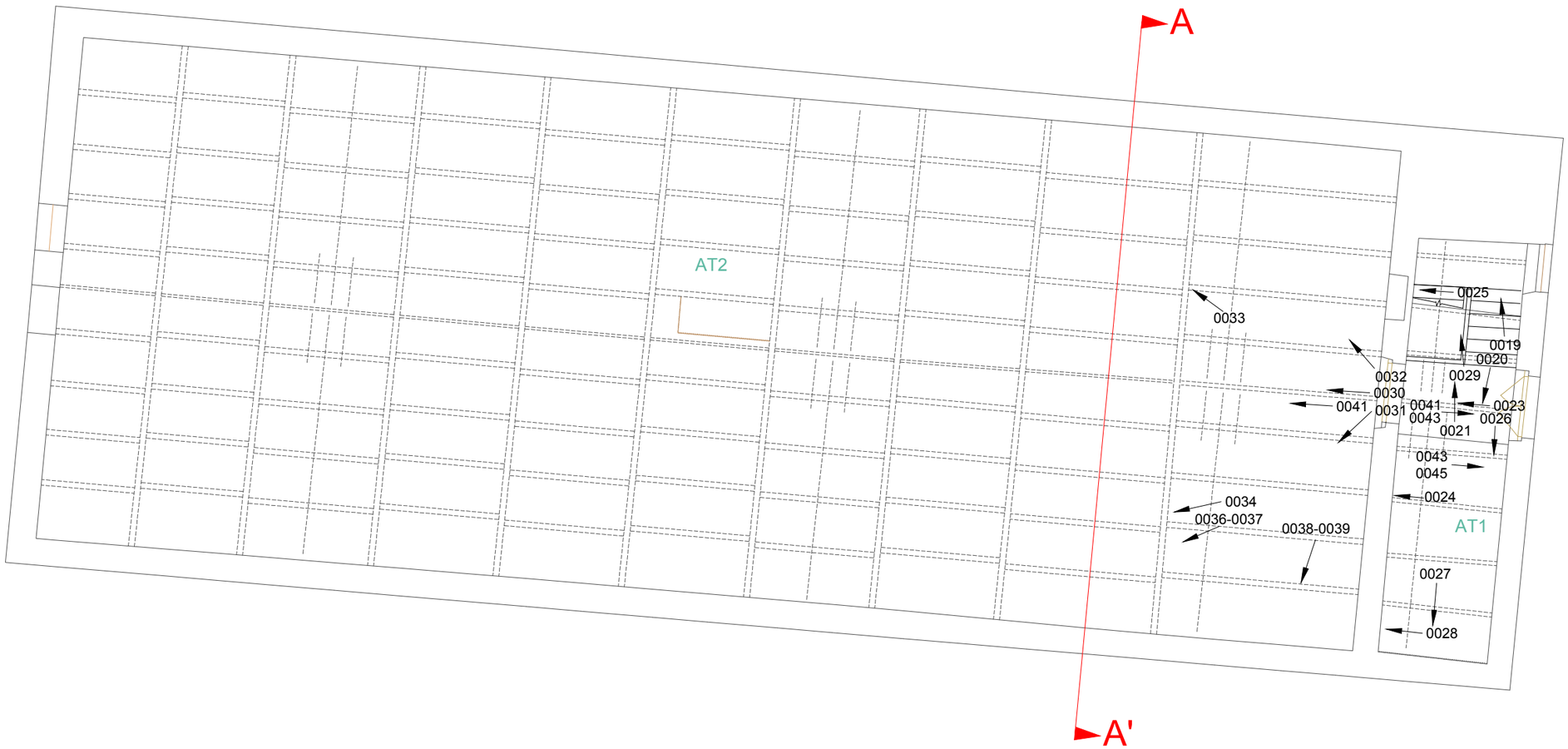
Ebor Mill: spinning mill first floor photo locations

Figure 9



Ebor Mill: spinning mill second floor photo locations

Figure 10



Ebor Mill: spinning mill third floor photo locations

Figure 11

Ebor Mill: boiler house and economiser photo locations

Figure 12

N

Second floor

First floor

Ground floor

KEY

0001 photo vantage point

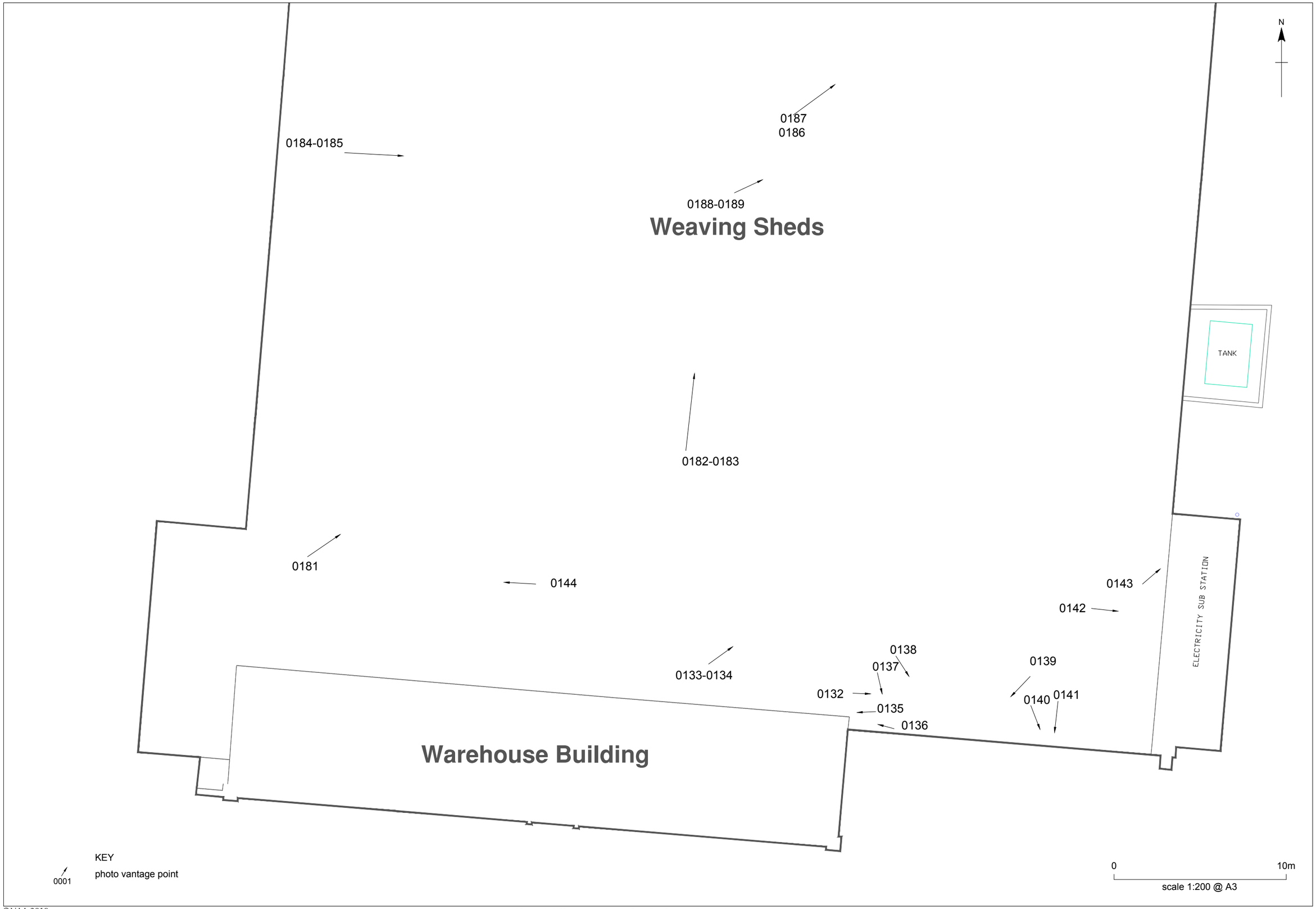
AG1 room number

0 10m

scale 1:200 @ A3

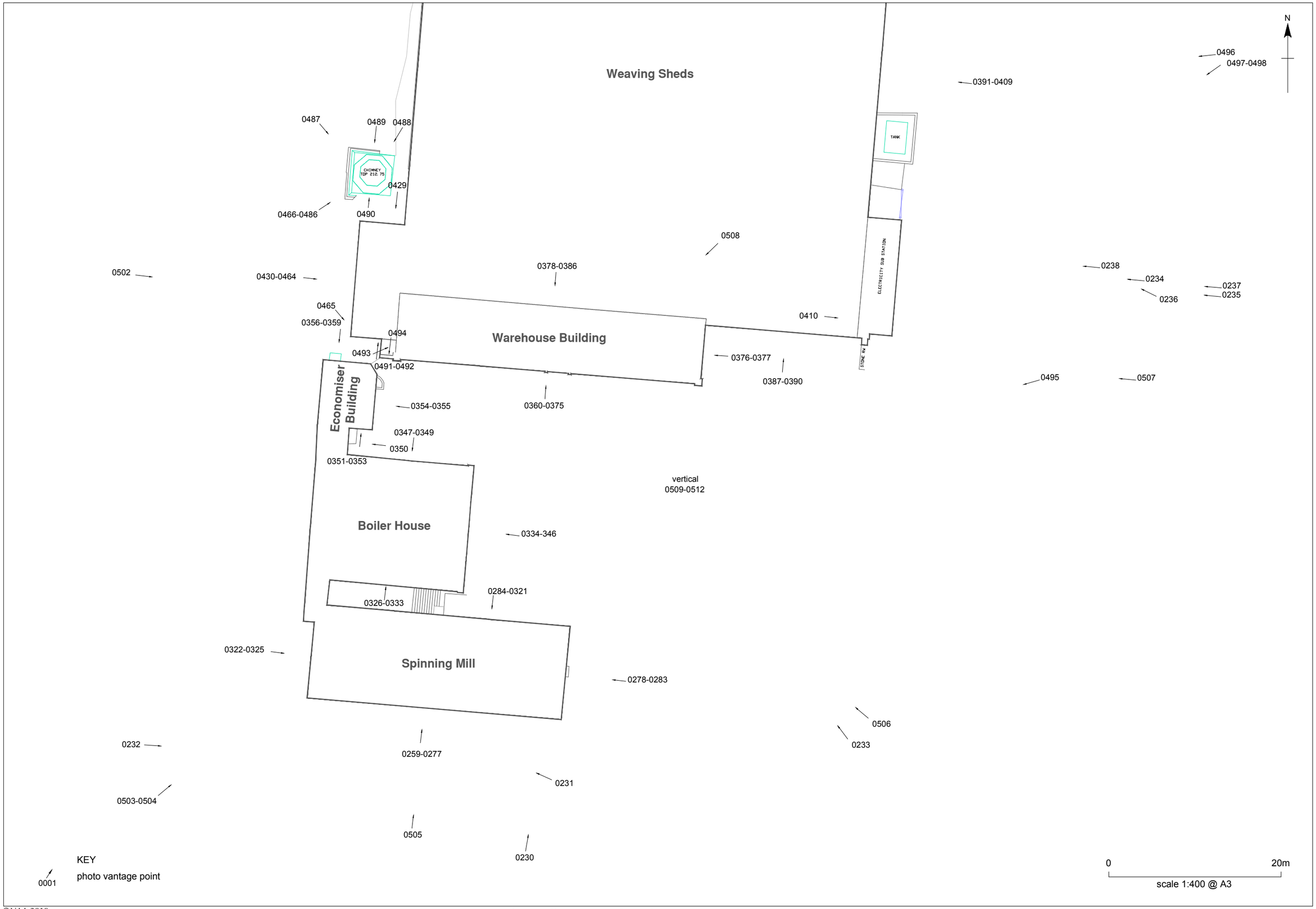
Ebor Mill: warehouse photo locations

Figure 13



Ebor Mill: weaving shed photo locations

Figure 14m



Ebor Mill: exterior photo locations (south)

Figure 15

Ebor Mill: exterior photo locations (north)

Figure 16

PLATES

Plate 1: Ebor mills, facing north-west with building numbers highlighted

Plate 2: Layout of Ebor Mills with building numbers highlighted (north is at the top of the image)

APPENDIX A: SPECIFICATION

SPECIFICATION FOR ARCHAEOLOGICAL PHOTOGRAPHIC AND DRAWN RECORDING AND AT EBOR MILLS, HAWORTH WEST YORKSHIRE

SE 03654 37589

This specification was produced on the request of Mike Bottomley of M B Heritage for his client, Skipton Properties and prepared on behalf of City of Bradford Metropolitan District Council.

1 Introduction

1.1 This specification details the requirements for an archaeological and architectural photographic and drawn record at Ebor Mill, Haworth prior to a planning application being made to change its use to apartments and develop other areas of the mill estate for housing.

1.2 Please note that a hard copy of the final report must be submitted to the West Yorkshire Historic Environment Record to enable the results of fieldwork to be made publically accessible as required by the National Planning Policy Framework.

1.3 Further below ground archaeological work may be necessary during any development of the site. This will be determined in light of future proposals and the results of this survey.

NOTE: The requirements detailed in paragraphs 6.1 to 6.4 are to be met by the archaeological contractor prior to the commencement of fieldwork by completing and returning the attached form to the WY Archaeology Advisory Service.

2 Site Location and Description (Grid ref. SE 03654 37589)

2.1 Ebor Mills are located to the north of Ebor Lane as it turns sharply to the west towards Haworth. The Bridgehouse Beck lies to the west of the mill and site is located on several terraces in the narrow, steep sided valley bottom. The built development has a footprint of 3982m^2. A large proportion of this is provided by a "weaving" shed whilst the remainder comprises 19th century multi-storey mills and ancillary buildings. Other semi-ruinous structures, perhaps associated with former gas works and water filtration, are present to the east of the mill complex.

2.2 Coursed local sandstone is used throughout in the construction of the mill with a mix of roof coverings including stone slates, thin slates and cement pan tiles. Internal construction is largely of wood with cast iron columns and one notable use of steel. The surviving buildings stand slightly apart and include (see figure 1):

- the original, now 4 storey water mill on Ebor Lane (A)
- A late 19th century boiler house built to support an enlarged mill (B) (interior not accessed by the WYAAS in November 2018).

- An octagonal chimney is located on the western side of the Mill. This is tall and slender with an elaborate over sailing cresting and partial masonry smoke cap (D)

- a warehouse mid-19th century warehouse and attached but heavily altered weaving shed (E and F)

- The site of the later and burnt down multi-storey spinning mill and engine house (2 and 3)

2.3 An economiser house (C) (adjacent to the boiler house) and a narrow range along the Bridgehouse Beck. The interiors of the latter two buildings were not accessed by the WYAAS in November 2018.

2.4 There is also a silted up mill pond to the north of Ebor Lane

3 Planning Background

3.1 The site owners, through their agents are preparing a planning proposal to redevelop Ebor Mills, Haworth. M B Heritage (No. 1 Leeds, 26 Whitehall Road, Leeds, LS12 1BE Tel: 0113 418 0079) have prepared a heritage statement and after initial discussions with CBMDC's conservation office the WYAAS were contacted to determine if the site warranted additional archaeological and architectural investigation, recording and documentation prior to development taking place.

3.2 The WYAAS, as CBMDC archaeological advisor, has recommended that the mill complex is recorded before development and has prepared this specification in order to allow the owners to meet the terms of an archaeological condition which will be placed on any consent granted by the LPA.

4 Archaeological and Architectural Interest

4.1 Ebor Mills is listed grade II and a designated heritage asset (NHLfE No. 1,283,338 and West Yorkshire Historic Environment Record PRN 3644). The earliest part of the mill complex comprises a water powered spinning mill of c. 1819 which was built as an apparently speculative venture by Hiram Craven, a stone mason (A on fig. 1). As an early worsted manufactory Ebor Mill is slightly atypical in a district where many 18th and early 19th mills initially spun cotton yarn.

4.2 The mill's original prime mover was a waterwheel set in a pit below basement level. The fall in level of the Bridgehouse Beck at this point is several metres and this is exploited in the design and plan of the mill. From visual inspection of the wheel pit, pentrough and silted mill pond it seems likely that the wheel was of the overshot or high-breast shot variety. Based on the size of the wheel pit and the associated bearings the wheel is estimated to have had a diameter of around 7m and in operation the mill would have projected into the ground floor space of the mill. Although large the layout of the wheel pit does not suggest any great level of innovation in its design.

4.3 There appears to be some evidence for the transfer of power from the eastern side of the water wheel to a vertical shaft in the east bay of the original mill

(various bearing boxes and an access door in a substantial masonry pier noted in the half-basement level).

4.4 How this mechanical power was then transmitted to machinery on the upper floors of the mill is not obvious. The slender cast iron columns which support the upper floors do not appear to have had bearing plates to support line shafting and are offset to the mill's centre line. Line shafting before the 1840s employed many bulky wooden components and operated at much lower revolutions per-minute than the later iron and steel shafts. Given the mill's date the layout of the columns may be evidence of an early power distribution system at ceiling or even floor level in line with gearing taken off the waterwheel.

4.5 The continued use of water power in the production of textiles during the 19th century is a feature of the industry in the Pennines culminating in the introduction of water turbines to provide both mechanical power and generate electricity such as at Brooks Meeting Mill, Oxenhope (PRN 16291). The waterwheel at Ebor Mill was apparently removed c. 1939. The wheel pit should be carefully studied for any evidence of such an arrangement and any evidence of control mechanisms regulating the flow of water from the pentrough to the wheel pit.

4.6 Evidence illustrating alterations to the layout of the mill after the removal of the waterwheel and associated structures should be sought.

4.7 Given the mill's relatively early foundation date the presence of placed articles or deposits should also be kept in mind during recording. A child's wooden clogs were for example found in a wheel pit at Woodlands Mill, Steeton in Eastburn (PRN 3638) and considered to represent an apotropaic deposit from the early 19th century.

4.8 It is also notable that gas was being produced for use in the mill by the mid-19th century. This early gas facility was located in the yard to the north of the water mill in a location occupied by later mill buildings. However, archaeological evidence of this gasometer may survive.

4.9 **The Later Mill**: The later development of Ebor Mills sees the construction of a steam powered spinning mill of which no obvious evidence survives although a location to the west of the later warehouse and weaving shed has been suggested for its engine house (See figure 1 numeral 1). The 1852 Ordnance Survey Map however shows a substantial range on the east of the mill yard which may better fit the location of this phase of the mill. This was later the site of a large spinning mill built by the early 1890s and destroyed by fire in 2010 (figure 1 numerals 2 & 3).

4.10 A weaving shed and warehouse were constructed to the north of the mill yard (figure 1 E & F). This was built in the third quarter of the century although the exact sequence of development is currently unknown. The weaving shed was ultimately powered with the later multi-storey spinning mill's large horizontal steam engine (2), as evidenced by the huge bearing box in its south-east corner and the presence of supports for line shafting along the shed's southern wall. It is considered likely that shed's interior has been altered as the grid of columns supporting the roof has an unusual spacing and both pitches of the roof are

covered with late 20th century cement pan tiles. The warehouse is unremarkable save possible evidence of an earlier engine house in its west (fig. 1 numeral 1) and the insertion of a large composite riveted steel beam in its eastern wall above the later engine house. The origin and name of the beam's manufacturer, "Dorman Long Middlesbrough" is chalked on its lower face. The beam is clearly inserted to reinforce the earlier warehouse and certainly dates it to after the 1880s.

4.11 The "new" spinning mill (3) was built before 1892 and destroyed by fire in 2010. The surviving boiler house, economiser house and chimney are an indication of its scale and decoration (B, C and D). Evidence of this steam engine's installation may survive as may evidence of a later gas plant on land to the east of this mill building as buried archaeological remains.

4.12 The development of Ebor Mills in the context of the worsted branch of the Yorkshire textile industry is illustrative of its origins, growth and expansion. Beginning as a small specialist spinning mill the site's owners responded to changes in technology and organisation within the industry with new buildings and an expanding range of activities in support of their business.

4.13 Worsted cloth is characterised by employing only long woollen fibres (tops) or other substitute yarns such as cotton or silk in the warp with a woollen weft. Since the yarn produced from these sources was stronger than short staple wool the weaving of worsted cloth was mechanised a decade or two earlier than the heavy woollens industry, in the 1830s or 40s (Ponting K G 1970 *Baine's Account of the Woollen Manufacture of England*, David and Charles p71). However, despite the properties of the yarn the industry remained constrained by hand combing the woollen tops until the late the1840s and the building of expansive weaving sheds had to await the mechanisation of this preparatory stage. This "stalling" in the development of the industry is illustrated by the lack of a large shed at Ebor Mills on the Ordnance Survey map of 1852. It was common to carry out mechanical wool combing in fireproof structures due to the attendant risks and it is of note that no special building has yet been identified at Ebor Mill.

4.14 The rapid development of Ebor Mills as an integrated spinning and weaving mill from this stage on is paralleled in the district by numbers of medium sized integrated mills being new built or developed on earlier sites during the later 19th century e.g. Lees Mill, Ivy Bank Mill and the prodigious Bridge House Mill which employed a very large suspension waterwheel in the late 19th century. (PRNs 3667, 10245 and 15992). The evidence of this expansion at Ebor Mills is of significance and warrants targeted recording prior to the reuse of the site. In particular evidence of the following should be sought:

- Provision of water power in the early 19th century
- Adaptations to steam power in the 1850s
- Any evidence for gas lighting in early buildings
- The integration of the later 19th century spinning mill (boiler house etc.) with earlier layouts.

4.15 For a further understanding of the archaeological research priorities for mill buildings in West Yorkshire please see the Industrial Archaeology research agenda available as a PDF document to download from the WYAAS website:

http://www.wyjs.org./archaeologyuk-advisory/

The RCHME' historical survey of Yorkshire's textile industry should also be consulted (Giles and Goodall 1992 *Yorkshire Textile Mills 1770 – 1930*; HMSO).

5 Aims of the Project

5.1 5.1 The first aim of the proposed work is to identify and objectively record by means of photographs and annotated measured drawings any significant evidence for the original and subsequent historical form and functions of the mill complex. The buildings should be analysed and interpreted as an integrated system intended to perform a specialised function. The archaeologist on site should give particular attention to reconstructing as far as possible the functional arrangements and division of the building type. The roles of historical plan form, technical layout / layout and circulation / process flow should all be considered in this process of interpretation. This archaeological record should be placed in the public domain by depositing it with the West Yorkshire Historic Environment Record (West Yorkshire Archaeology Advisory Service , West Yorkshire Joint Service, Nepshaw Lane South, Morley, Leeds LS27 7JQ tel. 0113 5350174; email wyher@wyjs.org.uk).

5.2 5.2 The second aim of the proposed work is to identify and characterise those elements, features and characteristics of the complex which either determine or contribute to the building's special archaeological, architectural and historic interest. This work should be done with a view to providing sufficient information on the survival and significance of the original and historic elements of the building to enable informed decisions to be made with regard to its appropriate and sensitive repair, conservation or refurbishment.

6.1 Health and Safety

6.1.1 The building recorder on site will naturally operate with due regard for Health and Safety regulations. Prior to the commencement of any work on site the building recorder may wish to carry out a Risk Assessment on the building / structure in accordance with the Health and Safety at Work Regulations. The building recorder should identify any contaminants which constitute potential Health and Safety hazards and make arrangements with the owner for making safe as necessary and appropriate. The WY Archaeology Advisory Service and its officers cannot be held responsible for any accidents or injuries which may occur to outside contractors engaged to undertake this survey while attempting to conform to this specification.

6.2 Confirmation of Adherence to Specification

6.2.1 Unauthorised variations are made at the sole risk of the building recorder. Proposed modifications presented in the form of a re-written

specification/project design will not be considered. For technical queries see para. 8.1.

6.3 Confirmation of Timetable and Contractors' Qualifications

6.3.1 Prior to the commencement of any work, the building recorder must provide the local planning authority and WYAAS in writing with:

- a projected timetable for the site work
- details of the staff structure and numbers
- names and *CVs* of key project members (the project manager, site supervisor, any proposed specialists, sub-contractors *etc.*)

6.3.2 All project staff provided by the building recorder must be suitably qualified and experienced for their roles. In particular, staff involved in building recording should have proven expertise in the recording and analysis of industrial buildings. The timetable should be adequate to allow the work to be undertaken to the appropriate professional standard.

6.4 Notification and Monitoring

6.4.1 The Local Authority and WYAAS should receive at least one week's notice in writing of the intention to start fieldwork.

7 Recording Methodology

7.1 Site preparation

7.1.1 Prior to the commencement of work on site the building recorder should identify all removable modern material (including late 20th and 21st-century partitions, dry-boarding, suspended ceilings etc.) which may significantly obscure material requiring a photographic record, and should contact the developer in order to make arrangements for its removal. It is not the intention of this specification that large-scale removal of material of this type should take place with the building recorder's manpower or at that contractor's expense.

7.2 Documentary research

7.2.1 Prior to the commencement of *fieldwork*, the buildings archaeologist must study M B Heritage's Heritage Assessment and determine if additional research is necessary on sources held by the Bradford Local History Library and the Bradford office of the West Yorkshire Archive Service (WYAS Bradford, Prince's Way, Bradford BD1 1NN Telephone: +44 (0)113 393 9785 [sic] Email: bradford@wyjs.org.uk) and the Historic Environment Record. This work is intended to inform the building recording by providing background information with regard to function and phasing. Please note that this exercise is not intended to be a formal desk-based assessment, and should not represent a disproportionate percentage of the time allowed for the project overall.

7.2.2 A copy of the M B Heritage Assessment is held by the WY HER. Please note the WY HER make a charge for commercial consultations. Please contact us to find out the current cost.

7.3 Site/building plans

7.3.1 If as "existing plans" of the mill have been located then, if appropriate, these plans may be used for any annotation relative to the photographic record (permission of the copyright holder must be sought).

7.3.2 Failing this, an accurate plan of the mill layout, marked with a north pointer, should be derived from the most appropriate large-scale historic mapping and reproduced at an appropriate scale (not smaller than 1:100). This plan should then be used for any annotation relative to the photographic record.

8 Recording Methodology

8.1 Written Record

8.1.1 The archaeologist on site should carefully examine all parts of the mill complex prior to the commencement of the drawn and photographic recording, in order to identify all features relevant to its original use and to obtain an overview of the development of the building and of the site as a whole. As part of this exercise, the archaeologist on site should produce written observations (e.g. on phasing; on building function) sufficient to permit the preparation of a report on the structure. This process should include the completion of a Room Data Sheet or similar structured recording pro-forma1 for each room or discrete internal space within the volume of the structure. The crucial requirement is that each room should be examined individually, that the results of that examination should be noted in a systematic fashion, and that these objective observations should be used to inform an analytical interpretation of the overall development and operation of the site.

8.2 Drawn Record

8.2.1.1 The drawn record should comprise:

- A ground floor plan of the 1819 water mill with the location of the now obscured wheel pit marked
- Internal elevations of the wheel pit
- A plan showing the eastern drive side of the wheel pit and possible evidence of a vertical drive shaft bearing.
- A composite sectional elevation of the 1819 mill showing wheel pit, mill construction and a typical roof truss

[1] The WY Archaeology Advisory Service would recommend the employment of the attached pro-forma, but will consider any suitable alternative which the archaeological contractor may wish to submit (Note that agreement for the employment of an alternative *schema* must be obtained in writing from the WY Archaeology Advisory Service prior to the commencement of work on site).

- Elevations of the slender cast iron columns used in the 1819 mill
- Phase plan(s) showing the development of the 1819 mill and the mill complex as a whole
- Sanitary arrangements

8.2.1.2 Plans and elevations should be made at an appropriate scale (not smaller than 1:100 for plans; not smaller than 1:50 for sections & elevations). The scale employed for diagrams should be determined by the buildings archaeologist. The structures should be recorded as existing, but a clear distinction should be made on the final drawings between surviving as-built features and all material introduced in the structure during the late 20th-century.

8.3 Provision for Additional Drawings

8.3.1 The recording requirements outlined above are based on a brief inspection of the site by the WY Archaeology Advisory Service. However, detailed examination and analysis of the site by the archaeological contractor may reveal features which merit detailed recording beyond what has been specifically required. In addition to what is requisite to complete the work specified above, the archaeological contractor should tender for a contingency period of two days recording on site (with two day drawing-up time off site – 4 days in total) in order that features so identified may be adequately recorded. This contingency should be clearly and separately identified in any tender document.

8.3.2 If features requiring additional drawing are identified during the course of work on site, the WY Archaeology Advisory Service should be contacted as soon as possible, and should be provided in writing with a schedule of proposed additional work. A site visit will then be arranged by the WYAAS to examine the features in question and to assess the need to apply the contingency (this visit will usually be combined with a routine monitoring visit). Implementation of the contingency will be at the decision of the West Yorkshire Archaeology Advisory Service, which will be issued in writing, if necessary in retrospect after site discussions.

8.4 Scope of record

8.4.1 Typically, items of interest would include:

- All original structural elements, roof structures / trusses
- Any inscriptions, dedications or date stones
- Original doors and window frames
- Evidence of original structure/construction
- Staircases and other access arrangements

- Evidence of original specialist rooms or structures, e.g. offices, wheel pit and later adaptations

- Evidence of water, steam and electrical power and the transmission of mechanical power

But this list should not be treated as exhaustive. The building recorder on site should also identify and note:

- any significant changes in construction material – this is intended to include significant changes in stone/brick type and size
- any blocked, altered or introduced openings
- evidence for phasing, and for historical additions or alterations to the building.

8.4.2 Elements for which multiple examples exist (e.g. each type of roof truss, column or window frame) may be recorded by means of a single representative illustration. N.B. Detail photographs must be taken at medium-to-close range and be framed in such a way as to ensure that the element being photographed clearly constitutes the principal feature of the photograph.

8.4.3 Areas which cannot be safely entered should be identified and will potentially be subject to a structural watching brief during demolition/alteration.

8.5 Dimensional accuracy

8.5.1 Dimensional accuracy should accord with the normal requirements of the English Heritage Architecture and Survey Branch (at 1:20, measurements should be accurate to at least 10mm; at 1:50, to at least 20mm; at 1:100, to at least 50mm).

8.5.2 The use of rectified digital photography wold be considered to appropriate in obtaining a dimensionally accurate record of the wheel pit.

8.6 Drawing method

8.6.1 The survey may be executed either by hand or by means of reflectorless EDM as appropriate.

8.6.2 Consultation with commercial and academic practitioners suggests high resolution terrestrial time of flight laser scanning would also be a viable means to collect metric data but note the finished product remains clearly executed drawings to the standard outlined below. Point cloud data should be archived in accordance with the guidance provided by "3D Laser Scanning for Heritage 2nd Edition" (English Heritage 2011 p.15 -16) and Archaeological Data Service's Big Data Project and use the .LAS (.las) format.

8.6.3 In accordance with national guidelines2, drawings executed on site should be made either on polyester-based film (minimum thickness 150 microns) with polymer-bonded leads of an appropriate thickness and density, or on acid-free

[2] English Heritage 2006, *Understanding Historic Buildings – a guide to good recording practice*, 7.1.1ff

or rag paper. If finished drawings are generated by means of CAD or a similar proven graphics package, recorders should ensure that the software employed is sufficiently advanced to provide different line-weight (point-size); this feature should then be used to articulate the depth of the drawings. CAD repeats or cloning of features should **not** be used. What is required as an end product of the survey is a well-modelled and clear drawing; ambiguous flat-line drawings should be avoided. Drawing conventions should conform to English Heritage guidelines as laid out in English Heritage 2006, Understanding Historic Buildings – a guide to good recording practice, and the WYAAS would recommend that the CAD layering protocol detailed in the same volume (8.3, Table 2) should be adhered to.

8.7 External photographs

8.7.1 An external photographic record should be made of all elevations of the mill complex, from vantage points as nearly parallel to the elevation being photographed as is possible within the constraints of the site. The contractor should ensure that all visible elements of each elevation are recorded photographically; this may require photographs from a number of vantage points. A general external photographic record should also be made which includes a number of oblique general views of the mill from all sides, showing the complex as a whole in its setting. In addition, a 35mm general colour-slide survey of the building should also be provided (using a variety of wide-angle, medium and long-distance lenses). While it is not necessary to duplicate every black-and-white shot, the colour record should be sufficiently comprehensive to provide a good picture of the form and general appearance of the mill. The colour slide record should also include some internal shots. (See para. 8.12 below for possible use of digital photography in place of colour transparency)

8.8 Internal photographs

8.8.1 A general internal photographic record should be made of the Mill buildings. General views should be taken of each room or discrete internal space from a sufficient number of vantage points to adequately record the form, general appearance and manner of construction of each area photographed. In areas which are wholly modern in appearance, character and materials, a single shot to record current appearance will suffice.

8.9 Detail photographs

8.10 Detailed record shots should be made of all features of archaeological and architectural interest identified during the process of appraisal and listed in section 8.4.1 above.

8.11 Equipment

8.11.1 General photographs should be taken with a Large Format monorail camera (5” x 4” or 10” x 8” negative), or with a Medium Format camera that has perspective control, using a tripod. The contractor must have proven expertise in this type of work. Any detail photographs of structural elements should if possible be taken with a camera with perspective control. Other detail

photographs may be taken with either a Medium Format or a 35mm camera. All detail photographs must contain a graduated photographic scale of appropriate dimensions (measuring tapes and surveying staffs are not considered to be acceptable scales in this context). A 2-metre ranging-rod, discretely positioned, should be included in a selection of general shots, sufficient to independently establish the scale of all elements of the structure.

8.12 Digital photography In place of colour slide film

8.12.1 Digital photography: as an alternative for colour slide photography, good quality digital photography may be supplied, using cameras with a minimum resolution of 10 megapixels. Images may be captured in RAW format but archiving should follow the guidance given by Historic England in "Digital Image Capture and File Storage: Guidelines for Best Practice", July 2015. Note that conventional black and white print photography is still required and constitutes the permanent record. Digital images will only be acceptable as an alternative to colour slide photography if each image is supplied as both a JPEG and a TIFF versions. The latter as an uncompressed 8-bits per channel TIFF version 6 file of not less than 25Mbs (See section 2.3 of the Historic England guidance). The contractor must include metadata embedded in the TIFF file. The metadata must include the following: the commonly used name for the site being photographed, the relevant centred OS grid coordinates for the site to at least six figures, the relevant township name, the date of photograph, the subject of the photograph, the direction of shot and the name of the organisation taking the photograph. Any digital images are to be supplied to WYAAS on archive quality gold CDs by the archaeological contractor accompanying the hard copy of the report.

8.13 Film stock

8.13.1 All record photographs to be black and white, using conventional (not chromogenic) silver-based film only, such as Illford FP4 or HP5, or Delta 400 Pro that is replacing HP5 in certain film sizes (such as 220). Dye-based films such as Ilford XP2 and Kodak T40CN are unacceptable due to poor archiving qualities.

8.14 Printing (from negatives and digital images)

8.14.1 Record photographs should be printed at a minimum of 5" x 7" .In addition a small selection of photographs (the best of the exterior setting shots and interior shots with important detail) should be printed at 10" x 8". Bracketed shots of identical viewpoints need not be reproduced, but all viewpoints must be represented within the report.

8.14.2 Prints may be executed digitally from scanned versions of the film negatives, and may be manipulated to improve print quality (but not in a manner which alters detail or perspective). All digital prints must be made on paper and with inks which are certified against fading or other deterioration for a period of 75 years or more when used in combination. If digital printing is employed, the contractor must supply written details of the paper/inks used in writing to the

local authority with supporting documentation indicating their archival stability/durability.

8.14.3 Use of Digital Archiving in Place of Medium Format Film

8.14.3.1 In response to the mounting costs and decreasing numbers of practitioners offering professional photographic building recording on large and medium format chemical film the WYAAS have investigated other means to secure the long term preservation of photographic images. The WYAAS are satisfied that it is now feasible to substitute digital photography for this aspect of building recording in some projects as an alternative to monochrome photography as specified above.

8.14.3.2 The long-term archiving and curation of image captured during building recording will be carried out by the Archaeological Data Service (ADS). The ADS charge for this service and it is the contractor's responsibility to pay for this long term curation. See:

http://archaeologydataservice.ac.uk/advice/chargingPolicy.xhtml

8.14.3.3 An estimate of the cost of archiving digital images and reports using the ADS Easy service can be obtained from the ADS website:

http:/archaeologydataservice.ac.uk/easy/costing

8.14.3.4 The buildings archaeologist should be aware of the ADS' polices and requirements for metadata accompanying digital files. Comprehensive guidance can be found on the ADS website dealing with planning for the creation of a digital archive, collecting data, selection and discard policies, file structures, licencing and the transfer of material to the ADS.

8.14.4 Equipment

8.14.4.1 A digital SLR with a resolution of at least 10 megapixel should be employed. Cameras with an FX sensor, which is close to equivalency with 35mm film, are preferable to DX sensor equipped cameras. A variety of lenses should be used to best capture the subject and its setting

8.14.4.2 Care should be taken to ensure sharply focused well composed photographs are taken and when appropriate the camera should be set up and levelled on a tripod, e.g. when recording facades and larger interior spaces. The use of perspective shift lenses or pan and tilt adaptors may be necessary in some situations to achieve an acceptable image. Alternatively lens distortion may be removed post-capture by software but this must be recorded in the photographic catalogue and details of the software used given in the report. Original pre-correction images should be included in the site archive.

8.14.4.3 Photographs should be taken with a low ISO setting (i.e. 100 or less) to reduce noise in the images captured.

8.14.4.4 The camera should also be Exchange Image File (EXIF) compliant and accurate time, date and, where applicable, GPS information and other metadata set up prior to commencing recording work on site. Further requirements relating to metadata are described below.

8.14.5 Archiving Digital Photographs

8.14.5.1 Photographs and reports should be archived using the ADS Easy online service. (http://archaeologydataservice.ac.uk/easy/home). An estimate of the cost to archive digital images and reports using the ADS Easy service can be obtained from the ADS website

http://archaeologydataservice.ac.uk/easy/costing

8.14.5.2 The buildings archaeologist should be aware of the ADS' polices and requirements for metadata accompanying digital files. Comprehensive guidance can be found on the ADS website dealing with planning for the creation of a digital archive, collecting data, selection and discard policies, file structures and naming conventions, licencing and the transfer of material to the ADS

http://archaeologydataservice.ac.uk/advice/guidelinesForDepositors.xhtml

8.14.5.3 Meta data: in addition to the EXIF data stored in each image the contractor should create Project Level meta data. The coverage field in this document should include the historic township, site name and grid reference of the site (http://guides.archaeologydataservice.ac.uk/g2gp/CreateData_1-2).

8.14.5.4 A raster data meta data file, cataloguing the digital photographs, should also be prepared. A template for this spreadsheet is available to download from the ADS (a template & examples of the latter are available from the ADS at:

http://archaeologydataservice.ac.uk/advice/FilelevelMetadata.xhtml

8.14.5.5 When depositing files with the ADS the contractor should enable the automatic notification of the completion of this process and have an email sent from the ADS to the WYAAS at the following address wyher@wyjs.org.uk.

8.14.5.6 The WYAAS will only recommend the discharge of planning conditions upon receipt of a notification from the ADS that photographs have been archived.

8.14.5.7 Please note the WYAAS still require hard copy of the report accompanied by laser prints of the photographs on archivally stable paper and a facsimile copy of the report in PDF format and the images on a "gold" archive quality CD.

9 Documentation

9.1.1 A photographic register and photo location plan are required. The photographic register should (as a minimum) include location, direction and subject of shot must accompany the photographic record; a separate photographic register should be supplied for any colour slides and digital photographs. Position and direction of each photograph and slide should be noted on a scaled copy of the building plan (minimum acceptable scale 1:100), which should also be marked with a north pointer. Separate plans should be annotated for each floor of the building/ structure. (See also para. 5.3 above.)

9.2 Post-Recording Work and Report Preparation

9.2.1 Prior to the commencement of any other work on site, the archaeological contractor should arrange a meeting at the offices of the WY Archaeology Advisory Service to present a draft of the 1st- stage drawn record (fully labelled and at the scale specified above), a photo-location plan, and photographic contact prints adequately referenced to this plan (material supplied will be returned to the contractor). Copies of the slides or digital photographs should also be brought in for checking. **N.B**. if full-sized prints or digital versions of contact sheets are supplied for this purpose, they must be accompanied by a sample of the processed negatives. If appropriate, the WY Archaeology Advisory Service will then confirm to District Planning Services, that this phase of fieldwork has been satisfactorily completed.

10 Structural watching brief

10.1.1 If access cannot be gained to the interior of all the buildings in the mill complex then subsequent to the commencement of demolition/conversion work on site, a structural watching brief should be maintained by the contracting archaeologist to record any pertinent historic structural or functional detail boiler house and economiser house which may be exposed during the course of demolition in these locations.

10.1.2 This record should be obtained by means of notes, drawings and photographs as appropriate, to the standards outlined elsewhere in this specification. This detail should then be incorporated into the completed record.

10.1.3 This work can be secured by a suitably worded condition attached to any grant of planning consent awarded by CBMDC.

11 Post-Recording Work and Report Preparation

11.1 Report Preparation

11.1.1 Report format and content

11.1.1.1 A written report should be produced. This should include:

- an executive summary including dates of fieldwork, name of commissioning body, planning application reference and condition number and a brief summary of the results including details of any significant findings
- an introduction outlining the reasons for the survey

- a brief architectural description of the mill complex presented in a logical manner (as a walk around and through the complex, starting with setting, then progressing to all sides of the structure in sequence, and finally to the interior from the ground floor up) and discuss how it was powered
- a discussion placing the mill in its local and historical contexts, describing and analysing the development of individual structures and of the complex as a whole. This analysis should consider the historical plan form, and layout of the mill complex.

Both architectural description and historical/analytical discussion should be fully cross-referenced to the photographic record, sufficient to illustrate the major features of the site and the major points raised.

11.1.2 Report Illustrations

11.1.2.1 Illustrations should include:

- a location map at a scale sufficient to allow clear identification of the mill complex in relation to other buildings in the immediate area
- a complete set of site drawings at a legible scale, on which position and direction of each photograph has been noted
- any relevant historic map editions, with the position and extent of the site clearly indicated
- Plans and sections as listed in section 8.2.1.1
- any additional illustrations pertinent to the site
- a complete set of good-quality laser copies of all photographs. All photographs should be accompanied by detailed captions clearly locating and identifying any pertinent features.

11.1.2.2 The latter should be bound into the report, appropriately labelled (numbered, and captioned in full) and fully referenced within the report. When captioning, contractors should identify the individual photographs by means of a running sequence of numbers (e.g. Plate no. 1; Plate no. 2), and it is this numbering system which should be used in cross-referencing throughout the report and on the photographic plans. However, the relevant original film and frame number should also be included in brackets at the end of each caption.

11.2 Report deposition

11.2.1 **A hard copy of the full report (plus a digital copy on on "archive" quality gold disk in ISO 10005-1 compliant (PDF/A) format) will be submitted directly to the WY Archaeology Advisory Service within a timescale agreed by both parties** and include the photographic prints and any colour slides) supplied to the West Yorkshire HER. The finished report should be supplied within twelve weeks of completion of all fieldwork unless otherwise agreed with the local authority. The report will become publicly accessible once deposited with the West Yorkshire Historic Environment Record, unless confidentiality is explicitly requested, in which case it will become publicly accessible six months after deposit.

11.2.2 The West Yorkshire HER supports the Online Access to Index of Archaeological Investigations (OASIS) project. The overall aim of the OASIS project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large-scale developer funded fieldwork. The building recorder must therefore complete the online OASIS form at http://ads.ahds.ac.uk/project/oasis/. Contractors are advised to contact the West Yorkshire HER officer prior to completing the form. Once a report has become a public document by submission to or incorporation into the HER, the West Yorkshire HER may place the information on a web-site. Please ensure that you and your client agree to this procedure in writing as part of the process of submitting the report to the case officer at the West Yorkshire HER.

11.2.3 With the permission of the client, the building recorder is encouraged to consider the deposition of a copy of the report for this site with the appropriate Local History Library.

11.3 A note or longer article on the recording should also be supplied to the Council for British Archaeology's Yorkshire Forum publication (please contact the editor or CBA's website for more information forum-editor@cba-yorkshire.org.uk).

12 Archive Deposition (black and white and colour transparency film)

12.1.1 Deposition with WYAAS (as holders of the West Yorkshire Historic Environment Record)

12.1.2 The report copy supplied to the WY Archaeology Advisory Service (see address at the base of this document) should also be accompanied by both the photographic negatives and a complete set of labelled photographic prints (mounted in KENRO display pockets or similar, and arranged in such a way that labelling is readily visible) bound in a form which will fit readily into a standard filing cabinet suspension file (not using hard-backed ring-binders). Labelling should be on the back of the print in pencil giving film and frame number only (taking care not to damage the print) and on applied printed labels stuck on the front of the relevant photographic sleeve and which should include:

- film and frame number
- date recorded and photographer's name
- name and address of building
- national grid reference
- specific subject of photograph.

Negatives should be supplied in archivally stable mounts (KENRO display pockets or similar), and each page of negatives should be clearly labelled with the following:

- national grid reference
- Site name and address
- Date of photographs (month/year)
- Name of archaeological contractor

- Film number

12.1.3 Colour slides should be mounted, and the mounts suitably marked with the ' (Haworth), the township name, at the top of the slide with site name, "Ebor Mills" below; grid reference at the bottom; date of photograph at the right hand side of the mount; subject of photograph at the left hand side of the mount. Subject labelling may take the form of a numbered reference to the relevant photographic register. The slides should be supplied to the WY Archaeology Advisory Service in an appropriate, archivally stable slide hanger (for storage in a filing cabinet). In all other respects, standards for archive compilation and transfer should conform to those outlined in Archaeological Archives – a guide to best practice in creation, compilation, transfer and curation (Archaeological Archives Forum, 2011).

12.1.4 Copyright - Please note that by depositing this report, the contractor gives permission for the material presented within the document to be used by the WYAAS, in perpetuity, although The Contractor retains the right to be identified as the author of all project documentation and reports as specified in the Copyright, Designs and Patents Act 1988 (chapter IV, section 79). The permission will allow the WYAAS to reproduce material, including for commercial use by third parties, with the copyright owner suitably acknowledged.

13 Technical Queries

13.1.1 Any technical queries arising from the specification detailed above, should be addressed to WYAAS without delay.

14 Valid Period of Specification

14.1.1 This specification is valid for a period of one year but may then need to be revised to take account of changing techniques and approaches.

West Yorkshire Archaeology Advisory Service **December 2018**
West Yorkshire Joint Service,
Nepshaw Lane South,
Morley,
Leeds
LS27 7JQ

Telephone: 0113 5350300
E-mail: david.hunter@wyjs.org.uk

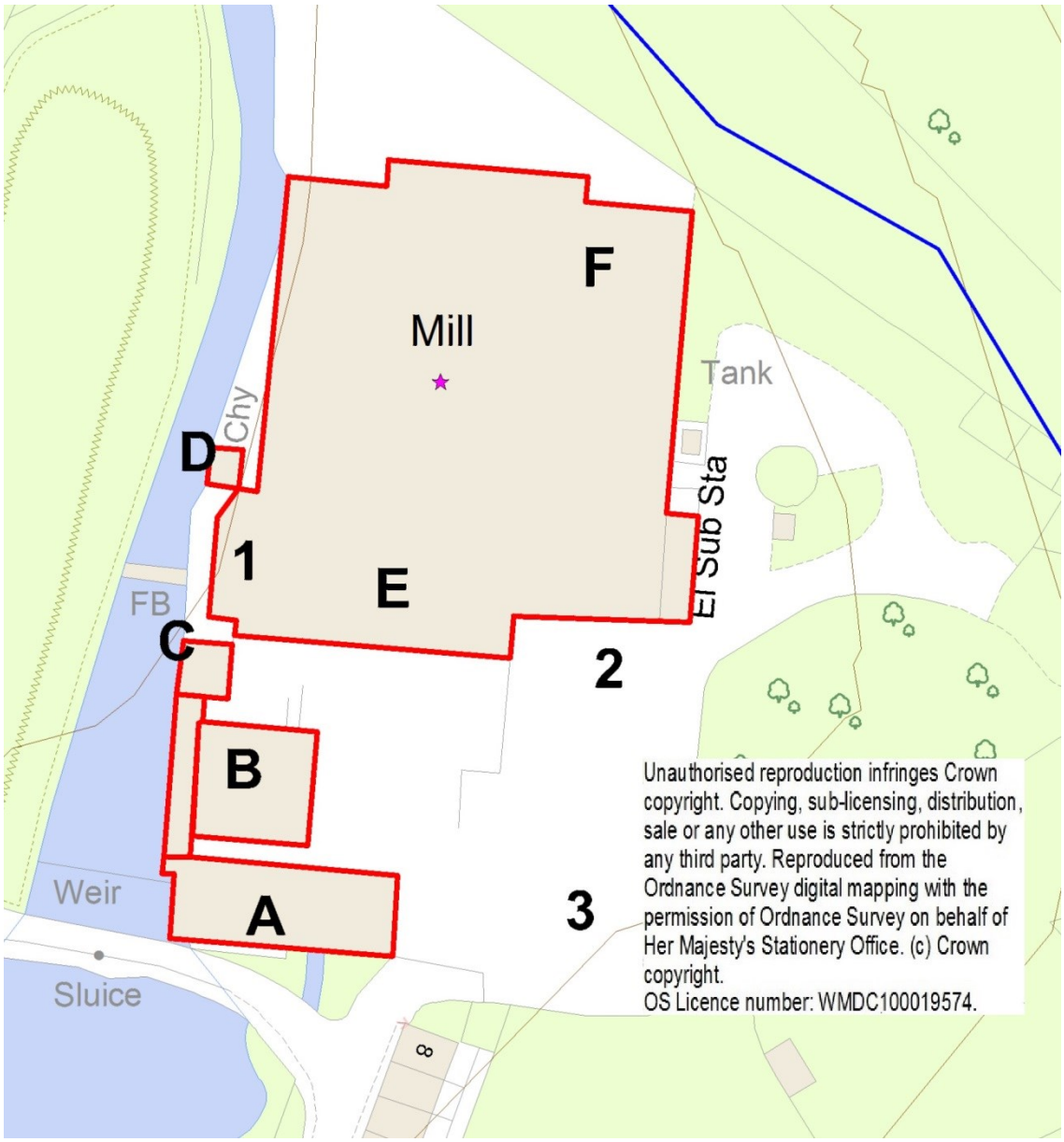


Fig. 1 Location of Building Recording

APPENDIX B: PHOTOGRAPHIC REGISTER

1492 Ebor Mills Photographic register						
1. SITE CODE: Ebor Mills 2019						
Frame number	Film type	Contexts	Facing	Scales	Description	Initials
0001	Digital	Spinning mill	W	2m	Room AF1	KT
0002		Spinning mill	E	2m	Room AF1	KT
0003		Spinning mill	E	2m	Doorway from Room AF3 to Room AF1	KT
0004		Spinning mill	SE	2m	Room AF2	KT
0005		Spinning mill	N	2m	Room AF1 staircase up	KT
0006		Spinning mill	S	n/a	Corbel in Room AF1	KT
0007		Spinning mill			deleted	KT
0008		Spinning mill	N	1m, 1m	Blocked door into Room AF4	KT
0009		Spinning mill			deleted	KT
0010		Spinning mill			deleted	KT
0011		Spinning mill	N	1m, 1m	Staircase on 2nd floor	KT
0012		Spinning mill	S	2m	Room AS2	KT
0013		Spinning mill			deleted	KT
0014		Spinning mill	SW	2m	Butt join on south wall of Room AS2	KT
0015		Spinning mill	W	0.5m	Bearing box in west wall of Room AF2	KT
0016		Spinning mill			deleted	KT
0017		Spinning mill	W	0.5m	Bearing box in west wall of Room AF2	KT
0018		Spinning mill	SW	0.5m	Pintle in door frame, Room AS1	KT
0019		Spinning mill	N	1m, 1m	Blocked door into Room AS4	KT
0020		Spinning mill	S	2m	Room AT1	KT
0021		Spinning mill	N	2m	Room AT1	KT
0022		Spinning mill			deleted	KT
0023		Spinning mill	W	2m	Doorway into Room AT3	KT
0024		Spinning mill	W	1m, 1m	Blocked window in west wall of Room AT3 (south)	KT
0025		Spinning mill	W	n/a	Blocked window in west wall of Room AT3 (north)	KT
0026		Spinning mill	S	0.5m	Shaft hangar on purlin, Room AT1	KT
0027		Spinning mill	S	2m	Brackets on floor of Room AT1	KT
0028		Spinning mill	W	0.5m	Bracket on floor of Room AT1	KT
0029		Spinning mill	NW	1m, 1m	Balustrade Room AT3	KT
0030		Spinning mill	W	n/a	Roof frame	KT
0031		Spinning mill	SW	n/a	South side of roof	KT
0032		Spinning mill	NW	n/a	North side of roof	KT
0033		Spinning mill	NW	n/a	Queen post attachment strap	KT
0034		Spinning mill	SW	n/a	Joist attachment scar	KT
0035		Spinning mill			deleted	KT
0036		Spinning mill	SW	n/a	Purlin attachments	KT
0037		Spinning mill	W	n/a	Attachment scar	KT
0038		Spinning mill	SW	n/a	Attachment scar	KT
0039		Spinning mill	SW	n/a	Attachment scar	KT
0040		Spinning mill			deleted	KT
0041		Spinning mill	W	n/a	General view of roof	KT
0042		Spinning mill			deleted	KT
0043		Spinning mill	E	1m, 1m	Hoist door Room AT3	KT
0044		Spinning mill			deleted	KT
0045		Spinning mill	E	n/a	Pulley above hoist door	KT
0046		Spinning mill	W	2m	Room AF3	KT
0047		Spinning mill	SE	n/a	Room AF3, east wall, south	KT
0048		Spinning mill	NE	n/a	Room AF3, east wall, north	KT
0049		Spinning mill	N	n/a	View to ground floor from Room AF3	KT
0050		Spinning mill	W	n/a	Type 2 column, Room AF3	KT
0051		Spinning mill	SE	n/a	Type 2 column, Room AF3	KT
0052		Spinning mill	SW	n/a	Type 1 column, Room AF3	KT
0053		Spinning mill	E	n/a	Type 1 column, Room AF3	KT
0054		Spinning mill	SW	n/a	Room AF3, west wall, south	KT
0055		Spinning mill			deleted	KT
0056		Spinning mill	NW	n/a	Room AF3, west wall, north	KT
0057		Spinning mill	SW	n/a	Bracket at west end of Room AF3	KT
0058		Spinning mill	S	n/a	Windows in Room AF3	KT
0059		Spinning mill			deleted	KT
0060		Spinning mill			deleted	KT
0061		Spinning mill	SW	n/a	Bearing box in east wall of Room AF3, south	KT
0062		Spinning mill	NE	n/a	Bearing box in east wall of Room AF3, north	KT
0063		Spinning mill	N	n/a	Loading doors north wall, Room AF3	KT
0064		Spinning mill			deleted	KT
0065		Spinning mill	W	2m	Room AS3	KT

1. SITE CODE: Ebor Mills 2019						
Frame number	Film type	Contexts	Facing	Scales	Description	Initials
0066		Spinning mill	E	2m	Room AS3	KT
0067		Spinning mill	E	2m	East wall Rooms AS3, AT3	KT
0068		Spinning mill	NE	2m	Room AS3, east wall, north	KT
0069		Spinning mill	SE	2m	Room AS3, east wall, south	KT
0070		Spinning mill	E	n/a	Type 3 column Room AS3	KT
0071		Spinning mill	E	n/a	Type 4 column Room AS3	KT
0072		Spinning mill	SE	n/a	Type 3 column Room AS3	KT
0073		Spinning mill	SE	n/a	Type 4 column Room AS3	KT
0074		Spinning mill	SE	n/a	Bearing box in east wall of Room AS3, south	KT
0075		Spinning mill	NE	n/a	deleted	KT
0076		Spinning mill	NE	n/a	Bearing boxes in east wall of Room AS3, north	KT
0077		Spinning mill	SE	n/a	Type 3 column Room AS3	KT
0078		Spinning mill	S	n/a	Scar between windows in Room AS3	KT
0079		Spinning mill	SE	2m	Room AG3a	KT
0080		Spinning mill	NW	2m	Room AG3a	KT
0081		Spinning mill	N	2m	Door into Room AG3a	KT
0082		Spinning mill	E	1m, 1m	East wall Room AG3a	KT
0083		Spinning mill	W	1m, 1m	Blocked door between Rooms AG3a and AG4	KT
0084		Spinning mill			deleted	KT
0085		Spinning mill	S	2m	Room AG3b	KT
0086		Spinning mill			deleted	KT
0087		Spinning mill	S	2m	South wall of Room AG3b	KT
0088		Spinning mill	SW	2m	Transmission box between Room AG3a and AG4	KT
0089		Spinning mill	E	0.5m	Bracket in block on east wall of Room AG3b	KT
0090		Spinning mill	E	0.5m	Blocked opening into Room AG3c	KT
0091		Spinning mill	W	n/a	Bearing box in west wall of Room AG3b	KT
0092		Spinning mill	S	1m, 1m	Floor of Room AG3b	KT
0093		Spinning mill	S	2m	Room AG2a	KT
0094		Spinning mill	SE	2m	Blocked door Room AG2a	KT
0095		Spinning mill	E	2m	Room AG1	KT
0096		Spinning mill			deleted	KT
0097		Spinning mill	S	2m	Stairs, Room AG1	KT
0098		Spinning mill	N	2m	Blocked door in north wall Room AG1	KT
0099		Spinning mill	W	2m	Room AG5	KT
0100		Spinning mill	E	2m	Blocked transmission opening Room AG5	KT
0101		Spinning mill	E	2m	Blocked opening between Room AG4 and Room AG5	KT
0102		Spinning mill	N	2m	Double doors in Room AG5	KT
0103		Spinning mill	S	0.5m	Hole in floor Room AG5	KT
0104		Spinning mill	E	2m	Type 5 column Room AG5	KT
0105		Spinning mill	E	n/a	Type 5 column Room AG5	KT
0106		Spinning mill	W	n/a	Line shaft hanger scar Room AG5	KT
0107		Spinning mill	S	n/a	Line shaft hanger scar Room AG5	KT
0108		Spinning mill	E	2m	Type 6 column Room AG5	KT
0109		Spinning mill	E	n/a	Type 6 column Room AG5	KT
0110		Spinning mill	W	n/a	Bearing box in west wall of Room AG5	KT
0111		Spinning mill	SW	n/a	Bearing box and bracket in west wall of Room AG5	KT
0112		Spinning mill			deleted	KT
0113		Spinning mill	NW	n/a	Bracket on west wall of Room AG5	KT
0114		Spinning mill	W	n/a	Bricks within west wall of Room AG5	KT
0115		Spinning mill	N	n/a	Blocked opening, north-west corner of Room AG5	KT
0116		Spinning mill	SE	n/a	Room AB1	KT
0117		Spinning mill	W	n/a	Blocked windows in west wall of Room AB1	KT
0118		Spinning mill	S	1m, 1m	Concrete bases in Room AB1	KT
0119		Spinning mill	N	1m, 1m	Concrete bases in Room AB1	KT
0120		Spinning mill			deleted	KT
0121		Spinning mill	E	1m	Room AB2	KT
0122		Spinning mill	S	2m	Room AB3 and AG4	KT
0123		Spinning mill	NW	2m	Blocked opening in west wall of Room AG4	KT
0124		Spinning mill	SW	n/a	Blocked transmission opening Room AG4, west wall	KT
0125		Spinning mill	S	n/a	South wall of Room AG4	KT
0126		Spinning mill	SE	n/a	Blocked transmission box east wall of Room AG4	KT
0127		Spinning mill	S	n/a	Sill in Room AG4	KT
0128		Spinning mill	E	n/a	Arched blocked opening in east wall of Room AG4	KT
0129		Spinning mill	N	n/a	Tail race Room AB3	KT
0130		Warehouse	E	2m	Level 1 images of Warehouse	KT
0131		Warehouse	N	2m		KT

1. SITE CODE: Ebor Mills 2019						
Frame number	Film type	Contexts	Facing	Scales	Description	Initials
0132		Northlight shed	E	2m	Level 1 images of weaving shed	KT
0133		Northlight shed	SE	2m		KT
0134		Northlight shed	S	n/a		KT
0135		Northlight shed	SW	n/a		KT
0136		Northlight shed	W	n/a		KT
0137		Northlight shed	S	n/a		KT
0138		Northlight shed	SE	n/a		KT
0139		Northlight shed	SW	2m		KT
0140		Northlight shed	SE	2m		KT
0141		Northlight shed	S	2m		KT
0142		Northlight shed	E	2m		KT
0143		Northlight shed	NW	n/a		KT
0144		Northlight shed	W	n/a		KT
0145		Warehouse	S	2m	Level 1 images of Warehouse	KT
0146		Warehouse	W	2m		KT
0147		Warehouse			deleted	KT
0148		Warehouse	W	2m		KT
0149		Warehouse	E	2m		KT
0150		Warehouse	W	2m		KT
0151		Warehouse			deleted	KT
0152		Warehouse			deleted	KT
0153		Warehouse	N	2m		KT
0154		Building 1	W	2m	Former exterior of engine house Building 1	KT
0155		Warehouse	N	2m		KT
0156		Building 1	SE	2m	Room 1G1	KT
0157		Warehouse	S	2m		KT
0158		Warehouse	S	2m		KT
0159		Warehouse	NW	2m		KT
0160		Warehouse	SW	2m		KT
0161		Warehouse	E	2m		KT
0162		Warehouse			deleted	KT
0163		Warehouse	E	2m		KT
0164		Warehouse	W	n/a		KT
0165		Warehouse	W	n/a		KT
0166		Building 1	SW	2m	Room 1F1	KT
0167		Building 1	SW	n/a	Room 1F1	KT
0168		Building 1	SW	n/a	Room 1F1	KT
0169		Building 1	NW	2m	Room 1F1	KT
0170		Warehouse			deleted	KT
0171		Warehouse	W	2m		KT
0172		Warehouse	E	1m		KT
0173		Warehouse	E	0.5m		KT
0174		Warehouse	SE	0.5m		KT
0175		Warehouse	S	0.5m		KT
0176		Warehouse			deleted	KT
0177		Warehouse	E	2m		KT
0178		Warehouse	E	2m		KT
0179		Building 1	SW	1m	Cornice on former east external wall	KT
0180		Building 1	W	2m	Cornice on former east external wall	KT
0181		Northlight shed	NE			KT
0182		Northlight shed	N			KT
0183		Northlight shed	N			KT
0184		Northlight shed	E			KT
0185		Northlight shed	E			KT
0186		Northlight shed	E			KT
0187		Northlight shed	E			KT
0188		Northlight shed	E			KT
0189		Northlight shed	E			KT
0190		Boiler house	E	n/a	Room BG2	KT
0191		Boiler house	NW	2m	Room BG1	KT
0192		Boiler house	E	2m	Doorway between Rooms BG1 and BG3	KT
0193		Boiler house	NE	1m, 1m	Room BG3 large blocks	KT
0194		Boiler house	NE	n/a	Room BG3 valve gear	KT
0195		Boiler house	E	n/a	Room BG3 valve gear	KT
0196		Boiler house	W	2m	Room BG1 west wall, north	KT
0197		Boiler house	SW	2m	Window and recess in Room BG1	KT
0198		Boiler house	NE	2m	Room BG1	KT

1. SITE CODE: Ebor Mills 2019						
Frame number	Film type	Contexts	Facing	Scales	Description	Initials
0199		Boiler house	SW	2m	Room BG4	KT
0200		Boiler house	W	2m	Potential boiler casing Room BG4	KT
0201		Boiler house	S	2m	Dividing wall Room BG4 east	KT
0202		Boiler house	S	2m	Dividing wall Room BG4 west	KT
0203		Boiler house	E	2m	Room BG4 east wall	KT
0204		Boiler house	W	2m	Room BG4 west wall	KT
0205		Boiler house	NW	1m	Flues exit point Room BG4 north-west corner	KT
0206		Boiler house	W	1m	Flues exit point Room BG4 west wall	KT
0207		Boiler house	SW	1m	Flues exit point Room BG4 west wall	KT
0208		Boiler house	S	n/a	Pulleys on dividing wall Room BG4	KT
0209		Boiler house	S	2m	Room BG5	KT
0210		Boiler house			deleted	KT
0211		Boiler house	N	2m	Room BG5	KT
0212		Boiler house	S	1m, 1m	South end of Room BG5	KT
0213		Boiler house	N	1m, 1m	Brick flue Room BG5	KT
0214		Boiler house	E	n/a	Column top Room BG5	KT
0215		Economiser building	S	1m, 1m	Flue entry point in south wall	KT
0216		Economiser building			deleted	KT
0217		Economiser building	N	1m	Flue exit point in north wall	KT
0218		Economiser building	NW	2m	Interior of economiser	KT
0219		Economiser building	SW	2m	Interior of economiser	KT
0220		Economiser building	S	2m	Interior of economiser	KT
0221		Spinning mill	E	n/a	Type 3 column Room AS3	KT
0222		Spinning mill	E	n/a	Type 4 column Room AS3	KT
0223		Spinning mill	E	n/a	Type 3 column Room AS3	KT
0224		Spinning mill	E	n/a	Type 2 column, Room AF3	KT
0225		Spinning mill	E	n/a	Type 1 column, Room AF3	KT
0226		Spinning mill	E	n/a	Type 5 column Room AG5	KT
0227		Spinning mill	E	n/a	Type 6 column Room AG5	KT
0228		Spinning mill	E	n/a	Type 6 column Room AB1	KT
0229		Spinning mill	E	n/a	Type 6 column Room AB1	KT
0230		Exterior	N	n/a	Road to Ebor Mills	KT
0231		Exterior	NW	n/a	Spinning mill and bridge	KT
0232		Exterior	E	n/a	View across bridge toward site	KT
0233		Exterior	NW	n/a	Ebor Mills	KT
0234		Exterior	W	n/a	Ebor Mills	KT
0235		Exterior	W	n/a	Ebor Mills	KT
0236		Exterior	W	n/a	Ebor Mills	KT
0237		Exterior	W	n/a	Ebor Mills	KT
0238		Exterior	W	n/a	Ebor Mills	KT
239		Spinning mill	SW	n/a	Wheel pit	DR/OGS
240		Spinning mill	W	n/a	Wheel pit	DR/OGS
241		Spinning mill	W	n/a	Wheel pit	DR/OGS
242		Spinning mill	E	n/a	Wheel pit	DR/OGS
243		Spinning mill	W	n/a	Wheel pit	DR/OGS
244		Spinning mill	W	n/a	Wheel pit	DR/OGS
245		Spinning mill	SW	n/a	Wheel pit	DR/OGS
246		Spinning mill	W	n/a	Wheel pit	DR/OGS
247		Spinning mill	N	n/a	Wheel pit	DR/OGS
248		Spinning mill	E	n/a	Wheel pit	DR/OGS
249		Spinning mill	W	n/a	Wheel pit	DR/OGS
250		Spinning mill	E	n/a	Wheel pit	DR/OGS
251		Spinning mill	NE	n/a	Wheel pit	DR/OGS
252		Spinning mill	N	n/a	Wheel pit	DR/OGS
253		Spinning mill	N	n/a	Wheel pit	DR/OGS
254		Spinning mill	N	n/a	Wheel pit	DR/OGS
255		Spinning mill		n/a	deleted	DR/OGS
256		Spinning mill		n/a	deleted	DR/OGS
257		Spinning mill		n/a	deleted	DR/OGS
258		Spinning mill		n/a	deleted	DR/OGS
259		Spinning mill	N	n/a	Elevation 1	DR/OGS
260		Spinning mill	N	n/a	Elevation 1	DR/OGS
261		Spinning mill	N	n/a	Elevation 1	DR/OGS
262		Spinning mill	N	n/a	Elevation 1	DR/OGS
263		Spinning mill	N	n/a	Elevation 1	DR/OGS
264		Spinning mill	N	n/a	Elevation 1	DR/OGS

1. SITE CODE: Ebor Mills 2019						
Frame number	Film type	Contexts	Facing	Scales	Description	Initials
265		Spinning mill	N	n/a	Elevation 1	DR/OGS
266		Spinning mill	N	n/a	Elevation 1	DR/OGS
267		Spinning mill	N	n/a	Elevation 1	DR/OGS
268		Spinning mill	N	n/a	Elevation 1	DR/OGS
269		Spinning mill	N	n/a	Elevation 1	DR/OGS
270		Spinning mill	N	n/a	Elevation 1	DR/OGS
271		Spinning mill	N	n/a	Elevation 1	DR/OGS
272		Spinning mill	N	n/a	Elevation 1	DR/OGS
273		Spinning mill	N	n/a	Elevation 1	DR/OGS
274		Spinning mill	N	n/a	Elevation 1	DR/OGS
275		Spinning mill	N	n/a	Elevation 1	DR/OGS
276		Spinning mill	N	n/a	Elevation 1	DR/OGS
277		Spinning mill	N	n/a	Elevation 1 orthophoto	DR/OGS
278		Spinning mill	W	n/a	Elevation 2	DR/OGS
279		Spinning mill	W	n/a	Elevation 2	DR/OGS
280		Spinning mill	W	n/a	Elevation 2	DR/OGS
281		Spinning mill	W	n/a	Elevation 2	DR/OGS
282		Spinning mill	W	n/a	Elevation 2	DR/OGS
283		Spinning mill	W	n/a	Elevation 2 - between Spinning mill and Boiler house	DR/OGS
284		Spinning mill	S	n/a	Elevation 3	DR/OGS
285		Spinning mill	S	n/a	Elevation 3	DR/OGS
286		Spinning mill	S	n/a	Elevation 3	DR/OGS
287		Spinning mill	S	n/a	Elevation 3	DR/OGS
288		Spinning mill	S	n/a	Elevation 3	DR/OGS
289		Spinning mill	S	n/a	Elevation 3	DR/OGS
290		Spinning mill	S	n/a	Elevation 3	DR/OGS
291		Spinning mill	S	n/a	Elevation 3	DR/OGS
292		Spinning mill	S	n/a	Elevation 3	DR/OGS
293		Spinning mill	S	n/a	Elevation 3	DR/OGS
294		Spinning mill	S	n/a	Elevation 3	DR/OGS
295		Spinning mill	S	n/a	Elevation 3	DR/OGS
296		Spinning mill	S	n/a	Elevation 3	DR/OGS
297		Spinning mill	S	n/a	Elevation 3	DR/OGS
298		Spinning mill	S	n/a	Elevation 3	DR/OGS
299		Spinning mill	S	n/a	Elevation 3	DR/OGS
300		Spinning mill	S	n/a	Elevation 3	DR/OGS
301		Spinning mill	S	n/a	Elevation 3	DR/OGS
302		Spinning mill	S	n/a	Elevation 3	DR/OGS
303		Spinning mill	S	n/a	Elevation 3	DR/OGS
304		Spinning mill	S	n/a	Elevation 3	DR/OGS
305		Spinning mill	S	n/a	Elevation 3	DR/OGS
306		Spinning mill	S	n/a	Elevation 3	DR/OGS
307		Spinning mill	S	n/a	Elevation 3	DR/OGS
308		Spinning mill	S	n/a	Elevation 3	DR/OGS
309		Spinning mill	S	n/a	Elevation 3	DR/OGS
310		Spinning mill	S	n/a	Elevation 3	DR/OGS
311		Spinning mill	S	n/a	Elevation 3	DR/OGS
312		Spinning mill	S	n/a	Elevation 3	DR/OGS
313		Spinning mill	S	n/a	Elevation 3	DR/OGS
314		Spinning mill	S	n/a	Elevation 3	DR/OGS
315		Spinning mill	S	n/a	Elevation 3	DR/OGS
316		Spinning mill	S	n/a	Elevation 3	DR/OGS
317		Spinning mill	S	n/a	Elevation 3	DR/OGS
318		Spinning mill	S	n/a	Elevation 3	DR/OGS
319		Spinning mill	S	n/a	Elevation 3	DR/OGS
320		Spinning mill	S	n/a	Elevation 3	DR/OGS
321		Spinning mill	S	n/a	Elevation 3 - orthophoto	DR/OGS
322		Spinning mill	E	n/a	Elevation 4	DR/OGS
323		Spinning mill	E	n/a	Elevation 4	DR/OGS
324		Spinning mill	E	n/a	Elevation 4	DR/OGS
325		Spinning mill	E	n/a	Elevation 4	DR/OGS
326		Boiler house	N	n/a	Elevation 5	DR/OGS
327		Boiler house	N	n/a	Elevation 5	DR/OGS
328		Boiler house	N	n/a	Elevation 5	DR/OGS
329		Boiler house	N	n/a	Elevation 5	DR/OGS
330		Boiler house	N	n/a	Elevation 5	DR/OGS
331		Boiler house	N	n/a	Elevation 5	DR/OGS

1. SITE CODE: Ebor Mills 2019						
Frame number	Film type	Contexts	Facing	Scales	Description	Initials
332		Boiler house	N	n/a	Elevation 5	DR/OGS
333		Boiler house	N	n/a	Elevation 5 - orthophoto	DR/OGS
334		Boiler house	W	n/a	Elevation 6	DR/OGS
335		Boiler house	W	n/a	Elevation 6	DR/OGS
336		Boiler house	W	n/a	Elevation 6	DR/OGS
337		Boiler house	W	n/a	Elevation 6	DR/OGS
338		Boiler house	W	n/a	Elevation 6	DR/OGS
339		Boiler house	W	n/a	Elevation 6	DR/OGS
340		Boiler house	W	n/a	Elevation 6	DR/OGS
341		Boiler house	W	n/a	Elevation 6	DR/OGS
342		Boiler house	W	n/a	Elevation 6	DR/OGS
343		Boiler house	W	n/a	Elevation 6	DR/OGS
344		Boiler house	W	n/a	Elevation 6	DR/OGS
345		Boiler house	W	n/a	Elevation 6	DR/OGS
346		Boiler house	W	n/a	Elevation 6 - orthophoto	DR/OGS
347		Boiler house	S	n/a	Elevation 7	DR/OGS
348		Boiler house	S	n/a	Elevation 7	DR/OGS
349		Boiler house	S	n/a	Elevation 7	DR/OGS
350		Boiler house	W	n/a	Elevation 6 - between Boiler house and Economiser building	DR/OGS
351		Economiser building	N	n/a	Elevation 8	DR/OGS
352		Economiser building	N	n/a	Elevation 8	DR/OGS
353		Economiser building	N	n/a	Elevation 8	DR/OGS
354		Economiser building	W	n/a	Elevation 9	DR/OGS
355		Economiser building	W	n/a	Elevation 9	DR/OGS
356		Economiser building	S	n/a	Elevation 10	DR/OGS
357		Economiser building	S	n/a	Elevation 10	DR/OGS
358		Economiser building	S	n/a	Elevation 10	DR/OGS
359		Economiser building	S	n/a	Elevation 10	DR/OGS
360		Warehouse	N	n/a	Elevation 12	DR/OGS
361		Warehouse	N	n/a	Elevation 12	DR/OGS
362		Warehouse	N	n/a	Elevation 12	DR/OGS
363		Warehouse	N	n/a	Elevation 12	DR/OGS
364		Warehouse	N	n/a	Elevation 12	DR/OGS
365		Warehouse	N	n/a	Elevation 12	DR/OGS
366		Warehouse	N	n/a	Elevation 12	DR/OGS
367		Warehouse	N	n/a	Elevation 12	DR/OGS
368		Warehouse	N	n/a	Elevation 12	DR/OGS
369		Warehouse	N	n/a	Elevation 12	DR/OGS
370		Warehouse	N	n/a	Elevation 12	DR/OGS
371		Warehouse	N	n/a	Elevation 12	DR/OGS
372		Warehouse	N	n/a	Elevation 12	DR/OGS
373		Warehouse	N	n/a	Elevation 12	DR/OGS
374		Warehouse	N	n/a	Elevation 12	DR/OGS
375		Warehouse	N	n/a	Elevation 12	DR/OGS
376		Warehouse	W	n/a	Elevation 13	DR/OGS
377		Warehouse	W	n/a	Elevation 13	DR/OGS
378		Warehouse	S	n/a	Elevation 14	DR/OGS
379		Warehouse	S	n/a	Elevation 14	DR/OGS
380		Warehouse	S	n/a	Elevation 14	DR/OGS
381		Warehouse	S	n/a	Elevation 14	DR/OGS
382		Warehouse	S	n/a	Elevation 14	DR/OGS
383		Warehouse	S	n/a	Elevation 14	DR/OGS
384		Warehouse	S	n/a	Elevation 14	DR/OGS
385		Warehouse	S	n/a	Elevation 14 - orthophoto	DR/OGS
386		Warehouse	S	n/a	Elevation 14 - orthophoto	DR/OGS
387		Northlight shed	N	n/a	Elevation 15	DR/OGS
388		Northlight shed	N	n/a	Elevation 15	DR/OGS
389		Northlight shed	N	n/a	Elevation 15	DR/OGS
390		Northlight shed	N	n/a	Elevation 15 - orthophoto	DR/OGS
391		Northlight shed	W	n/a	Elevation 16	DR/OGS
392		Northlight shed	W	n/a	Elevation 16	DR/OGS
393		Northlight shed	W	n/a	Elevation 16	DR/OGS
394		Northlight shed	W	n/a	Elevation 16	DR/OGS
395		Northlight shed	W	n/a	Elevation 16	DR/OGS
396		Northlight shed	W	n/a	Elevation 16	DR/OGS

1. SITE CODE: Ebor Mills 2019						
Frame number	Film type	Contexts	Facing	Scales	Description	Initials
397		Northlight shed	W	n/a	Elevation 16	DR/OGS
398		Northlight shed	W	n/a	Elevation 16	DR/OGS
399		Northlight shed	W	n/a	Elevation 16	DR/OGS
400		Northlight shed	W	n/a	Elevation 16	DR/OGS
401		Northlight shed	W	n/a	Elevation 16	DR/OGS
402		Northlight shed	W	n/a	Elevation 16	DR/OGS
403		Northlight shed	W	n/a	Elevation 16	DR/OGS
404		Northlight shed	W	n/a	Elevation 16	DR/OGS
405		Northlight shed	W	n/a	Elevation 16	DR/OGS
406		Northlight shed	W	n/a	Elevation 16	DR/OGS
407		Northlight shed	W	n/a	Elevation 16	DR/OGS
408		Northlight shed	W	n/a	Elevation 16	DR/OGS
409		Northlight shed	W	n/a	Elevation 16	DR/OGS
410		Northlight shed	E	n/a	Elevation 16b	DR/OGS
411		Northlight shed	S	n/a	Elevation 17	DR/OGS
412		Northlight shed	S	n/a	Elevation 17	DR/OGS
413		Northlight shed	S	n/a	Elevation 17	DR/OGS
414		Northlight shed	S	n/a	Elevation 17	DR/OGS
415		Northlight shed	S	n/a	Elevation 17	DR/OGS
416		Northlight shed	S	n/a	Elevation 17	DR/OGS
417		Northlight shed	S	n/a	Elevation 17	DR/OGS
418		Northlight shed	S	n/a	Elevation 17	DR/OGS
419		Northlight shed	S	n/a	Elevation 17	DR/OGS
420		Northlight shed	S	n/a	Elevation 17	DR/OGS
421		Northlight shed	S	n/a	Elevation 17	DR/OGS
422		Northlight shed	S	n/a	Elevation 17	DR/OGS
423		Northlight shed	S	n/a	Elevation 17	DR/OGS
424		Northlight shed	E	n/a	Elevation 18	DR/OGS
425		Northlight shed	S	n/a	Elevation 18	DR/OGS
426		Northlight shed	E	n/a	Elevation 18	DR/OGS
427		Northlight shed	E	n/a	Elevation 18	DR/OGS
428		Northlight shed	E	n/a	Elevation 18	DR/OGS
429		Northlight shed	S	n/a	Elevation 19	DR/OGS
430		Northlight shed	E	n/a	Elevation 20	DR/OGS
431		Northlight shed	E	n/a	Elevation 20	DR/OGS
432		Northlight shed	E	n/a	Elevation 20	DR/OGS
433		Northlight shed	E	n/a	Elevation 20	DR/OGS
434		Northlight shed	E	n/a	Elevation 20	DR/OGS
435		Northlight shed	E	n/a	Elevation 20	DR/OGS
436		Northlight shed	E	n/a	Elevation 20	DR/OGS
437		Northlight shed	E	n/a	Elevation 20	DR/OGS
438		Northlight shed	E	n/a	Elevation 20	DR/OGS
439		Northlight shed	E	n/a	Elevation 20	DR/OGS
440		Northlight shed	E	n/a	Elevation 20	DR/OGS
441		Northlight shed	E	n/a	Elevation 20	DR/OGS
442		Northlight shed	E	n/a	Elevation 20	DR/OGS
443		Northlight shed	E	n/a	Elevation 20	DR/OGS
444		Northlight shed	E	n/a	Elevation 20	DR/OGS
445		Northlight shed	E	n/a	Elevation 20	DR/OGS
446		Northlight shed	E	n/a	Elevation 20	DR/OGS
447		Northlight shed	E	n/a	Elevation 20	DR/OGS
448		Northlight shed	E	n/a	Elevation 20	DR/OGS
449		Northlight shed	E	n/a	Elevation 20	DR/OGS
450		Northlight shed	E	n/a	Elevation 20	DR/OGS
451		Northlight shed	E	n/a	Elevation 20	DR/OGS
452		Northlight shed	E	n/a	Elevation 20	DR/OGS
453		Northlight shed	E	n/a	Elevation 20	DR/OGS
454		Northlight shed	E	n/a	Elevation 20	DR/OGS
455		Northlight shed	E	n/a	Elevation 20	DR/OGS
456		Northlight shed	E	n/a	Elevation 20	DR/OGS
457		Northlight shed	E	n/a	Elevation 20	DR/OGS
458		Northlight shed	E	n/a	Elevation 20	DR/OGS
459		Northlight shed	E	n/a	Elevation 20	DR/OGS
460		Northlight shed	E	n/a	Elevation 20	DR/OGS
461		Northlight shed	E	n/a	Elevation 20	DR/OGS
462		Northlight shed	E	n/a	Elevation 20	DR/OGS
463		Northlight shed	E	n/a	Elevation 20	DR/OGS

1. SITE CODE: Ebor Mills 2019						
Frame number	Film type	Contexts	Facing	Scales	Description	Initials
464		Northlight shed	E	n/a	Elevation 20 - orthophoto	DR/OGS
465		Northlight shed	SE	n/a	Overview photo	DR/OGS
466		Chimney	NE	n/a	Chimney	DR/OGS
467		Chimney	NE	n/a	Chimney	DR/OGS
468		Chimney	NE	n/a	Chimney	DR/OGS
469		Chimney	NE	n/a	Chimney	DR/OGS
470		Chimney	NE	n/a	Chimney	DR/OGS
471		Chimney	NE	n/a	Chimney	DR/OGS
472		Chimney	NE	n/a	Chimney	DR/OGS
473		Chimney	NE	n/a	Chimney	DR/OGS
474		Chimney	NE	n/a	Chimney	DR/OGS
475		Chimney	NE	n/a	Chimney	DR/OGS
476		Chimney	NE	n/a	Chimney	DR/OGS
477		Chimney	NE	n/a	Chimney	DR/OGS
478		Chimney	NE	n/a	Chimney	DR/OGS
479		Chimney	NE	n/a	Chimney	DR/OGS
480		Chimney	NE	n/a	Chimney	DR/OGS
481		Chimney	NE	n/a	Chimney	DR/OGS
482		Chimney	NE	n/a	Chimney	DR/OGS
483		Chimney	NE	n/a	Chimney	DR/OGS
484		Chimney	NE	n/a	Chimney	DR/OGS
485		Chimney	NE	n/a	Chimney	DR/OGS
486		Chimney	NE	n/a	Chimney	DR/OGS
487		Chimney	SE	n/a	Chimney	DR/OGS
488		Chimney	S	n/a	Chimney base	DR/OGS
489		Chimney	S	n/a	Chimney - orthophoto north face	DR/OGS
490		Chimney	B	n/a	Chimney - orthophoto south face	DR/OGS
491		Warehouse	N	n/a	Warehouse niche	DR/OGS
492		Warehouse	N	n/a	Warehouse niche	DR/OGS
493		Warehouse	NE	n/a	Warehouse niche	DR/OGS
494		Warehouse	S	n/a	Warehouse niche	DR/OGS
495		Ebor Mills	W	n/a	Aerial view	DR/OGS
496		Ebor Mills	W	n/a	Aerial view	DR/OGS
497		Ebor Mills	SW	n/a	Aerial view	DR/OGS
498		Ebor Mills	SW	n/a	Aerial view	DR/OGS
499		Ebor Mills	S	n/a	Aerial view	DR/OGS
500		Ebor Mills	S	n/a	Aerial view	DR/OGS
501		Ebor Mills	SE	n/a	Aerial view	DR/OGS
502		Ebor Mills	E	n/a	Aerial view	DR/OGS
503		Ebor Mills	NE	n/a	Aerial view	DR/OGS
504		Ebor Mills	NE	n/a	Aerial view	DR/OGS
505		Ebor Mills	N	n/a	Aerial view	DR/OGS
506		Ebor Mills	NW	n/a	Aerial view	DR/OGS
507		Ebor Mills	W	n/a	Aerial view	DR/OGS
508		Ebor Mills	SW	n/a	Aerial view	DR/OGS
509		Ebor Mills	Vertical	n/a	Aerial view - Chimney	DR/OGS
510		Ebor Mills	Vertical	n/a	Aerial view	DR/OGS
511		Ebor Mills	Vertical	n/a	Aerial view	DR/OGS
512		Ebor Mills	Vertical	n/a	Aerial view - orthophoto	DR/OGS

APPENDIX C: PHOTOGRAPHS