



**Former Mill Building**

**Dobroyd Mills**

**Jackson Bridge, Hepworth**

**Holmfirth, HD9 1AF**

**Client:** Mr Z Hinchcliffe  
**Project Number:** 15271  
**Date:** 22<sup>nd</sup> May 2016

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## **1.0 BRIEF**

- 1.1 Instructions were given to this office by Ms Rachel Slater of KPP Architects on behalf of Mr. Z Hinchcliffe, to carry out a structural inspection of Dobroyd Mill which is a disused mill building at Jackson Bridge near Holmfirth.
- 1.2 The brief was to inspect the existing building with a view to conversion into habitable accommodation.

## **2.0 LIMITATIONS OF INSPECTION AND REPORT**

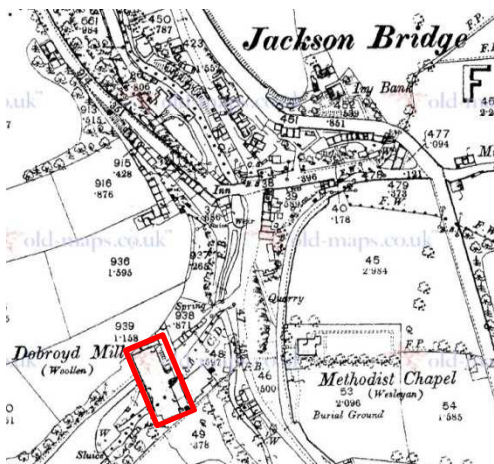
- 2.1 Dudleys Consulting Engineers have prepared this report for the sole use and benefit of the client and/or his appointed agent only and no liability is accepted to any third party who may seek to rely on the whole or any part of this report.
- 2.2 Comments are restricted to those elements of the structure which are load bearing and/or provide stability to the buildings, and to the external envelope. Non-structural items of interior or exterior fabric are excluded, except where deterioration or damage to such items may have caused or may in the future cause, damage to or loss of integrity of the structure.
- 2.3 Comments are restricted to those elements of the structure which were readily available for visual inspection. No “opening up” of the structure or exposure of foundations took place.
- 2.4 It is not practical to itemise every defect and minor defects which are obvious to the layman are not generally noted unless they are symptomatic of a more serious underlying structural fault.
- 2.5 The inspection does not include any services in or to the building and the services of appropriate experts should be sought if deemed necessary.
- 2.6 We have not carried out an exhaustive survey as to whether hazardous or deleterious materials are used in the construction of buildings, neither have we carried out any tests or other investigation to determine the presence or otherwise of methane gases or other noxious substances of any kind whatsoever on the site.

## **3.0 DATE OF INSPECTION**

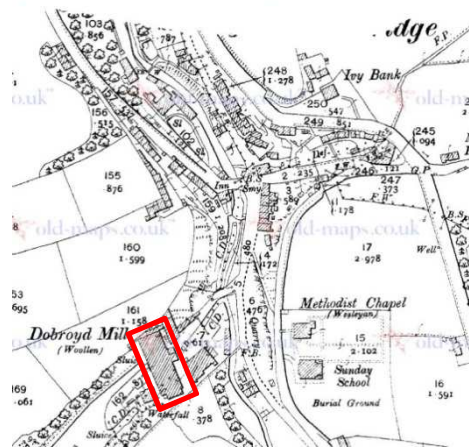
- 3.1 The property was inspected by the undersigned on 29<sup>th</sup> April 2016. The weather was cold, occasional snow with intermittent sunny periods.

#### 4.0 BACKGROUND

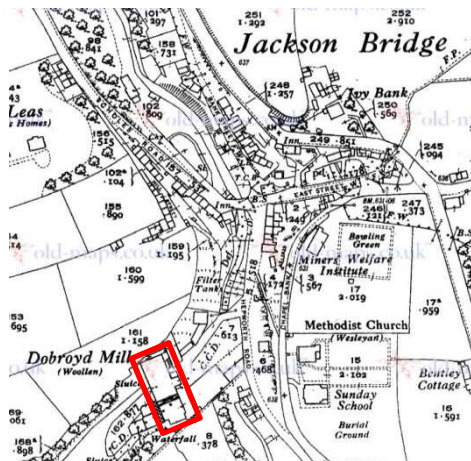
- 4.1 The site is located in Jackson Bridge located approximately two miles southeast of the village of Holmfirth, which is south of Huddersfield. Historic maps are presented below.
- 4.2 Dobroyd Mills was built in 1829 and fine cloth manufacturer Dobroyd Ltd was founded at the mill in 1919. Notable history includes the drowning of a Mary Webster in May of 1869 along with her infant in the mill dam and a fire in September of 1888 causing around £30,000 of damage. The mill closed in 1974, but was re-opened in 1976 under John Woodhead Ltd spinners. The site now has a number of occupiers and businesses.
- 4.3 The site currently consists of a number of other mill buildings surrounded by hardstanding; some demolition waste is stockpiled in the north of the site where some buildings have previously been demolished. Refer to the Site Plan below.
- 4.4 Proposals for the site include the retention of the original four storey stone mill building and conversion into commercial units and the construction of new houses on surrounding areas.



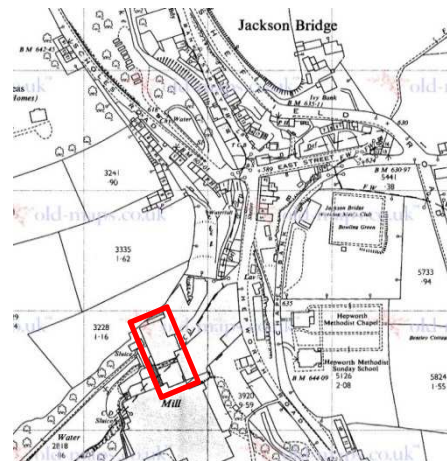
1893 OS County sheet 1:2500



1906 OS County sheet 1:2500

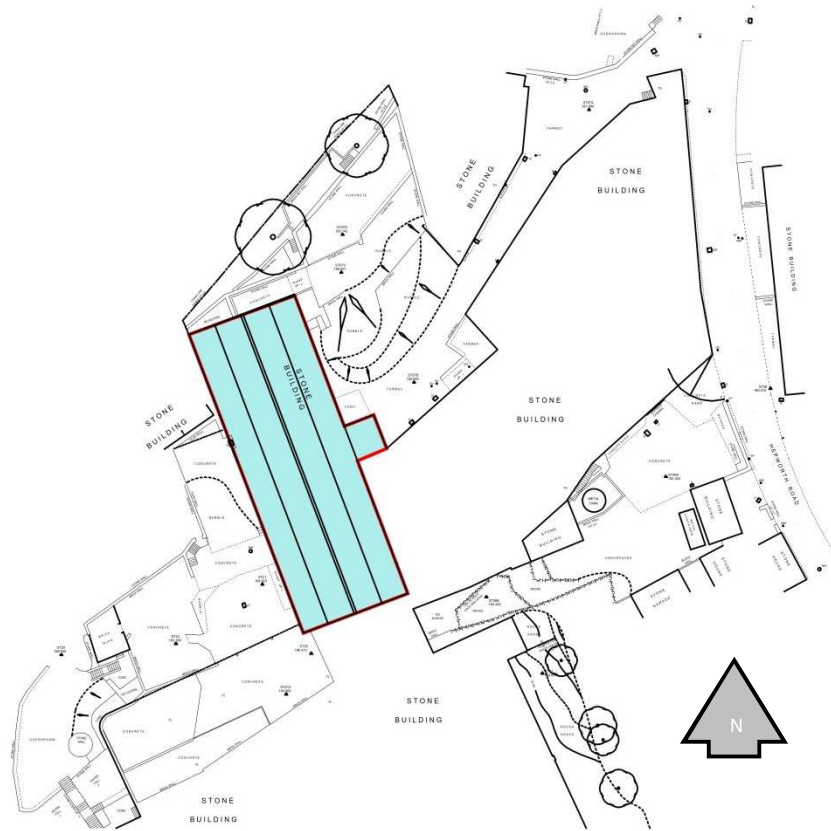


1931 OS County sheet 1:2500



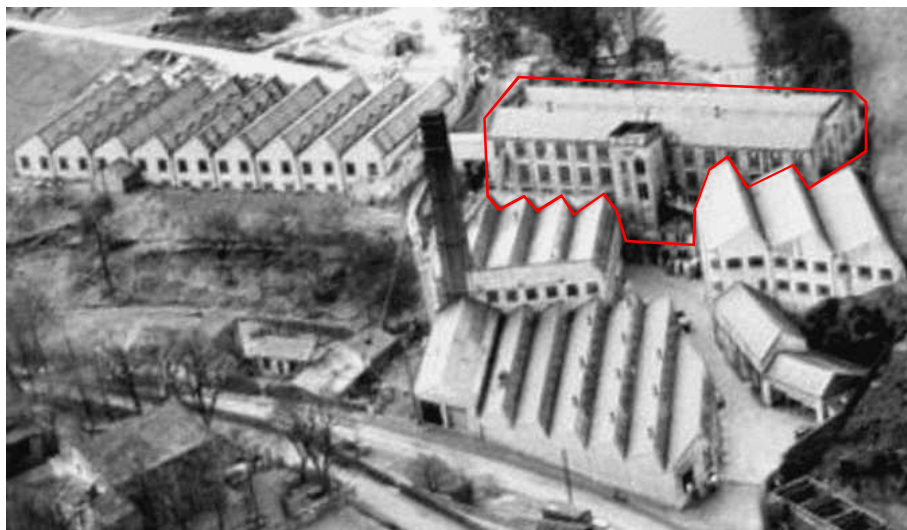
1967 OS sheet 1:2500

## 5.0 OBSERVATIONS - External



**SITE PLAN**

- 5.1 The construction type is typical of textile mills of the late 1800s and comprises of large bedded stonework, timber floors with central cast iron columns and a slate tiled roof supported by timber trusses. The roof being double ridged with a central valley.



Aerial view of the mill c1940 (from the northeast)

- 5.2 The four storey building has an external stair at mid-point along the east elevation serving all floors, however no access to the upper flights was available from this staircase; the treads were noted as being of solid stone at ground floor level.



External staircase with water tank at the top



Lean-to extension now demolished

- 5.3 Access to all floors is via an internal staircase located in the southwest corner of the mill in the junction between the original mill and the mill extension.



View down the side of the north elevation from 1<sup>st</sup> floor, only part access was available to about half way along the gable.

The remains of a lean-to roof is visible between the retaining wall and mail gable wall.

Some vegetation can be seen in the gutter.



Rear view of the mill (southeast elevation), previous ground level extensions now demolished

- 5.4 The whitewashed wall reveals the extent of a now demolished extension, the large central blocked up arch provided access through the mill.
- 5.5 Primary access to the mill is via the factory extension to the south of the mill and due to the change in levels across the site, this provides level access to the top floor of the mill.

## 6.0 OBSERVATIONS – Internal

### 3<sup>rd</sup> Floor and Roof

- 6.1 The double ridged roof is supported by pairs of timber trusses that have no vertical or diagonal members; the central row of cast iron columns, painted yellow, supports the truss ends at the valley line.
- 6.2 The timber floor is generally level and has been historically repaired in some areas as well as having various openings through the floor to accommodate the mill machinery.



Timber roof trusses



Central valley and new roof sheeting

- 6.3 Timber purlins support timber rafters and roof lights which are on the eastern roof slopes. Some more recent repairs have been carried out using new timber and modern profiled metal sheeting.



New roof sheeting



Access to ridge vents

- 6.4 There is some deterioration of the timber floor where leaks have not been repaired however the 3<sup>rd</sup> floor is generally dry.



Birds in the roof and leak



Water and twigs on the floor under the leak

## 2nd Floor

- 6.5 The timber floors is typical of mill floors; a central row of cast iron columns, painted white, supports primary timber beams which are seated in column heads with location bolts to the underside. Timber joists span onto the primary beams.
- 6.6 The timber floor is generally level and has been historically repaired in some areas as well as various openings through the floor to accommodate the mill machinery. There is some damp penetration which can be attributed to lack of good maintenance since the building was vacated.



Views looking towards the north gable

- 6.7 There have been some alterations to gable wall and door positions where access has been created to the mill extensions at the south. There are also subsequent alterations of the original openings.



Alterations to the south gable wall window



Hole through the floor

## 1st Floor

- 6.8 The floor construction differs from the others in that a concrete wearing surface is present; sections of it appear to have been overlaid with steel sheeting; again a central row of cast iron columns, painted yellow and black, supports primary timber beams above.
- 6.9 The floor is generally level and has evidence of corrosion of steel sheeting previously laid over the floor which has corroded during its life evident by the rust staining on the floor surface; the outline of steel sheets can be seen now the sheets have been removed.



Views looking towards the north gable

- 6.10 The right-hand side of the north gable has been rebuilt in new concrete blockwork and there is evidence of water ingress at the left of the new wall.



North Gable: water ingress and damp on the existing wall and part re-built wall

- 6.11 The second floor joists over are built into the gable wall and are showing signs of damp and deteriorated timber at their bearings.



Rust staining on the floor; note an infilled arch below the window



Water ingress through a floor opening

### Ground Floor

- 6.12 The northern part of the ground floor is of concrete construction and has several exposed large ducts in it. These appear to have been used as part of a washing or dyeing process. Again cast iron columns, painted yellow, support the 1<sup>st</sup> floor over.



Ducts in the floor



View of the northwest corner

- 6.13 Where column are located within a floor duct, concrete has been used to around the column base.
- 6.14 The 1<sup>st</sup> floor beams have been boxed out with a metal lath and plaster covering making no part of the 1<sup>st</sup> floor structure visible. We were unable to determine the condition of the underside of the floor.
- 6.15 The remaining part of the ground floor appears to have been used as a workshop. Here the 1<sup>st</sup> floor structure and cast iron columns have been strengthened. Pairs of steel beams can be seen under the floor and the columns have pairs of heavily battened steel channels around them.



View of the south west corner; pairs of steel beams under the 1<sup>st</sup> floor



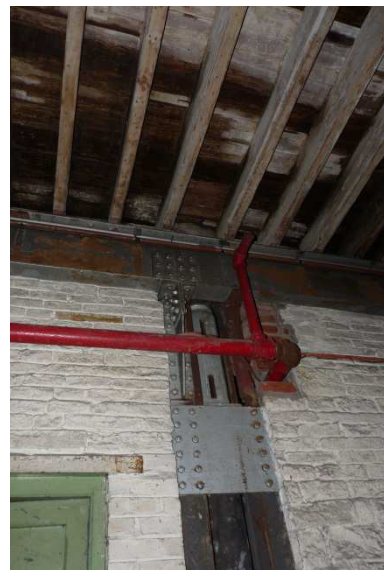
Additional steelwork strengthening



Additional steelwork around a column



Blocked up entrance arched



Strengthened column in a wall

6.16 Further record photographs taken at the time of inspection are included in Appendix A.

## **7.0 CONCLUSIONS**

- 7.1 The roof structure of the building is in fair to good condition and is strong enough in its current condition, with minor repairs, to support the weights associated with re-cladding with a like for like tiled or slate roof.
- 7.2 Subject to a timber condition survey, the second and third timber floors will be able to accommodate the proposed loadings from commercial use with appropriate minor repairs.
- 7.3 The external masonry to the building is in reasonably good condition and will require minor repairs and where some deterioration has taken place.
- 7.4 The ground floor slab in its current condition is not suitable for the proposed conversion as there are too many voids in the slab and is probably not insulated.
- 7.5 The strengthened 1<sup>st</sup> floor suggests that the original floor construction was upgraded possibly to allow the installation of heavy tanks or machinery; it is not likely to require any further strengthening work.
- 7.6 The main building walls, floor and roof are in good structural condition and can be strengthened and repaired where necessary, no strengthening works are envisaged. Wholesale demolition of the building is not required.

## **8.0 RECOMMENDATIONS**

- 8.1 The main building walls should be strengthened and repaired by the insertion of steel stitching pins across the cracks and joints where necessary. Re-pointing and the replacement of rainwater goods and down pipes will be required.
- 8.2 Some repairs will be necessary to the roof covering which will also need to incorporate suitable insulation to meet current Building Regulations.
- 8.3 Historic alterations to openings in the gable walls will require repairing with bonded masonry to match the existing materials.
- 8.4 The roof and floor timbers should be checked by a timber specialist for infestation and deterioration from wet or dry rot.
- 8.5 Where demolition of adjoining buildings and structures is proposed, this must be done carefully to avoid damage to the fabric of the retained mill.
- 8.6 The cladding to the floor support structure at the underside of the 1<sup>st</sup> floor should be opened up to allow a structural inspection of the beams and columns.

- 8.7 Some repairs will be necessary to the roof covering and the rainwater goods which will also need to incorporate suitable insulation.
- 8.8 A new ground floor slab will be required and it should be suitably reinforced and insulated to meet current Building Regulations.
- 8.9 These comments are generalised for the four storey stone mill building on the site only. When refurbishments plans for the building are sufficiently developed, the building will require a detailed survey to identify specific repairs required.

This report has been prepared by the undersigned,



**Adrian KM Smith** IEng, AMIStructE, AMICE  
For Dudleys Consulting Engineers Ltd

## **APPENDIX A**

### **Photographs**

























