Structural Appraisal

of

Mill Building at

Chipping, Lancashire

for 53N

Date: October 2013

Job Number 12-155
1. **Introduction**

1.1. It is proposed to reuse and convert the existing mill building at Chipping to a hotel and this report details the structural condition of the three storey building, recommends repair works and appraises the suitability of the structure for its new use.

1.2. Condition surveys have been carried out by others and these are referred to in this report.

1.3. This report is for the use of our client and cannot be reproduced or relied upon for third parties without permission from ourselves or our client.

1.4. This report concentrates on the structural elements only with the aim of stating that the building structure is capable of supporting a hotel usage.

2. **Description**

2.1. The mill building is a detached three storey structure constructed from solid stone walls supporting timber floors of typical Arkwright construction.

2.2. The general upper floor construction is thick timber floor planks supported by softwood timber joists supported by solid softwood timber beams spanning from the external stone masonry walls to steel or timber columns internally. There are generally two columns per beam.

2.3. The ground floor appears to be a recently modern concrete construction.

2.4. The first and second floor are the timber construction stated above.

2.5. The roof is a traditional timber king post truss at similar positions to the beams below supporting timber purlins and sloping jack rafters all in soft wood. It appears that the bottom boom of the truss once supported a timber floor.

2.6. The building shape indicates various extensions have been added and this is supported by the roof shapes, column positions and type of construction.

2.7. At one end of the structure is housed a disused water wheel surrounded by thick stone walls. The wheel was fed from a water race and pond directly behind the mill.

2.8. Reference to the arrangement of the building can be sort from the attached drawings in the appendix.
3. **Condition and required repairs.**

3.1. The structure is generally in reasonable condition but there is some evidence of timber failure due to water ingress.

3.2. Considering the age of the structure and open plan of the floor plates it is not surprising that the overall structure has suffered from general distortion particularly at the roof level. Some steel tie rods have been introduced but some of the columns at the upper levels show significant lean.

3.3. In addition the main structural beams and roof trusses appear to lack any significant tie between member especially at roof level.

3.4. In the attached drawings it can be seen what proposed works will be necessary to "strengthen" the stability. This includes adding new columns placed to suit the hotel layout and tying the structure together along with providing horizontal restraint back to the existing masonry walls.

3.5. Some of the extensions are in very poor condition and appear to have been constructed poorly at a much later date. It is proposed to replace these with a different construction which is Architecturally led. This provides the opportunity to add further stability to the structure whilst being sympathetic to the heritage of the building.

3.6. Attached are diagrams of the repair works necessary to the external envelope including crack repair and removal of corroded steel lintels.

3.7. We have carried out an assessment of the main timber beams when subject to a fire. It is proposed to expose these main beams but fire protect all other members. The assessment shows the beams to have 1 hour fire resistance.
Appendices:

1. Defect Survey Report
2. Schedule of immediate repair
3. Timberwise report
4. Mill Photographs
5. Drawings
DEFECT SURVEY REPORT

KIRK MILL
CHIPPING
NR PRESTON
CONTENTS

1.0 EXECUTIVE SUMMARY
DEFECT SURVEY REPORT

1.0 EXECUTIVE SUMMARY

<table>
<thead>
<tr>
<th>CLIENT NAME:</th>
<th>53N</th>
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</table>
| PROPERTY ADDRESS: | Kirk Mill  
Chipping  
Nr Preston |
| DATE OF INSPECTION: | 4 May 2011 |
| WEATHER AT TIME: | Dry and sunny |

PROPERTY DESCRIPTION

The property is one of the north-west’s oldest surviving cotton mills of an Arkwright type design, constructed in 1785, which originally operated as a cotton spinning factory comprising a substantial water wheel, powered by the mill pond to the north.

The mill has been subject to additions over time, with the initial extensions to the property being built in 1790 when the property was extended to the west end gable to accommodate additional machinery.

The property is 3 storeys built into the hillside, with later additions added, with its most recent use being as a factory for chair manufacture. It is constructed largely of coursed stone which is of loadbearing construction with stone dressings beneath roofs of slate, and at present corrugated asbestos sheeting laid over substantial timber dual pitched roof structures.

A later rendered brick built flat roof extension is noted to the south face elevation which extends above eaves height and incorporates 2 modern roller shutter doors at ground level, together with a canopy projecting at 1st floor level to facilitate the operations of the former occupier.

Windows are of painted timber sliding sash framed specification incorporating a series of glazing bars set within stone surrounds.

To the rear of the mill there is a large mill pond contained within a sandstone retaining wall. A short sandstone bridge connecting the pond and the mill formerly carried water from the pond to power the water wheel. Used water left the mill via an underground tail race to empty into Chipping brook downstream.

Internally, via access from the east gable elevation, the property comprises a vestibule and a series of store rooms with a timber staircase which extends to the 2nd floor. A passageway leads past the enclosed wheel pit, water wheel and driving gears and leads into the mill’s wooden floored 1st floor open plan accommodation, which is now occupied by chair making machinery. Iron and timber posts provide intermediate support to the floor structures, all of which are of timber specification. A wooden staircase near the north-west corner of the building gives access to the remaining floors, with a spiral stone staircase at the rear, also extending to all floor levels. The ground floor is a concrete floor, which we assume to be ground bearing.

Services include mains gas, water and electricity, although at present these supplies have been terminated.

We understand the property is currently under consideration for Listing, which is likely to be granted on a Grade II basis, and our following report takes account of the recommendations and initial briefing notes, which have been drafted by English Heritage as part of the consultation process.
**OVERVIEW OF BUILDING**

In accordance with your instructions, a full and detailed survey of the premises has been undertaken to identify short term, immediate and emergency repairs required to the premises, with the primary aim to safeguard the existing building fabric and ensure it does not fall into further disrepair.

Our survey identified significant deterioration of the external elements, with water and damp penetration found to be an ongoing issue throughout the property, resulting in timber decay and rot with evidence of live infestation also identified.

These findings are detailed below, along with short term recommendations, which we strongly advise are put in place to safeguard the premises between now and the time of its refurbishment.

**PRINCIPAL SURVEY FINDINGS**

**Roofs**

Throughout all of the slate covered roof slopes, there are large areas where slipped and displaced slates are present, with a number of chipped and damaged slates also noted. Evidence of historic repairs are noted throughout, with lead tingles provided to support slates which have been reinstated. The more seriously affected areas have resulted in openings within the roof coverings, and in their current condition, they no longer provide a wind/watertight barrier.

Rooflights are noted to the front roof slope of the mill building, formed with a timber framework and single glazing set within timber beading. These in turn are dressed with leadwork. Historic maintenance works have been undertaken with each of the rooflights, dressed with perspex sheeting. This does not, however, appear to be providing a waterproof detail, and penetration continues to occur.

To the perimeter, the leadwork is original in the most part, having exceeded its serviceable life it is now brittle and fragile. Temporary flashband repairs are noted as a result.

At the junction of the original mill building and that of the extensions, the roof line is uneven, and has caused a degree of lift, displacing many slates.

To the the right hand gable elevation the slates oversail the stonework and poor detailing has resulted in deterioration of the timber battens. Consequently the slates secured at the verge are generally loose and insecure. Both these locations give rise to the risk of lift and the potential for the roofs to be stripped in their entirety during periods of high winds.

The ridge detail is formed with stone cappings, secured on a cement bedding. The cement bedding is subject to deterioration, with large areas loose and friable. The stonework itself is also subject to a degree of spalling and general ageing, to the extent that some appear fragile.

Upon the rear roof slope sections of the original slate has been replaced by profiled asbestos cement sheeting. Whilst providing a weatherproof detail at present, the profiled sheeting is subject to extensive moss growth which, if left over time, can induce cracking upon the crowns. The age of the sheeting is such that it is friable, with the fixings noted to be heavily corroded the coverings having exceeded their servicable life.

Within the rear off shoot, a single rooflight has been overlaid with mineral surface felt. Due to the pitch of the roof slope and the age of the covering this has deteriorated significantly and no longer provides a waterproof barrier.

Concentrated to the rear roof slopes, hip and ridge detailing is dressed in leadwork, much of which appears original and has been subject to weathering, resulting in numerous locations where the detailing is vulnerable, including a section where the leadwork has lifted or is holed. As with the roof slates themselves, these areas are prone to water penetration.

To the front of the premises towards the left hand side is a small projection extending from the front, which is finished with a flat timber deck, dressed in leadwork. Our inspection found this to be in reasonable condition, commensurate with age, with no immediate defects identified.

The remaining extensions to the front of the premises generally comprise a variety of mono pitched canopies which at one time will have housed various plant and machinery and are currently weathered in a combination of profiled steel and asbestos coverings. These are supported off timber roof structures which remain exposed, and have been subject to extensive rot, and in some locations are in an unstable condition.
A single flat roof projection to the front of the premises is finished with a concrete deck with a cement profile to the perimeter. Generally this was found in repair with no defects noted.

**Roof Drainage**

Roof drainage is formed with a series of lead lined valley gutters combined with perimeter eaves gutters which connect into a series of circular rainwater pipes. These gutters and rainwater pipes are a combination of replacement uPVC, aluminium and original cast iron specification. Our inspection found the roof drainage to be blocked and congested throughout with vegetation and debris which is seriously affecting their operation. Further, gulley outlets have also choked at ground level, and inspections of the original cast iron rainwater pipes are fractured. The result of the condition of the current roof drainage is that water is tending to drain down the face of the stonework resulting not only in penetration internally but general deterioration and spalling and erosion of the stonework itself.

**Elevations**

Large areas of the mortar pointing are friable, most notably where maintenance works have been undertaken in the form of repointing, utilising modern sand/cement render as opposed to light lime mortars, which has resulted in further deterioration and spalling of the stonework over time.

At ground level, the projection to the front elevation is supported in part via steel beams and columns, which are exposed, although have benefited from a paint finish. The deterioration of the paint finish has resulted in corrosion developing, which is significant, resulting in deterioration of this supporting steel beam, compromising its function.

A series of redundant flues, projections, fixtures and fittings are present to the stone faced elevations, which are now redundant. These installations have been subject to corrosion, resulting in expansion of the fixings which has ultimately resulted in cracking and opening up of the stonework.

At high level across the front and rear of the premises, significant erosion of the stonework has occurred as a result of the dilapidated roof drainage and the historic use of sand/cement mortars undertaking maintenance to the property. Also at eaves level are a section of timber beams which extend through the perimeter walls, and are finished flush with the stonework. Their exposed nature has resulted in deterioration, with evidence of rot and infestation noted.

To the rear of the premises, a build up of vegetation growth has developed at ground level climbing up the face of the stonework to which has contributed to moss growth, leading to the stonework becoming damp and saturated. This is exacerbated by the secluded nature of the rear elevation, combined with its orientation, causing the stonework to become saturated.

**External Joinery**

External joinery is in various states of disrepair, most notably with the paint finish deteriorating throughout. Many of the existing windows have been broken/missing and without temporary protection, this is allowing water penetration to occur.

Where exposed, the timbers present to the perimeter of the premises supporting the roof structure, including timber battens are subject to rot, and where exposed are in a fragile condition. The perimeter external doors are generally of a timber specification with paint finish, and these in the most part remain serviceable.

**External Areas**

Typically the external areas comprise hardstandings, which are relatively modern and comprise concrete beds, tarmac surfacing, with the more original stone paths and features to the rear of the property. To the front are a series of pits/voids, currently enclosed by timber boards supported off a series of timber joists are noted. These are subject to rot and decay, and present a risk in terms of health & safety.

Upon the left elevation, an enclosed yard area is noted. This is subject to a build up of standing water, and it was noted that running water is penetrating the retaining wall to the rear. Standing water is ultimately penetrating the building, and this requires immediate attention.

**Internal Areas**

Owing to the deteriorating nature of the external fabric combined with the unheated nature of the premises...
whilst it has been vacant, atmospheric conditions which contribute to outbreaks of wet and dry rot have
arisen. Significant deterioration of timbers is noted to the surrounds of window apertures.

Damp penetration was also observed throughout other areas which has resulted in blown plastered surfaces
and deterioration of the internal fabric. Such penetration has also affected timbers, and there is evidence of
flight holes to suggest infestation, combined with cuboidal cracking, commonly associated with outbreaks of
dry rot.

Whilst not prevalent throughout, we estimate that extensive areas are subject to such deterioration.

We refer you to the photographic schedule of condition which highlights the salient points and other
significant defects prevalent to the building.

<table>
<thead>
<tr>
<th>STATUTORY AND ASSET MANAGEMENT ISSUES</th>
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<tbody>
<tr>
<td>HEALTH &amp; SAFETY</td>
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Particular attention is drawn to the defects identified above, including but not exclusive to the dilapidated
condition of the projections to the front of the premises, combined with the enclosures of the existing pits
and the vulnerable nature of the slates projecting beyond the gable elevations. If not suitably repaired or
addressed, this could give rise to serious damage to the building occurring and potential for partial localised
collapse. Given the building’s close proximity to the highway and nearby residential premises this presents
significant risk.

<table>
<thead>
<tr>
<th>DELETERIOUS MATERIALS AND RECOMMENDATIONS FOR FURTHER TESTING</th>
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During the course of our inspection, we identified suspected deleterious materials, including suspected
asbestos containing materials on site. Given the property has been subject to continual maintenance and
refurbishment throughout its lifetime, there is a strong likelihood that asbestos containing materials will be
present. We recommend your legal advisors make enquiries to ascertain whether an asbestos register is
available for the premises, which should have been updated and managed during the course of the buildings
occupation.

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<tr>
<th>REFURBISHMENT OPTIONS</th>
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It is our understanding the property will be subject to extensive redevelopment/refurbishment as part of your
plan for the entire Kirk Mill site. Whilst our inspection has identified some serious and significant defects, we
are confident that large elements of the building can be repaired, including elements of the external and
internal joinery, which is currently subject to a degree of rot and infestation. Providing the remedial works
recommended below are put in place then we are confident this will avoid the need for wholesale
replacement, which is likely to be key considering the property’s potential listing.

<table>
<thead>
<tr>
<th>SCHEDULE OF REPAIRS – IMMEDIATE &amp; RECOMMENDED PROTECTIVE MEASURES</th>
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</table>

In light of our survey findings, we would strongly recommend the following is implemented, such that the
buildings condition is safeguarded between now and the time of refurbishment.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>SHORT TERM</th>
<th>MEDIUM TERM</th>
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<tbody>
<tr>
<td>1. Demolition of the redundant canopies and projections extending from the</td>
<td></td>
<td>✓</td>
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<tr>
<td>front of the premises whose structures are in a poor condition and give rise</td>
<td></td>
<td></td>
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<tr>
<td>to potential collapse.</td>
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<tr>
<td>2. Installation of protective framed canopy extending across all roof</td>
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<td>✓</td>
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<tr>
<td>coverings, dressed beyond the eaves and verge outside the building</td>
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<tr>
<td>footprint to eliminate risk of water ingress and penetration via the roof</td>
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<td></td>
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<tr>
<td>coverings.</td>
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<tr>
<td></td>
<td>Task Description</td>
<td>Status</td>
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<tr>
<td>---</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------</td>
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<tr>
<td>3.</td>
<td>Overhaul and general maintenance to existing roof drainage, clearing all gulley outlets, gutters and rainwater pipes currently choked. Temporary piecemeal repairs to be undertaken to repair sections of the original cast iron rainwater pipes which are fractured, such that the roof drainage is returned to an operational condition. In conjunction with works cleaning of moss growth on asbestos roofs should also be undertaken.</td>
<td>✓</td>
</tr>
<tr>
<td>4.</td>
<td>Enclose windows and other openings to the external elevations to prevent further weathering and risk of water ingress internally. In conjunction with these works, more secure mechanisms are recommended to the perimeter doors, which in their current state are not fully secure and pose a security risk.</td>
<td>✓</td>
</tr>
<tr>
<td>5.</td>
<td>Undertake specialist timber survey to establish extent of rot and decay of original timbers and whether any infestation is currently live. This to be followed by suitable treatments to arrest any such deterioration.</td>
<td>Instructed</td>
</tr>
<tr>
<td>6.</td>
<td>Install more permanent durable covers to pits within the external areas.</td>
<td>✓</td>
</tr>
<tr>
<td>7.</td>
<td>Cut back all vegetation to the perimeter of the building, clean down moss growth to facilitate drying out process in conjunction with remedial works undertaken to roof drainage.</td>
<td>✓</td>
</tr>
<tr>
<td>8.</td>
<td>Remove all redundant flues and redundant fixtures and fittings secured to the perimeter of the building, which give rise to the deterioration of the elevation stonework.</td>
<td>✓</td>
</tr>
<tr>
<td>9.</td>
<td>Installation of temporary propping and protective measures to adequately support front projection upon the north-west gable to prevent risk of potential movement/collapse.</td>
<td>✓</td>
</tr>
<tr>
<td>10.</td>
<td>Eradicate water ingress to enclosed yard to left side penetrating retaining wall to rear with suitable diversion of re-directing water course at source. Gully outlet within yard to be reinstated</td>
<td>✓</td>
</tr>
</tbody>
</table>

Surveyor: Glen Turnbull
Appendix 2
## SCHEDULE OF IMMEDIATE REPAIR WORKS

### Externals

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<tbody>
<tr>
<td>1</td>
<td>Clear out roof drainage, removing all vegetation growth within gutters, rainwater pipes and present upon external stonework</td>
</tr>
<tr>
<td>2</td>
<td>Carry out temporary repairs as required utilising replacement uPVC gutters and rainwater pipes to re-connect existing drainage into existing gulley outlets</td>
</tr>
<tr>
<td>3</td>
<td>Within lead valleys and gutters, allow for temporary patch repairs in the form of lead or flashband to make good any split or holed sections</td>
</tr>
<tr>
<td>4</td>
<td>Cut back all vegetation present to rear elevation, removing vegetation growth from the stone face to facilitate drying out process</td>
</tr>
<tr>
<td>5</td>
<td>Within rear off shoot housing spiral staircase at 1st floor level, allow for temporary repairs to existing window to make good opening and leave in wind/weathertight condition</td>
</tr>
<tr>
<td>6</td>
<td>To all holed, cracked and damaged windows, allow for temporary repairs and making good with perspex or similar material to return to wind/weathertight condition</td>
</tr>
<tr>
<td>7</td>
<td>Subject to appropriate access provision, allow for overhaul of roof coverings including the following:</td>
</tr>
</tbody>
</table>
|   | - Cleaning down of moss growth from asbestos roof slopes  
|   | - Removal of congestion to lead valleys and gutters  
|   | - Re-securing slipped/displaced slates to roof coverings generally  
|   | - Repairs to existing rooflights to leave in wind/watertight condition  
|   | - Allow for clearing all debris and congestion from gulley outlets to leave fully operational |
| 8 | Subject to approval from Conservation Officer, remove all redundant fixings, flues, boxings and various installations present to the front elevation to leave the stonework free of penetrations |
| 9 | Remove existing timber enclosures over pit within service yard and replace with new steel plates of size and specification to support road vehicles |
| 10| Remove lean-to enclosure towards LHS of front elevation which is subject to rot and deterioration and cart away all materials from site. Remove all other redundant fixings, services et al across front elevation |
| 11| Provide temporary propping to front off shoot to support existing exposed steelwork subject to corrosion and stabilise remaining structure above |
| 12| To improve security, provide bracing on internal doorsets across front elevation at ground level, leaving the single access door to the rear of the premises |

### Internals

#### Showroom

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<thead>
<tr>
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<tbody>
<tr>
<td>13</td>
<td>Allow for installation of plywood floor deck 2m x 1m to be secured over existing floor structure upon rear elevation to make safe existing floor affected by wet rot</td>
</tr>
<tr>
<td>14</td>
<td>Cut out loose and damaged timbers above window aperture in same location and carry out all necessary repairs to roof and roof drainage externally to leave safe, wind/watertight</td>
</tr>
<tr>
<td>15</td>
<td>Carry out timber treatment works and damp treatments as identified in Timberwise</td>
</tr>
<tr>
<td>Medium Term Works</td>
<td></td>
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<tr>
<td>-------------------</td>
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</tr>
<tr>
<td>16. Repoint stonework with suitable lime mortar specification to be prior approved by conservation officer to make good stonework to each elevation, hacking off loose friable renders and existing pointing.</td>
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<tr>
<td>17. Provide temporary tarpaulin framed structure to roof coverings to provide waterproof covering/protection</td>
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Appendix 3
Dear Mr Turnbull

Thank you for your enquiry and instructions to inspect the above property to determine the presence and extent of problems associated with Dry Rot.

By using Timberwise, the largest privately owned British national preservation company, you automatically benefit from the high quality service and value associated with past four decades of Timberwise work.

Our report, proposals and quotations are attached. Please read them carefully to ensure that they meet with your requirement. If not, our surveyor, Bill Hedley, will be pleased to answer any questions you may have.

Please read this report in conjunction with the attached ‘specifications’ and ‘client information’ sheets contained within the folder.

For the purposes of identification, any descriptions are given as if facing the property from the front elevation.

The scope of the report is to identify areas where consolidation treatments are necessary to prevent the timber sections of the building deterioration prior to proposed future refurbishments. As such the report is limited to the immediate areas requiring urgent treatments. A more detailed inspection to the whole building should be undertaken. A further report will be forwarded on request.
THE PROPERTY

The above mentioned property is a large industrial building, circa 1740, constructed of both random and coursed stone, with more recent additions constructed using brickwork. Sections of the building have been rendered externally. The roof detail is formed of traditional twin pitch, clad with slates and asbestos sheeting. Again more recent sections are covered using built up felt roofing systems. The property is situated on a reasonably level site; however the adjoining road slopes from the rear to the front of the building.

At the time of our Inspection the property was unoccupied.

Weather conditions at the time of our Inspection were wet and overcast

EXTERNAL INSPECTION OBSERVATIONS

An external inspection was undertaken from ground floor level only, so defects which may be present could not be observed at the time of the inspection, at high level. The following defects were noted:-

- Cracked and delaminating render was noted to external walls
- Horizontal cracking and failure of the stone lintel to the front extended section.
- Roof covering generally are in poor condition, allowing rainwater to penetrate the fabric of the building.
- Self seeded vegetation noted to a number of the external elevations
- Open and porous mortar joints to several external elevations.

EXTERNAL INSPECTION RECOMMENDATIONS

All external defects should be made good by the clients own contractor under separate contract. If you require any additional information with regards to these defects noted, please do not hesitate to contact our surveyor. We understand the building is due to be covered using a temporary scaffold and sheeting, to limit the ingress of water. This should be undertaken as soon as possible.

INTERNAL OBSERVATIONS

Inspection was restricted to the areas where outbreaks by the True Dry Rot Fungus (*Serpula lacrymans*) were noted, as this type of fungus can spread to areas beyond the source of the initial outbreak.

Further outbreaks of the Wet Rot Fungus (*Coniophora puteana*) and active infestations by the Common Furniture Beetle, (*Anobium punctatum*) were also noted to timbers within the building. Although treatments will be required to these areas, they could b undertaken in conjunction with proposed refurbishment works.

THIRD FLOOR

Former Showroom.

Large fruiting body indicating the presence of the True Dry Rot Fungus (*Serpula lacrymans*) was noted to the base of the kitchen sink unit, extending to floor boarding and timber panelling to the front elevation wall. Large strands of mycelium were noted to the exposed wall surfaces behind the sections of panelling removed.
Further Dry Rot Decay in the form of sheet mycelium growth was evident to the mezzanine floor level above the former showroom area, extending to affect floor boarding and floor joists below. This outbreak was directly below a section of defective roof slating.

**Main Contractors Work**

- Remove and dispose of sink base unit and radiator affixed to the front elevation wall.
- Make good to all disturbed wall plaster upon completion of treatments by Timberwise
- Form temporary roof covering to the building, limiting the amount of surface water penetrating the fabric of the building.
- Make good to all disturbed ceiling plaster upon completion of treatments by Timberwise
- Ensure adequate water and electrical power is provided within a reasonable distance of the work area.

**RECOMMENDATIONS (As detailed on the attached sketch plan)**

**Timberwise Technicians Will**

- Remove the timber panelling as marked on the attached sketch plan
- Remove wall plaster one meter above and below the floor level as marked on the attached sketch plan.
- Remove defective floor boarding from within the treatment area.
- **TOXIC BOX:** Holes are to be formed at 450mm staggered centres in walls in excess of 150mm thickness, floor to ceiling. Fungicidal fluid is to be applied to each hole together with a surface application to the perimeter of the treatment area.
- Apply a liberal application of a combined fungicide fluid to any retained timbers within 1000mm adjacent to the front elevation wall including large timber lintels spanning windows below the affected area.
- All replacement and adjacent timbers are to be treated on site with fungicidal fluid.
- Remove the affected joists and boarding to the mezzanine level flooring, and treat all immediate surrounding retained timber sections.
- On completion of works, remove all debris resulting from our operations, leaving the site clear and tidy.

**CAUSE OF ATTACK:** Leaking and defective roof cladding, and open porous mortar joints, allowing water to penetrate the building, raising moisture level of the adjoining timbers and creating conditions favourable for the development of fungal decay.

Dry Rot spores are ubiquitous and there is no environment free of them.

Spores will germinate and grow in timber with a moisture content of between 20 and 30 per cent. The fine fungal thread (hypha) digests the cellulose and hemi cellulose fractions of the wood, but is unable to attack the structural lignin.

These remain as a brittle matrix which cracks into cubes under differential stresses. Cuboidal cracking is also a characteristic of many wet rots and does not automatically indicate the presence of Dry Rot. Fungal hyphae may clump together into a variety of structures known as mycelia which takes various forms depending on the surrounding conditions.
They may fill a humid cavity as a cotton wool-like mass, or grow across the surface of the timber as grey-white skin. Active Dry Rot has a fresh white or greyish appearance. Some hyphae group together to form conducting strands. Their main function is the conduction of nutrients through inert non-nutrient materials (brickwork etc.) to permit eventual colonisation of other timbers.

Their relatively impervious outer layer, together with an unusual alkaline tolerance, allows them to survive in the mortar layers within masonry and walls and an infested area may be full of Dry Rot strands.

The Dry Rot fungus may tolerate relatively lower moisture contents and, through this and other quirks in its biology, is potentially capable of considerable destruction.

**Client is responsible for:**

- The removal of radiators, sink base unit and any other stored items including personal possessions prior to our arrival on site. Any delay caused due to floor coverings and items not having been removed may become subject to additional cost due to either work commencement being delayed or it not being possible to commence during that visit. Please note the importance of all necessary preparatory works being completed prior to our arrival and commencement on site.

- Re-plaster using a 3:1 sand/cement render incorporating a waterproof additive and skim finish if required.

Please note that no allowance has been made in our quotation for removal or re-instatement of any plumbing, electrical fixtures from the areas to be treated. These will require removal prior to our technicians arriving on site and subsequent re-instatement by others.

**NOTES**

*Our inspection has been limited to the accessible exposed surfaces, and therefore we are unable to comment as to the condition of all timbers that may be present. All timbers adjacent to damp walls must be considered to be at risk from fungal decay.*

The above report is based upon our instructions as we understand them. If any part of this report requires clarification or fails to address your expectation please contact the office/inspector and let us know of your concern immediately.

Our long term guarantee for Timber Treatment works unless otherwise stated in our report will be issued when the final account has been settled. In addition to our guarantee, as we are members of the British Wood Preserving and Damp Proofing Association, we are pleased to offer you the added benefit of the Guarantee Protection Insurance Limited “backup” guarantee. The premium is shown as a separate item on our quotation.
If we can be of any further assistance regarding the above report and quotation please do not hesitate to telephone our surveyor, Bill Hedley on 07970 602062.

Yours sincerely,

Bill Hedley CSRT, CTIS, CRDS
For and on behalf of TIMBERWISE (UK) LIMITED
Quotation and Acceptance

To be returned when quotation is accepted

Mr Glen Turnbull
Crowther Turnbull Booth
75 Great George Street
Leeds LS1 3BR

Property

Kirkmill Malt Brow
Chipping
Preston PR3 2RA

Date
3 June 2011

Your Timberwise Contact is
Bill Hedley CSRT

TO CARRY OUT WORKS AS DETAILED IN REPORT - OUR REF: G43487\BH\JS

* Dry Rot Treatments £ 2,145.00 plus VAT

All the above items where marked * are inclusive of our long term Guarantee

Also available, our full 20 Year Guarantee Insurance including 6% IPT £ 106.00 (Timber)

The above figure comprises of the following:- (Insurance Premium £45, Admin £55 & Insurance Premium Tax £6.00)

Mr/Mrs/Miss Forename(s)……………………………… Surname……………………………… Signed………………………….

Mr/Mrs/Miss Forename(s)……………………………… Surname……………………………… Signed………………………….

Contact Telephone No ……………………………………… Date………………………………

Address to which the invoice should be sent:

Guarantee to be in the name(s) of ………………………………………………………………………………………………

☐ 40% Deposit amount attached or take from debit/credit card as detailed:

£ 1,030.00

☐ Full amount 40% deposit is to be taken from my debit/credit card as detailed immediately and the balance to be taken upon satisfactory completion of the work

Please tick your intended method of payment

Cash ☐ Cheque ☐ Bank Draft ☐ Building Society ☐ Local Auth. Grant ☐
Maestro / Delta Card No ☐ American Express No ☐ Mastercard / Visa Card No ☐ Pay On Line ☐

☐ ☐ ☐ ☐ ☐ ☐ Issue No ☐ ☐ Card Security Code ☐ ☐ ☐ ☐ (on back of card)
TIMBERWISE TECHNICIANS WILL:-

• Remove the timber panelling as marked on the attached sketch plan
• Remove wall plaster one meter above and below the floor level as marked on
  the attached sketch plan.
• Remove defective floor boarding from within the treatment area.
• TOXIC BOX: Holes are to be formed at 450mm staggered centres in walls in
  excess of 150mm thickness, floor to ceiling. Fungicidal fluid is to be applied to
  each hole together with a surface application to the perimeter of the treatment
  area.
• Apply a liberal application of a combined fungicide fluid to any retained timbers
  within 1000mm adjacent to the front elevation wall including large timber lintels
  spanning windows below the affected area.
• All replacement and adjacent timbers are to be treated on site with fungicidal
  fluid.
• Remove the affected joists and boarding to the mezzanine level flooring, and
  treat all immediate surrounding retained timber sections.
• On completion of works, remove all debris resulting from our operations,
  leaving the site clear and tidy.
KIRK MILL PHOTOGRAPHS

Third Floor Former Showroom

Dry Rot noted to the panelling affixed to the front elevation of the third floor former showroom.

Further exposure works to the panelling and floor boards within the alcoves forming the front elevation.

Sheet Mycelium growth to the underside of the mezzanine floor above the former showroom.

Closer view of Dry rot outbreak. Cut out and treat adjoining timbers as detailed within the report.
TERMS AND CONDITIONS OF CONTRACT

THESE CONDITIONS APPLY TO WORKS AND/OR GOODS SUPPLIED BY TIMBERWISE AND TO ANY AGREEMENT BETWEEN THE PARTIES FOR THE PERFORMANCE OF SUCH WORKS AND/OR SUPPLY OF SUCH GOODS.
This report has been prepared for the person, company, partnership or other legal entity named overleaf. It may not be disclosed to or relied upon by a third party without the express prior written consent of a director of the Company. If this report is disclosed to and/or relied upon by a third party then such disclosure, reliance or use is made entirely at the risk of those parties involved and without liability on the part of the Company.

Details of the date and scope of our inspection and the premises (or part thereof) to which it relates are set out overleaf. We have not investigated, considered or reported upon any other matter including, without limitation:

- the future state of the property
- adjoining or adjacent properties
- the general structure of the property
- in the case of timber inspections, timbers exposed to the outside or timbers not visible at the time of inspection
- furniture, doors and gates

Our inspection was not and, should not be relied upon as, a substitute for a structural survey.

Our investigation and this report are limited to those areas of the property that our inspector might reasonably be expected to have accessed at the time of his inspection bearing in mind the safety, state of occupation and furnishing of the property and whether any parts of the property were locked, obscured from view or otherwise inaccessible.

This report and all copyright, trade marks, design rights and other intellectual property rights herein are owned by the Company. This report may not be copied in whole or in part without the express prior written consent of a director of the Company.

This report and the Company’s inspection services are subject to the Company’s standard terms and conditions of supply, a copy of which is available upon request.
Appendix 4
Photograph Schedule

1 : Kirk Mills
2 : The Windsor Building
3 : The Traditional Stone Barn
4 : Main Factory
5 : Main Storage Warehouse
6 : Open Sided Timber Store
7 : Access Route to the Site
1. Kirk Mills
2. The Windsor Building
3. The Traditional Stone Barn
4. Main Factory
5. **Main Storage Warehouse**
6. **Open Sided Timber Store**
7. **Access Route to Site**
Appendix 5
GENERAL NOTES

1. ALL MEASUREMENTS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR.
2. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO JOB.
3. ALL SCRATCHES ETC. TO BE MADE GOOD ON SITE.
4. ALL BOLTS TO ALL CONNECTIONS MUST BE INSTALLED DURING THE ERECTION OF EACH SECTION.
5. REFER TO CLIENTS DRAWINGS AND SPECIFICATIONS FOR DETAILS OF ANY FIRE PROTECTION AND SURFACE FINISHES.
6. ALL EXISTING MEMBER SIZES TO BE CHECKED ON SITE BY CONTRACTOR.
7. ALL CONNECTIONS TO BE DESIGNED BY THE STRUCTURAL STEELWORK SUB CONTRACTOR BASED ON LOADINGS PROVIDED BY THE ENGINEER.
GENERAL NOTES

1. ALL MEASUREMENTS ARE TO BE CHECKED ON SITE BY THE CONTRACTOR.
2. ALL DIMENSIONS TO BE VERIFIED ON SITE PRIOR TO USE.
3. ALL SCAFFOLDING TO BE MARKED GOOD ON SITE.
4. ALL HEATS TO ALL CONNECTIONS MUST BE INSTALLED DURING THE ERECTION OF EACH SECTION.
5. REFER TO CLIENTS DRAWINGS AND SPECIFICATIONS FOR DETAILS OF ANY FIRE PROTECTION AND SURFACE FINISHES.
6. ALL EXISTING MEMBER SIZES TO BE CHECKED ON SITE BY CONTRACTOR.
7. ALL CONNECTIONS TO BE DESIGNED BY THE STRUCTURAL STEELWORK SUB CONTRACTOR BASED ON LOADINGS PROVIDED BY THE ENGINEER.

CDM

Third Floor Plan

Second Floor Plan
The Heath Business & Technical Park, Runcorn, Cheshire WA7 4QX
Tel 01928 563 847                       Email eng@gravitateconsulting.com

Kirk Mill Elevations

gravitate consulting
The Heath Business & Technical Park, Runcorn, Cheshire WA7 4QX
Tel 01928 563 847 Email eng@gravitateconsulting.com

S3 N

CHIPPING

Project

Kirk Mill Elevations

Status    INFO   Date:   Dec 2013
Scale     1:100   Job Number:  LJ-155
Drawn By  JT   Drawing Number:  N
Checked By  RS   Revision:  A
Remove Steel Fixing & Make Good

Remove Metalwork and make good masonry

Repoint elevation
ELEVATION 4

- Remove steel brackets x2 and make good
- Remove vent and repair masonry to match existing
- Remove steel bracket and make good
- Remove 4 no Bracket Plates and make good
- Repoint Wall

ELEVATION 5

- Remove all steel overhead cable fixings and make good
ELEVATION 6

- Remove flue, brackets and fixings and make good masonry.
- Repoint wall.
- Sandblast existing steel beams, repair as required and repaint.