

Address: White Hart Hotel

Job Number: 220342

Date: 22nd of June 2022



Structural Appraisal of Outbuilding

at:

**The White Hart Hotel
Alton
Staffordshire**

Client:

**Mr R Goodley
17 High Street
Alton
Staffordshire
ST10 4AQ**

**C2C Consulting Engineers Ltd
The Old Church Offices
Shelton New Road
Hartshill, Staffs
ST4 6DP**

Tel: 01782 980330
Fax: 01782 980331
Email: mail@c2cconsulting.co.uk



Address: White Hart Hotel

Job Number: 220342

Date: 22nd of June 2022



Contents:

1.0	INTRODUCTION
2.0	GENERAL DESCRIPTION
3.0	SOUTH-WEST ELEVATION - FRONT
4.0	NORTH-WEST ELEVATION – GABLE
5.0	SOUTH-EAST ELEVATION - GABLE
6.0	NORTH-EAST ELEVATION – REAR
7.0	INTERNAL ROOMS WORKSHOP
8.0	MIDDLE STORE
9.0	RIGHT HAND SIDE STOREROOM
10.0	CONCLUSIONS AND RECOMMENDATIONS

1.0 INTRODUCTION

- 1.1 C2C Consulting Engineers Ltd were instructed to carry out a Structural Inspection of the detached sandstone outbuilding located alongside the White Hart Hotel, Alton, Staffordshire. Our Engineer visited the site on Thursday the 9th of June 2022 to carry out this inspection.
- 1.2 The detached outbuilding, a former barn/cattle shed is currently being utilised as covered storage for vehicles, other equipment and kitchen materials. This survey is focused on the outbuildings in respect of its structural integrity and suitability for alterations and conversion to commercial premises in accordance with Forefront Development Consulting drawings.
- 1.3 The inspection comprised a general, visual examination of the exposed accessible surfaces and areas on the building. We have not examined the woodwork, foundations, various surfaces and other parts of the building structure and fabric concealed at the time of inspection and we are, therefore, unable to comment on the condition of such areas. We have not consulted with the Local Authority or other statutory bodies.

2.0 GENERAL DESCRIPTION

- 2.1 The former barn is accessed via a tarmac drive from the high street and is located directly behind the White Hart Hotel.
- 2.2 St Peters Church is situated to the rear of the barn structure. The church yard being build up at the back of the building by approximately 2 – 2.5 metres above the slab level of the barn.
- 2.3 A dry-stone wall forms the boundary between the church yard and the adjacent site where the barn structure appear to have been constructed directly alongside.
- 2.4 The former barn building is a single storey structure constructed of solid sandstone block, circa 200mm thickness, under a pitched tiled roof, formed of a system of king post type trusses which span between front and rear elevations. These supporting purlins which span between the trusses and internal/ external masonry walls have jack rafters located between.
- 2.5 Ground levels to the front of the barn are generally level, however, there is a gradual fall towards the North-west Elevation, before the levels drop more steeply across the adjacent allotments in a North Westerly direction.
- 2.6 The building is set to a mixture of tarmac hard standing to the front and soft landscaping to the rear of the barn.

3.0 SOUTH-WEST ELEVATION

- 3.1 This elevation has a single window opening noted to the far-left hand side having a sandstone block lintel providing support over. Three further full height gated openings

are located throughout the extent of this elevation, having sandstone pillars located between the openings.

- 3.2 The sandstone blockwork generally appears to be in reasonable order and is straight and plumb. Weathering is noted throughout to the stone faces with significant perished mortar joints.
 - 3.3 The wall appears to be locally leaning outwards to the section of stonework to the left-hand area above window head height.
 - 3.4 The sandstone lintel above the window opening has failed, resulting in a large open diagonal fracture where the masonry block has dropped onto the timber window frame below.
 - 3.5 Evidence of mechanical damage is noted to the stone pillars where corners of blocks have broken away as a result of direct collision damage and failures of historic door/gate fixings.
 - 3.6 A large timber wall plate is located at the head of the wall finished flush with the outside face of the external stone and extending into the barn beyond the inner face. The timber indicates deformation along the line of the front elevation, as the head of the wall appears to drop as it runs towards the North-west Elevation.
 - 3.7 The roof structure is in a poor condition with significant distortion and deflection noted along its length. There are many dislodged, damaged or missing tiles noted throughout.
 - 3.8 The guttering is noted along the eaves. however this, appears to be in a substandard condition.
- 4.0 NORTHWEST ELEVATION
- 4.1 This elevation has no openings located within and is situated directly adjacent to an external store.
 - 4.2 The wall appears to be in reasonable order and appears to be straight and plumb.
 - 4.3 Some weathering is noted to the stone faces with significant perished and open mortar joints throughout.
 - 4.4 Sections of clay bricks and slate tiles are noted in two locations providing an infill to the general sandstone brick elevations.
 - 4.5 An arrangement of guttering has been constructed across this elevation connecting pipe work from the front and rear elevations at differing heights, discharging via a down pipe into water butts.

5.0 SOUTH-EAST ELEVATION

- 5.1 This elevation has no openings within, other than a small ventilation hole located directly under the apex point.
- 5.2 A large proportion of this elevation to the right-hand side is covered in vegetation, limiting the area that can be satisfactory inspected.
- 5.3 The wall appears to be in reasonable condition and appears straight and plumb. Some minor weathering is noted to the sandstone faces and mortar joints.
- 5.4 A diagonal fracture is noted within the mortar joint, starting at the left-hand side at eaves level working its way up three block courses. The section of mortar within the joint along this fracture line has become de-bonded and fallen away.

6.0 NORTH-EAST ELEVATION

- 6.1 The rear elevation backs directly on to the church yard where the barn has been built into the embankment.
- 6.2 Ground levels drop across this elevation, with a height difference of approximately 300mm between ground and gutter to the left-hand side increasing to approximately 800 mm to the right-hand corner.
- 6.3 The wall section to the left-hand side appears to be of a concrete block construction and appears to have been rebuilt at some point in the past.
- 6.4 The central section has several loose laid bricks noted between ground and underside of gutter and fascia board.
- 6.5 The brickwork, where exposed to the righthand side appears to be in reasonable order and has two small vent holes noted below wall plate level.
- 6.6 The roof structure is in need of an overhaul with significant deformation noted across its length and numerous broken and dislodged tiles notes particularly across this central section at eaves level.
- 6.7 Rainwater goods are present; however, these are in poor condition and broken in several places.

7.0 INTERNAL ROOMS – WORKSHOP

- 7.1 This area is located adjacent the North-west elevation. The ground floor appears to be of a random nature, formed of stone blocks, brick paviors and sections of cast concrete.
- 7.2 The rear wall forms the retaining structure and appears to be constructed of intermediate stone columns with panels of masonry brickwork between.

- 7.3 The stone columns appear to have been constructed vertical, with the masonry infill panels vertical up to approximately 1.5 metres above which it tapers back at an angle up to the adjacent external ground level where the brickwork appears to have been built vertical again up to underside of wall plate.
- 7.4 A green coloration is noted to the rear wall caused by significant moss growth due to water ingress.
- 7.5 The eaves level/wall plate to the front elevation appears to have been constructed approximately 300mm below the level of the wall plate to the rear elevation. The roof structure, purlins and trusses also appear to have been built to reflect the wall plate height differences as there are no obvious indications that the roof pitches differs significantly between the front and rear sections.
- 7.6 A masonry partition wall is constructed full height between the workshop and adjacent middle store.

8.0 MIDDLE STORE

- 8.1 The ground floor to this area has a concrete paving slab covering and currently contains large amounts of storage obscuring the area from a more detailed inspection.
- 8.2 The floor level in this area appears to be approximately 150mm higher than the adjacent workshop area.
- 8.3 The rear retaining wall appears to be of a random size dry stone wall nature, constructed between the stone pillars.
- 8.4 A timber panel partition wall separates the adjacent storeroom.

9.0 RIGHT-HAND SIDE STOREROOM

- 9.1 This space has an exposed earth floor. The rear wall appears to be of a concrete block construction and appears to have been re-built in more recent times.
- 9.2 The blockwork wall appears to have been built off a concrete plinth, which upstands approximately 300mm from the ground level. There are three drainage weep holes noted at the base of the retaining wall.
- 9.3 The mortar joints to the inside face of the sandstone gable wall appears to be significantly perished with evidence of weathering noted to the stone faces.
- 9.4 Some green coloration from moss growth and white staining is noted to the rear wall, considered to be as a result of water ingress.

10.0 CONCLUSIONS AND RECOMMENDATIONS

- 10.1 From the observations made it would appear that the barn building is in reasonable order with no evidence of any ongoing settlement or subsidence noted. However past settlement is considered likely due to the apparent mis-alignment of adjacent wall plate heights and deformation of the wall plate along the front elevation. Moreover, this could equally be as a result of its original construction.
- 10.2 In general, the damage noted was confined to the superstructure and was caused by a variety of reasons.
- 10.3 These encompassing, weathering, mechanical damage, thermal and differential movement coupled with the various alterations that have been made to the building. We understand that the building is to be converted to form a commercial premises in the form of a microbrewery.
- 10.4 We would, however, recommend that a formalised regime of repair be drawn up which encompasses such items as the following.
- 10.5 Formation of new ground bearing slabs, care should be taken when carrying out this operation not to undermine any existing walls which may require underpinning should the proposed formation level be lower than the existing foundation level. We would advise that several trial holes are excavated to the elevations around the barn to establish the depth of the existing foundations to give an early indication of the potential extent of any works that maybe required.
- 10.6 The existing retaining wall structure to the rear of the barn is not considered adequate to today's standards. Consideration should be given to forming a new retaining structure in front of the existing wall, incorporating its new base foundation within the structural ground slab.
- 10.7 The retaining wall should be adequately waterproof utilising two separate forms of tanking.
- 10.8 Introduction of damp proof course.
- 10.9 The formation of new insulated internal wall coverings.
- 10.10 The roof structure is in poor condition with much distortion noted throughout. Some evidence of roof spread is noted at eaves level. Roof spread occurs when the downward pressure from the weight of the roof thrusts the roof timbers outwards, which in situations where there are no ceilings present can result in rotation of the wall plate and the head of the wall being pushed outwards. The roof structure and finishes should be completely overhauled and replaced with a suitably designed structure to support both vertical and horizontal forces. Should some of the existing king post trusses be considered to be in satisfactory condition, then these could be treated and used for cosmetic purposes within the proposed refurbished building.
- 10.11 With regards to the timber in general, if it is proposed to re-use any elements then an inspection should be undertaken by a specialist to establish whether any damage has

Address: White Hart Hotel

Job Number: 220342

Date: 22nd of June 2022



been caused due to insect infestation and/or damp and any recommendations being undertaken accordingly.

- 10.12 The condition of the masonry in general is satisfactory and in the main will only require very localised taking down and rebuilding. Namely, the section of masonry above the left-hand side window to the south-west elevation.
- 10.13 External masonry requires re-pointing with areas of weathered/spalled stonework been made good. Any fractured blocks should be removed and replaced with the necessary crack repairs been undertaken.
- 10.14 Formalisations of lintels above all apertures. Removal of timber lintels and other timber elements within wall structure where applicable. The stone lintel above the window opening to the South-west elevation is to be replaced given it has failed.
- 10.15 The introduction of new rainwater goods and formalisations of drainage on site.
- 10.16 All vegetation and trees should be cleared from along side the building to remove the potential for structural problems and ongoing maintenance issues.
- 10.17 Notwithstanding the points above, the building is of substantial construction. C2C consulting are satisfied that the structure is sufficiently robust and entirely suitable for conversion providing the remedial works as detailed above are incorporated into the schedule of work.

Yours Sincerely

A handwritten signature in black ink, appearing to read 'Tim Wright'.

Tim Wright

Associate Director

BEng.(Hons) IEng AMIStructE

For and on behalf of C2C Consulting Engineers Ltd

Address: White Hart Hotel

Job Number: 220342

Date: 22nd of June 2022



Standard Scope and Limitations

This report has been prepared to provide guidance on the structural condition of the property.

We have only inspected and reported upon the defects within the property, as instructed by the client.

The report is based upon a visual inspection of those areas of the property that were readily accessible at the time of the inspection. It is not normal practice to remove internal finishes, lift carpets or move furniture etc. As such, comments cannot be made on those parts of the structure that were inaccessible or hidden from view at the time of the inspection.

We have limited our report to the most important aspects as stated in the text. The report does not provide a checklist of all repairs and improvements that might be desirable.

Our inspection did not include:-

1. The excavations of any trial holes to establish the depth of foundations and bearing strata.
2. Inspection of non-structural items such as doors, door frames, windows, floor, wall and ceiling finishes, other than where they are relevant to structural movement.
3. We have not inspected any services such as electric, gas, water and drainage.
4. We have not inspected those parts of the structure, which were covered, unexposed or inaccessible and we are therefore unable to report that such parts of the property are free from defect.

This report is for the private and confidential use of the client for whom it is prepared.