

## **STRUCTURAL INSPECTION**

Of

### **THE TALBOT HOTEL AND ADJACENT BARN**

For

### **SUNDERLAND PEACOCK & ASSOCIATES LTD**

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## 1.0 INTRODUCTION

Acting on instructions from Mr Richard Maudsley of Sunderland Peacock and Associates, Reid Jones Partnership carried out a structural inspection of the Talbot Hotel and adjacent barn building at Talbot Street, Chipping, Lancashire. Last used as a public house and restaurant, the building has been disused and vacant for at least 12 years. Built originally for agricultural purposes, the adjoining barn is also no longer used and lies empty.

Current proposals are to renovate the hotel building and convert the barn to a new use. The purpose of the inspection was to assess the structural condition of both buildings and make recommendations on essential structural repairs considered necessary as part of conversion and general refurbishment works.

Mr John Reid BSc CEng MICE MStructE of Reid Jones Partnership Ltd carried out the structural inspection on Thursday 25<sup>th</sup> November 2021. Photographs are included within Appendix A.

The inspection was of a visual nature, and no opening up of the fabric of the building was carried out.

This report shall be for the sole use of Sunderland Peacock and Associates and their professional advisors and shall not be relied upon by any other party without the full written consent of Reid Jones Partnership Ltd.

## 2.0 DESCRIPTION

For orientation purposes, the front of the building faces Talbot Street, and the right- and left-hand sides of the building are those viewed when standing at the front of the property and looking directly at the front wall.

The hotel is a stone-built two-storey building constructed in the late 18<sup>th</sup> century (**photos 1 & 2**). It is Grade II listed. Two single storey extensions at the rear of the property are of more recent construction. The ground floor comprises a bar, several lounges, toilets and a kitchen. On the first floor is landlord's living accommodation and a snooker room. An attic floor is located within the roof space and may have originally provided accommodation for guests or servants but appears to have been left unused for some considerable time. A cellar or beer vault lies under part of the hotel, accessed through a covered yard. Further storerooms are located on the ground floor on the right-hand side of the main building. The barn lies to the left of the hotel and is generally of single storey construction, but with a two-storey area attached to its left-hand side (**photos 3 & 4**). It is also stone-built and of a similar age to the hotel.

The walls of both the hotel and barn are of traditional, solid, stone masonry, with the front of the hotel having a rendered finish. Stone quoins are provided at external corners, and most window and door openings have dressed stone surrounds. Stone arches are provided above the main front and rear doors of the barn. A slate covering is provided on the main hotel roof and the front roof slope of the barn, with the rear roof slope of the barn mostly covered with stone flags. The roof structure of both hotel and barn comprises timber rafters on timber purlins, supported in turn by timber trusses. The upper floors of the hotel are of timber construction, and the ground floors of both hotel and barn are of stone flags or concrete. Stone vaulted ceilings are provided over the cellar areas.

## 3.0 OBSERVATIONS

The following observations were made during the inspection of the property:

### Hotel – Attic Space

- The roof has been re-covered relatively recently and provided with new rafters and felt (**photo 5**). Some original rafters remain and show signs of extensive decay due to insect infestation (**photo 6**).
- The original timber trusses and purlins remain in place. Signs of serious wet-rot decay were noted in the timber purlins, in particular at wall bearing positions and close to rooflights on the front slope (**photos 7 & 8**). Evidence of historic repairs to these purlins was noted. Some timber purlins show a noticeable down-slope sag in the middle of their span. The truss in the right-hand attic space has been infilled with timber framing for a now-removed plaster wall (**photo 9**). One internal strut has been removed to form a door opening in the wall. The main trusses appeared to be free of wet-rot decay, but access to inspect the more vulnerable truss feet at the external walls was restricted. Signs of insect infestation were noted in many of the timber purlins and in both trusses.
- The original ceiling joists remain, but the lath-and-plaster ceiling has been removed.
- Cracks were noted in the left-hand gable wall (**photo 10**), internal dividing wall (**photo 11**) and in the right-hand gable wall above and to the side of the chimney breast of the right-hand gable wall, where it was noted that the timber lintel had decayed (**photo 12**).
- The timber floor of the attic is partly supported on the bottom tie-beam of the roof trusses and is uneven and not level, with many missing floorboards.

### Hotel – First Floor

- The undersides of the main roof truss tie beams are visible behind partly-detached timber cladding. Signs of insect infestation were noted (**photo 13**).
- There is a vertical crack of some 15mm width in an internal wall of the rear left-hand bedroom, close to the door (**photo 14**).
- The ceiling above the bathroom has partially collapsed (**photo 15**).
- The inner wall of the room to the rear of the snooker room shows a significant lean to the right (**photo 16**).
- Damp and detached plaster were noted on the left-hand wall of the snooker room (**photo 17**), above the chimney breast in the front left-hand bedroom and in the external walls of several other first floor rooms.
- The first floor is generally uneven and out-of-level.

### Hotel – Ground Floor

- Signs of water ingress and timber decay were noted at several locations near the rear wall (**photo 18**).
- Some signs of moisture ingress were noted in the left wall of the front right-hand lounge (**photo 19**). The ends of the timber first floor beams that rest on this wall show signs of decay.
- The ceiling of the kitchen is sagging.
- The roof of the covered yard area appears to have failed and is propped by steel props (**photo 20**).
- The slate roof covering to the right -hand storeroom has recently been replaced (**photo 21**).

### Hotel – Cellar

- The cellar has a stone vaulted ceiling and a stone floor (**photo 22**). The walls were dry but the floor of the lowest room was damp. No structural defects were noted.

### Hotel – External

- There is a noticeable sag in the ridge of the single-storey kitchen roof (**photo 23**).
- The gable wall of the kitchen leans outward.
- The stone facing is eroded. Some areas have been re-pointed using modern sand and cement mortar.
- There are several minor cracks in the render on the main front wall and projecting return walls of the right-hand lounge. The main front wall shows a noticeable lean backward over its full length.

## Barn – Internal

- The barn roof has four timber trusses (**photo 24**), all of a king post arrangement, creating five bays of timber purlins.
- Close inspection of the timber rafters and purlins could not be made from ground level. The rafters appear to be more recent replacements, not original timbers. Some purlins appear to be of original hewn timber, others are more modern sawn timber replacements. Some of the original purlins have failed (**photo 25**) or have twisted severely. Areas of slating have partially collapsed or show an excessive amount of downward sag.
- Close inspection of the roof trusses could not be made from ground level. The first truss from the right-hand gable is of relatively modern sawn timber and appears to be in reasonable structural condition. The second truss is similar but appears to be propped by several timber uprights rising from the floor (**photo 26**). It is possible that these timbers may have been part of a partition wall or screen. The third truss appears to be original but has been strengthened by the provision of a steel beam below the bottom tie and additional timbers on both sides of the principal rafters (**photo 27**). The fourth truss is a more recent replacement, in sawn timber, and appears to be in reasonable condition.
- The inside face of the front, rear and left-hand gable walls of the barn appeared to be in reasonable condition. Holes remain in the walls where the floor timbers of former upper floors were supported. There is a large hole in the right-hand gable wall (**photo 28**).
- Insect infestation and decay was noted in the timber inner lintel over all door openings (**photo 29**).
- There was no access available to the rooms or spaces at the left-hand side of the main barn.

## Barn - External

- An area of partially collapsed and missing slating could be seen on the rear roof pitch (**photo 30**).
- The front wall (Talbot Street) appears to be in reasonable condition. Some open joints and erosion of the stonework were noted, especially close to leaking gutters and downpipes (**photo 31**).
- The right-hand gable wall shows excessive outward bulging and been propped (**photo 32**). A metal tie bar has been installed between the front and rear walls at mid-height of the gable, presumably to prevent outward movement and separation of the gable stonework.
- The rear wall shows noticeable distortion along its length, in particular to the right (as viewed from outside) of the rear entrance door (**photo 33**). The stonework is eroded, most noticeably close to the rainwater downpipes. Stones are dislodged or missing each side of an old clay flue near the left-hand gable (**photo 34**).
- No significant defects were noted in the left-hand gable wall.

## 4.0 CONCLUSIONS AND RECOMMENDATIONS

The hotel is in reasonable structural condition but contains structural defects that need to be addressed during the course of overall refurbishment works.

The slated roof covering and timber rafters are in reasonable condition, having been replaced relatively recently, but significant decay was noted in the timber purlins, especially those on the front slope close to the rooflights. The roof trusses appeared to be reasonably sound, but with signs of insect infestation in the bottom tie beam. Other internal timbers are also affected by woodworm, and wet-rot decay was noted in several locations where water was penetrating the building fabric, at failed or missing flashings and gutters. We would recommend that a more detailed inspection is undertaken by a timber preservation specialist of the roof and floor timbers and any timber lintels built into the stone walls. Sufficient floorboards, ceilings and lath-and-plaster lining walls should be removed to provide full access to all structural members, including the feet of the main roof trusses. Following full inspection, a decision can be made on which timbers can be retained and re-used, and which need to be repaired or augmented with new timbers or steel plating. All timbers will need to be treated to eradicate wood-boring insects.

There is cracking in the internal walls at several positions, the most significant being in the rear left-hand bedroom at first floor level. The cause of this crack is unclear without further investigation. The wall should be rebuilt locally to ensure that the stonework is fully bonded. The leaning internal wall to the room to the rear of the snooker room may be associated with this wall originally being built as an external wall. The degree of lean is not great compared to the thickness of the wall and chimney breast at this point, and re-building is not required.

The external walls are generally straight and plumb, apart from the front wall which shows an inward lean. The stonework is suffering from erosion of the mortar joints close to defective gutters or flashings. Some areas of stonework have been pointed with sand and cement mortar, and this has resulted in water becoming entrapped in the stone and subsequent frost damage. We would recommend that all the stonework is cleaned, the joints raked out and the whole re-pointed with sand and lime mortar. Cracks in the render can be raked out and repaired during general refurbishment.

The barn is in reasonable condition considering its age, but also contains defects that need to be corrected during any conversion works.

The roof should be stripped and the timbers inspected by a timber preservation specialist. It may be possible to retain and re-use most of the existing rafters and purlins, and the three timber trusses of more recent construction. The strengthening work to the one original truss would need to be assessed to see if it is of a standard adequate for a building converted to habitable or commercial use.

The right-hand gable wall is significantly distorted, has partially collapsed and has been propped. The central portion of this wall should be re-built. Decayed timber lintels should be replaced. The stonework should be cleaned, the joints raked out and the whole of the external face of the external wall re-pointed with lime and sand mortar. On the internal face, the re-pointing can be restricted to cracked or poorly consolidated areas.

The conversion of the barn should include a new blockwork internal lining wall, tied to the existing stonework. This, in conjunction with a new first floor and upgraded roof, should add significantly to the overall robustness of the structure and prevent future distortion of the external walls.

**APPENDIX A**

**PHOTOGRAPHS**



**Photo 1 - View of front of hotel**



**Photo 2 – View of rear of hotel**





**Photo 3 – View of front of barn**



**Photo 4 – View of rear of barn**



**Photo 5 – Underside of roof, showing new rafters and felt**



**Photo 6 – Decay to original timber rafters**



**Photo 7 – Decay to timber purlin at wall bearing**



**Photo 8 – Decay to timber purlin at skylight**



**Photo 9 – Truss strut removed to form door opening**



**Photo 10 – Crack in left hand gable wall**



**Photo 11 – Crack in internal dividing wall**



**Photo 12 – Cracking to chimney breast**



**Photo 13 – Exposed truss tie beam showing signs of decay**



**Photo 14 – Crack in wall of rear left-hand bedroom**



**Photo 15 – Collapsed ceiling in bathroom**



**Photo 16 – Leaning wall in rear right-hand room**



**Photo 17 – Damaged and detached plaster**



**Photo 18 – Decayed timber and damp staining**





Photo 19 – Water ingress in front right-hand lounge



Photo 20 – Propped roof to covered yard



**Photo 21 – New roof to front right-hand storeroom**



**Photo 22 – General view of cellar**



**Photo 23 – Sag in kitchen ridge**



**Photo 24 – Barn roof structure**



**Photo 25 – Fractured purlin**



**Photo 26 – Timber uprights fixed to truss**



**Photo 27 – Steel beam below third truss**



**Photo 28 – Hole in right-hand gable wall**



**Photo 29 – Decayed timber lintels**



**Photo 30 – Partially collapsed slates**



**Photo 31 – Water staining and vegetation growth**



**Photo 32 – Propped gable wall**



Photo 33 – Distorted rear wall



Photo 34 – Damaged stone and exposed flue