

STRUCTURAL INSPECTION

Of

**STONE BARNs AT WINKLEY HALL FARM,
STONYHURST, CLITHEROE**

For

STANTON ANDREWS

Project No.: 11342				
Issue Date	Revision	Status	Issued By	Checked By
13.11.2025	---	First Issue	SJ Reid	E Jones
05.02.2026	A	Second Issue	SJ Reid	E Jones
29.06.2026	B	Third Issue	SJ Reid	E Jones

Reid Jones Partnership Ltd
3 Cross Street
Preston
PR1 3LT

Tel: 01772 498007
Email: enq@reidjonespartnership.co.uk



CONTENTS

	Page No.
1.0 INTRODUCTION	3
2.0 DESCRIPTION	3
3.0 OBSERVATIONS	4
4.0 CONCLUSIONS AND RECOMMENDATIONS	5
APPENDIX A – KEY PLAN	7
APPENDIX B – PHOTOGRAPHS	9

1.0 INTRODUCTION

Acting on instructions from Stanton Andrews Architects, Reid Jones Partnership carried out an inspection of three stone-built barn buildings at Winkley Hall Farm, Stonyhurst, Clitheroe.

A structural inspection was required to establish the general structural condition of the buildings, the structural implications of their conversion to residential use, and the repairs required during refurbishment and conversion.

Mr. S John Reid BSc CEng MICE FStructE of Reid Jones Partnership Ltd carried out the inspection on Thursday 2nd October 2025. This report details the observations made during the inspection and gives recommendations on the work required during conversion. A Key Plan is included in Appendix A and photographs in Appendix B.

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

Initially issued in November 2025 and revised in February 2026, the report has now been updated to address comments received from Growth Lancashire Ltd in their response of March 2026. Previous proposals adopted a practical and economic route to the repair and refurbishment of the barns, considered appropriate to their curtilage listing. The recommendations have now been amended to reflect a more conservation-led approach to the historically sensitive structures.

This report shall be for the sole use of Stanton Andrews Architects 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, reference will be made to the four compass points. When viewing a wall or other structural element from inside or outside the building, reference to left and right relates to the element as viewed.

The three barns are traditional stone-built outbuildings to the rear of Winkley Hall Farmhouse (see Key Plan in Appendix A). They date from the 1700s, or early 1800s. Apart from the Farm Office, the other buildings on the farm are modern steel-framed sheds or extensions to the older buildings in brick or concrete block.

Barn 1 is two storeys high, and most likely originally had a hay-loft which has now been removed (photos 1-4). A single-storey lean-to shippon lies to the north. The barn walls are stone and the roof is of Welsh thin slate or asbestos-cement slate, on timber sarking boards, rafters, purlins and king-post trusses. The shippon is of similar construction, but with mono-pitch timber roof trusses. The building has been extended to the east and south with modern brick or block additions with asbestos-cement sheeted roofs. A relatively modern brick-built pigsty is attached to the north wall of the shippon.

Barn 2 is a two-storey building, the upper floor of which has been removed (photos 5 & 6). It has stone walls and a roof of concrete tiles on timber rafters, purlins and queen post trusses. A relatively modern workshop with concrete block walls and an asbestos-cement sheeted roof has been added to the east.

Barn 3 is a small two-storey building, with stone walls and a roof of stone slates on timber rafters and purlins (photos 7, 8 & 9). The roof has partially collapsed and the building leans significantly.

3.0 OBSERVATIONS

Barn 1 - Internal

- The roof structure of the main part of the barn was inspected from ground level (photo 10). Some decay due to wet-rot was noted in the sarking boards and rafters near eaves level on the south side, with widespread signs of insect infestation noted elsewhere. Some rafters and purlins are warped (photo 11), and most show signs of insect infestation and decay. The timber trusses all show signs of insect infestation, with one king post significantly reduced in cross-section (photo 12). Some water staining and possible wet-rot decay was noted on the truss bottom tie beams which rest on the south wall (photo 13). Two trusses are supported on bifurcated timber posts on the north side, and both posts show signs of insect infestation (photo 14).
- The roof structure of the shippon was inspected from ground level. Widespread decay due to insect infestation was noted (photos 15 & 16).
- The south wall of the main barn is reasonably straight and vertical, but the western part shows a slight outward lean (photo 17). The west wall is reasonably straight and vertical but bulges outward at around mid-height (photo 18). No significant structural defects were noted in the east or north walls.
- Minor vertical cracking was noted in the internal walls each side of the north wagon entrance (photo 19). Decaying timber lintels in the internal and external walls has caused the stonework to crack (photo 20).

Barn 1 - External

- The north and south roof pitches are reasonably straight and true, and no excessive irregularity or sagging was noted.
- At the south west corner, the stonework is poorly bonded and a quoin has cracked (photo 21). Some distortion and irregularity can be seen towards the top of the south wall.
- There is a noticeable outward bulge in the west wall at around mid-height (photo 22).

Barn 2 - Internal

- The roof structure and the south wall have been propped by a steel scaffold structure (photo 23). The timber purlins and trusses show signs of widespread and significant insect infestation (photos 24 & 25). The timber rafters are more recent replacements.
- The first floor joists and boarding have been removed (photo 26), leaving only the original timber beams (and one newer concrete beam).
- Vertical cracks were noted on the inside face of the north wall (photo 27) and west wall (photo 28).

Barn 2 – External

- The south wall is severely distorted and leans outwards. It has been stabilised by steel scaffolding (photo 29). The upper part has been re-built and there is a horizontal step between the old and more recent masonry (photo 30). There is cracking in the wall at multiple locations and one stone lintel has cracked (photos 31 & 32).
- There are cracks in the north wall in multiple locations, and a significant outward bulge at mid-height on the west side (photos 33, 34 & 35).
- One vertical crack was noted in the east wall (photo 36). The west wall is relatively straight and vertical, but with open-jointed stonework.

Barn 3 – Internal

- The upper floor was accessed via the external stone steps. A purlin on the southern roof pitch has fractured causing localised collapse (photo 37). The roof in general shows widespread signs of decay due to insect infestation (photo 38).
- The timber first floor is badly decayed and was unsafe to access.
- The ground floor was full of farm stores and equipment and was unable to be inspected.

Barn 3 – External

- The building tilts significantly to the west, with wide cracks forming in the north and south wall (photos 7 & 8).

4.0 CONCLUSIONS AND RECOMMENDATIONS

Barn 1

The original oak purlins and roof trusses show signs of decay due to insect infestation and localised wet-rot at their bearings. The purlins, rafters and boarding are similarly decayed. Warping noted in some timber rafters and purlins is a result of uneven moisture movement of the natural hardwood timber.

There is an isolated timber beam to the west of the wagon entrance at approximately mid-height. It is most likely a remnant of the former hay-loft and no longer plays a structural role.

The four main external walls are generally straight and vertical, with relatively minor distortion in the upper part of the south wall and some outward bulging of the west wall at around mid-height. The barn has been constructed to a good standard and the sarking boards have increased the rigidity of the roof, holding the walls in position. Cracking noted on the inside face of the external walls and on the internal walls has been caused mainly by thermal movement, possible de-lamination of the inner and outer skins due to lack of bonding through the rubble infill, and decay of timber lintels.

The barn is suitable for conversion to residential use. Its robustness will be improved by tying the external walls to new internal blockwork buttressing walls (or rigid steel framing) by means of a new first floor.

A trial pit has confirmed the existing foundations are sufficiently deep to allow a reduction in levels to construct a new insulated ground floor slab.

Structural repairs should be carried out using a conservation-led approach, with emphasis given to retaining the historic fabric and character of the building.

The following recommendations are made:

- The sarking boards, rafters, purlins, trusses and posts should be fully inspected by a timber conservation specialist. The trusses should have their end-bearings exposed where they meet the external walls. Each timber element should be inspected and the extent of wet-rot decay and decay due to insect infestation recorded, allowing a detailed evaluation of each item to be made. Additional sarking should be provided on top of the existing in decayed areas; decayed or excessively warped timber rafters should be retained and if necessary augmented by additional rafters; decayed or excessively warped purlins should be strengthened with stainless steel plating or new timber sections provided alongside the existing; excessively decayed parts of the roof trusses should be strengthened with stainless steel plating.
- Cracks in the stone walls should be repaired by local rebuilding, ensuring sufficient bonding across the cracks is provided. Surface-fixed straps could be used internally, where these will be hidden by new lining walls.
- Should a detailed verticality survey reveal that the outer and inner skins of rubble-filled walls are separating, the two leaves should be tied together with stainless steel ties, drilled from the inside.
- Internal walls that are unbonded to external walls should be tied with stainless steel bars or straps.
- Decayed timber lintels should be inspected and evaluated. Those excessively decayed should be repaired, strengthened or new relieving lintels provided above the originals.
- Loose and damaged areas of masonry should be consolidated by localised re-building, using the original stones and traditional sand:lime mortar.

Barn 2

The original oak purlins and roof trusses show signs of severe decay due to insect infestation and localised wet-rot. The timber rafters are relatively new.

The east and west walls are generally straight and vertical. Cracking noted on the inside and outside faces has been caused mainly by thermal movement. These walls require only minor repairs such as pointing of the open-jointed stonework and filling and stitching of vertical cracks.

Most of the north wall is reasonably straight and vertical, except for the upper part near the north west corner which bulges significantly.

The central part of south wall, particularly above first floor level, is in extremely poor condition and would collapse in the absence of the support provided by the scaffold system. This section of the wall should be taken down and re-built, leaving those parts close to the east and west corners that are straight and vertical, which should be repaired as described below.

The distortion and near collapse of parts of the south wall has been caused by lack of buttressing from internal walls, in particular above first floor level, partial or complete removal of the first floor, and lack of rigidity in the roof. Some separation of the internal and external leaves of the rubble-filled walls may be taking place.

The barn is suitable for conversion to residential use. Its robustness will be improved by tying the external walls to new internal blockwork buttressing walls (or rigid steel framing) by means of a new first floor.

The existing foundations may be shallow and may need underpinning prior to reduction in levels to construct a new insulated ground floor slab.

Structural repairs should be carried out using a conservation-led approach as described above for Barn 1.

- The whole of the roof timbers should be inspected by a timber specialist and then evaluated for residual strength and the need for repair or strengthening.
- The central part of the south wall should be rebuilt. Only parts at low level that are straight and vertical should be retained. The bulged upper part of the north wall close to the north west corner should be taken down and rebuilt.
- Cracks in the stone walls should be cross-bonded with matching stones or stitched with surface-fixed straps on the inner face. Open joints should be pointed.
- Internal walls that are unbonded to external walls should be tied with stainless steel bars or straps.
- Decayed timber lintels should be evaluated, and augmented or strengthened if required.
- Loose and damaged areas of masonry should be consolidated by localised re-building using the original stones and traditional sand:lime mortar. Cracked stone lintels should be replaced, or new relieving lintels provided above.
- Parts of walls that are bulging due to inadequate bonding across loose rubble infill should be repaired by installing new ties, drilled from the inside.

Barn 3

Barn 3 has been severely damaged by timber decay and foundation movement.

Should conservation considerations require that the building is left in its current distorted state, and only localised re-building is permitted, it would need to be underpinned to prevent further foundation movement and new permanent internal steel framing provided to stabilise the walls.

It is our view that this building is beyond economic repair. We would recommend that it should be taken down completely and rebuilt from new foundations, re-using the existing stones and as much of the existing roof structure as possible.

APPENDIX A

KEY PLAN

A Existing site plan
Scale: 1:500



KEY PLAN

APPENDIX B

PHOTOGRAPHS



Photo 1 – Barn 1 - View from north west



Photo 2 – Barn 1 - view from north east



Photo 3 – Barn 1 – view from south



Photo 4 – Barn 1 – view from east (from within extension)



Photo 5 – Barn 2 – view from south east



Photo 6 – Barn 2 – view from north west



Photo 7 – Barn 3 – view from north east



Photo 8 – Barn 3 – view from south



Photo 9 – Barn 3 – view from north west



Photo 10 – Barn 1 – main roof structure



Photo 11 – Barn 1 – warped rafters and purlins



Photo 12 – Barn 1 – insect decay to roof truss



Photo 13 – Barn 1 – wet-rot at truss bearing



Photo 14 – Barn 1 – insect decay to timber post



Photo 15 – Barn 1 – insect decay to shippon roof timbers



Photo 16 – Barn 1 – insect decay to shippon roof truss



Photo 17 – Barn 1 - south wall



Photo 18 – Barn 1 – west wall



Photo 19 – Barn 1 – crack in internal wall



Photo 20 – Barn 1 – decayed lintel and cracks in wall



Photo 21 – Barn 1 - south west corner



Photo 22 – Barn 1 – outward bulge in west wall



Photo 23 – Barn 2 – roof structure



Photo 24 – Barn 2 – decayed roof timbers



Photo 25 – Barn 2 – decayed roof timbers



Photo 26 – Barn 2 – original floor beam



Photo 27 – Barn 2 – cracking in north wall



Photo 28 – Barn 2 – cracking in north and west walls



Photo 29 – Barn 2 – distorted and propped south wall



Photo 30 – Barn 2 – cracks and step in south wall



Photo 31 – Barn 2 – cracked lintel in south wall



Photo 32 – Barn 2 – cracking in south wall



Photo 33 – Barn 2 – cracking in north wall



Photo 34 – Barn 2 – cracking in north wall



Photo 35 – Barn 2 – cracking in north wall



Photo 36 – Barn 2 – cracking in east wall



Photo 37 – Barn 3 – fractured purlin



Photo 38 – Barn 3 – decayed roof timbers