

Our Ref: 14358.1/ADW/KW

Tim Reeve
TFH Reeve
Donhead Mill
Donhead St Andrew
Shaftesbury
Dorset
SP7 9EP

Dear Tim,

**RE: LOWER BRIDMORE FARM, BERWICK ST JOHN, WILTSHIRE –
STRUCTURAL INSPECTION AND REPORTING UPON DISUSED FARM BUILDINGS
TO ACCOMPANY A PRE-APP SUBMISSION FOR REPAIR AND CONVERSION**

Further to my recent visit to site, I now report upon my findings relating to the inspection. For each of the buildings I have described the existing fabric and its condition; considered the value from a conversion and historic viewpoint, and then provide outline proposals for both repair and replacement of fabric where appropriate.

BUILDING 4 – OAK FRAMED BARN

Description

This is a traditional barn comprising an oak framed structure supported on a perimeter masonry wall.

The western end of the barn comprises a braced gable frame constructed in a traditional manner. There are three bays, in total, with two braced oak trussed frames forming the bays, including the new western gable. This supports the view that there was, at one time, a fourth bay to the east, as the English Heritage Listing suggests.

The frames support intermediate purlins which, in turn, support modern, widely spaced, common rafters and a modern corrugated iron roof covering.

The walls are timber framed in a mixture of original and modern fabric supporting external timber boarding. The exception to this is the eastern gable which comprises modern simple timber framing clad in corrugated iron sheeting.

There is a substantial perimeter dado wall to the barn interrupted only by door openings into the barn.

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Condition

The barn has clearly not been well maintained for many years but, despite this, much of the original fabric remains and the majority is in generally serviceable condition.

The western gable wall comprises a significant amount of original fabric, which can be retained. The purlins in bay 1 all appear sound and can be retained. The first knee braced truss has clearly failed at the head of the northern jowl post, allowing rotation of the post and outward movement. A crude repair holds the joint together. The proposal for repair would be to prop the northern side of the truss, place the post back into line and vertical before simple repair. At base level timber wall plate is in poor order and needs partial replacement and re-bedding on the low level wall.

The purlins in bay 2 all appear sound and can be retained. Both north and south wall constructions are generally in good order in bay 2 and can be retained.

The second truss has racked to the north, but the primary members all appear sound. Some minor local repairs and re-pegging will be required.

The purlins in bay 3 appear serviceable and can be retained.

The now existing east gable wall appears to be an original truss which has been infilled. The truss framing is all in good order. More robust and traditional timber replacement framing infill can be provided to form the gable.

There is a perimeter masonry wall to support the timber barn fabric, to north, south and west walls. Some stones have been displaced and need re-setting and a general repoint. On the northern side the decay of the wall plate and movement of the truss framing has resulted in some sections being displaced and partially collapsing. These can be replaced to their original form using an appropriate lime mortar.

Conclusion

The remaining oak framed fabric is generally in good order despite the lack of maintenance or care. It is considered that very little extant fabric will need replacing with simple repairs the approach to be taken.

The building does lack lateral stiffness as well as longitudinal roof bracing and these issues need addressing. The roof can be diagonally braced using timber or straps on top of the new common rafters which will be required.

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Laterally the frames have clearly moved at their bases on the north side and at the head resulting in the visible deformations and joint dislocations. To combat this and prevent further movement it is proposed to install small independent steel portalised frames on the two central truss lines, simply attached to the trusses, to prevent further movement and perhaps provide support for a mezzanine floor area.

The perimeter wall needs simple repair and small sections re-built as well as replacement of decayed wall plates.

In conclusion, there is a significant amount of original fabric, in generally good order which will allow the barn to be returned to use, using predominately traditional repairs and materials.

BARN 7A

This building is sited adjacent to the original gable end of the barn which collapsed in the winter of 2018.

Description

This is a small single storey building at the southern end of the former barn.

The building is timber framed above a low-level brickwork supporting wall and has external timber boarding to three sides. The northern wall is the gable wall to the former adjacent barn which collapsed in 2018.

The roof comprises a timber structure, with twin pitched roof and central valley running north-south. The roof is now of corrugated iron sheeting supported on modern timber common rafters/purlins onto ad hoc timber trusses. Internally, the masonry walls are rendered; the area is sub-divided forming animal pens. The floor is of concrete throughout. The east, west and south timber-framed walls are internally timber boarded.

Condition

The building has clearly not been well maintain resulting in widespread water penetration through the roof valley area and decay of the original structural timber valley beam. As a result, there is a relatively recent steel beam and post assembly to support the valley and the intermediate trusses spanning east-west across the building. These trusses appear sound but are of lightweight, relatively crude form with raised collars simply nailed to the principal rafters. Timber purlins span between the trusses to support timber common rafters; these appear in reasonable order except in the valley zone.

The brickwork low level wall appears in good condition throughout with no sign of foundation movement; some low-level repointing would be required.

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Conclusion

The building was clearly an adjunct to the barn to the north, as is clearly discernible. The main issues in the fabric relate to the central valley area to the two roof pitches where there has already been significant intervention.

The roof framing is lightweight, and the truss connections will need reviewing, as will other roof structure, depending upon proposals to re-roof and, in particular the new roof finish.

Very few repairs are needed to masonry, the most significant of which will be the repair of the original barn wall in the north-east corner of the building.

There is, in my view, little in this building of historical significance.

BARN BUILDING 8

Description

This is a relatively large building of masonry construction formerly used as stables. There are three distinct elements to the building: a smaller double height room on the western side, a main central area with first floor and a single storey wing to the north.

The external walls are predominantly of masonry construction to eaves level with full height gables, except for the western elevation which is timber framed and boarded above first. The north stable wing is constructed in loadbearing brickwork built off a stone plinth.

The roof to the western wing is missing on the south slope and appears to be formed of a mix of salvaged and new timber. The masonry gable wall has been changed over the years.

Over the main central area there is a timber first floor, comprising timber boarding supported on timber floor joists spanning onto a pair of primary beams which span north-south across the building at one third points; one of these has a central supporting post. The roof structure is extremely lightweight constructed of modern softwood, poorly braced, and supports a corrugated iron sheet roof.

The north wing also has a timber roof finished with corrugated iron sheeting. There are two lightweight intermediate trusses, probably dating from 1930's, with central rod ties; these support slender purlins.

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Condition

The western wing envelope is in poor condition. The roof is partially lost and there is very little original fabric remaining. The gable masonry wall shows some movement and cracking but can be sympathetically repaired.

The enclosing walls to the main central area are in generally good order with few defects. Clearly some areas, particularly at low level, need repointing and consideration will need to be given to internal waterproofing where the south wall retains a significant change in level.

The original roof to the central area has been totally lost; the only original fabric remaining above first floor level, is the oak framing forming the eastern gable wall above ground floor level.

The roof which now exists is flimsy and inadequate in many ways and needs to be replaced in its entirety.

The existing first floor timber structure is clearly a later addition to the building. The main beams comprise a pair of sawn softwood beams bolted together, supporting timber floor joists and boarding. Water ingress in the centre bay has led to decay of both boards and joists. Boarding at first floor is generally in very poor order and, in many areas, unsafe to walk upon.

The brickwork walls to the north wing are generally in good condition though there is some slight movement in the north-east corner adjacent to the door, where some localised stitching and rebuilding will be required. Otherwise, work will comprise simple repointing, particularly at low level and of the stone plinth course.

The trussed roof and purlins are lightweight in form and may need augmenting depending upon the proposed roof finishes.

Conclusion

In the main, the original building fabric, which really comprises the masonry walls and gables, is all in good condition with only minor repair works required.

There is no original roof fabric remaining over the main area or western extension, save for some isolated elements over the later. If there was originally a first floor to the main area, then none of that structure remains today. In any scheme, therefore, a new roof structure will be required for the main part of the building. It is proposed to use roof trusses, of traditional form with purlins and common rafters to form the new roof with plain clay tile finish. Over the western projection, isolated original timbers could be incorporated into the new roof fabric.

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The existing first floor can be repaired, where decayed, and be retained with probably a post under the centre of each main beam line. These existing main beams could then form the tie beam element of the new roof trusses.

In the northern wing the existing trusses could be retained but, subject to a design check, might need augmenting with new intermediate trusses to be able to support purlins and the new plain clay tile roof.

There are concrete slabs to the ground floor throughout and these could be retained, overlaid with insulation, dpm and screed to form a new surface in the conversion.

I trust that the above report addresses the condition of the buildings in sufficient detail for the current purpose.

Yours sincerely



ANDREW WARING - BTech Eng CEng MICE MStructE
Consultant

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DISCLAIMER:

Our report concerns only the parts of the structure we that were appointed to inspect. Any other parts, adjacent structures, buildings or other areas are explicitly not considered unless deemed to pose some risk to the inspected structure.

Our inspection was visual in nature only. We did not include any intrusive investigations unless specifically noted otherwise. Where reasonably practicable we have attempted to access and inspect safely accessible areas.

We have not inspected all structural members in their entirety, but have examined a representative sample of areas that we believe offers a reliable indication of the overall structure. Localised areas with different construction types may not have been identified as a result.

All external observations of the structure are made from ground level only.

No guarantee can be given against the presence of rot, disease, beetle infestation or other defects within the timber elements of the structure.

No guarantee can be given against the presence of dampness, asbestos, harmful gases or other hazardous materials within the structure.

No testing or enquiries as to the presence of or susceptibility to pollution contamination, radiation, methane, radon and toxic mould, fungus or spore or other hazardous substances has been carried out.

Our inspection concerned structural aspects only and no comment or guarantee can be made on the condition of services, architectural finishes or decorations.

Any potential work valuations mentioned are estimated based on prior experience and should not be relied upon without consulting a professional cost consultant.

No responsibility is accepted to any third party for the whole or part of the contents of this report, which has been exclusively compiled for the use of our client.

The client should also note that liability to the client, whether in contract or tort, shall not exceed the amount as stated in the agreement, recoverable by way of indemnity insurance taken out by Andrew Waring Associates at the time we received instruction from the client.

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