Re: The Old Country House - Mathon

Robert Demaus [redacted]
Tue 23/07/2024 22:19
To:Andrew Waite <andrew.waite@nickcoxarchitects.co.uk> [redacted]
Cc:Robert Demaus [redacted]

Hello All

[redacted]

I hope I can let you have all the info you need for now in this written description:

For identification, I have assumed that the two oast houses are at the south end and have numbered trusses and bays from the south end of the cider barn.

Oast houses.
I could only inspect from the first floor of the barn. East - no identifiable timber degradation issues. West: there is a small area of visible decay in the wall plate approximately opposite the opening to the barn. It is likely to require simple partnering and/or strengthening bracket. When the slates are stripped, it is likely that some minor strengthening (simple brackets and/or partnering of weak rafters) may be needed, but this should not be extensive or complex, and should not involve the loss/replacement of any of the structural elements. As far as I am aware, the survival of the lime plaster finish to the interior is rare - with care It should be possible to retain the majority of what survives.

Cider barn
Roof Structure generally: There is relatively little structurally significant fungal degradation, and insect attack is largely confined to sapwood, and is not structurally significant. Deformation and dislocation towards the south end of the barn is mainly caused by modifications to the trusses over-stressing joints and sections. Consequent deformation has resulted in a re-roofing with additional rafters and very substantial firrings. The roof has also racked to the north. Additional raking braces (or tension cables) may be needed to resist further racking, but it would not be practicable or desirable to straighten the roof.
Bay 1 (between the oast houses and the first truss) - no identifiable significant issues.
Truss 1 The east principal rafter of he original truss is severely fractured and the later softwood east principal rafter is also partially fractured. These failures appear to be historic, but clearly some additional intervention will be necessary. I don't think it would be practicable to repair the original principal rafter without dismantling the truss and adjacent roof structure which I think would not be wise, and result in more loss than is necessary. Options might be to replace the later softwood truss with a new sw truss appropriately dimensioned and with brackets, sheer connectors etc as necessary, or insert a new truss alongside the original picking up under the purlins etc of Bay 2. The lintel over the ff door, on which the east foot of T1 bears, is not degraded but has deflected, and may need strengthening.

Bay 2 The upper purlin on the east slope needs to be re-attached to Truss 1.

Truss 2 The west principal rafter is severely fractured. As with T1, it would not be practicable to repair this without dismantling which would not be desirable. It should be possible either to replace the later softwood insertions with new and more appropriately sized elements, or insert additional softwood elements to provide the necessary strength and stiffness. Smith-forged metal brackets are a common and very traditional form of strengthening that have already been used to good effect in this building, and could play an important role. Metal repairs, if well done, are very conservative with little or no loss of original fabric, and are reversible, economic and can be aesthetically pleasing. There are many historic examples in the cider barn and the tradition should be continued.

No significant degradation or structural issues were identified further north in the roof structure. It is perhaps inevitable that when the roof coverings are removed, the need for some minor repairs may become apparent, but these should be very localised and simple.

There is some active furniture beetle in the softwood joists of the first floor, which has resulted in ~15% loss of strength mainly confined to Bay 3. This should not be a problem, but the joists will need to be treated.

The lower half of the north east corner post has been replaced, with what appears to be a plain butt joint connecting the new and old. Some strengthening to provide structural continuity may be required.

No other structurally significant issues were identified, but some areas were obscured by stored items internally and plant growth externally.

Almost all vernacular buildings, and particularly timber-framed ones, started life with much bigger overhangs at eaves and verges than now survive. Attrition and periodic re-roofings steadily reduce them. Assuming the roof coverings are to be stripped, I would strongly recommend increasing the overhangs at eaves and verge to provide greater protection to the walls. It is a simple intervention that greatly reduces degradation in walling materials, particularly where original wattle and daub infill panels have been replaced with brick.

I do hope the above provides sufficient information for the time being. Following a telephone discussion with John Topp, it would be sensible to meet own site to discuss in more detail possible options for necessary strengthening, mainly of Trusses 1 & 2. After that meeting may be the better time to provide a more detailed report.

Please do let me know if you need more information at this stage, or there are any points you would like to discuss

Kind regards

Robert Demaus

[redacted]

Demaus Building Diagnostics Ltd
Stagbatch Farm, Leominster, HR6 9DA

> On 23 Jul 2024, at 21:13, Robert Demaus [redacted] wrote:
>
> Kind regards
>
> Robert Demaus
> Demaus Building Diagnostics Ltd
>
> Begin forwarded message:
>
> **From:** Andrew Waite <andrew.waite@nickcoxarchitects.co.uk>
> **Dat** 32:11 BST
> **To:** [redacted]