PCA CONSULTING ENGINEERS | CIVIL STRUCTURAL CONSERVATION

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Our ref: 17253/PBC/lc/Reports 7th March 2024
By email: [redacted]

Bethany Fisher
Shepherd's Cottage
4 Stradbrook
Bratton
Westbury
BA13 4SE

Dear Bethany

Re: SHEPHERD'S COTTAGE, BRATTON – Bedroom Floor Repairs

Further to our recent liaison, we reconfirm the repair proposals for the floor joists and boarding over the bathroom, forming part of the bedroom floor above. This letter should be read in conjunction with SK. 17253.01 & 02, as previously issued.

The floor in the eastern bedroom, over the ground floor bathroom, includes elm boarding supported on oak joists, nominal 50x90 @ 350c/c spanning west – east approximately 2.5m. The floor structure is therefore quite weak. Two of the joists, local to the northern party wall, have significantly deflected, with evidence of the eastern joist bearings having settled historically.

The eastern bearings to the joists appear to be quite reasonable, with good embedment, but we suggest this is verified when works are undertaken. Similarly, the quality of the oak is adequate, although the second joist out from the eastern party wall is showing very slight signs of a minor centre span fracture. This will be adequate once the joist is strengthened as proposed.



Deflected bedroom floor structure over bathroom local to the eastern party wall.

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With respect to repairing this floor, we would recommend that the filling between the elm planks, which appears to be resinous, is carefully taken out, and the nails securing the boards over the bathroom are either released, or cut, to facilitate the northern end of the boards to be left in place but raised. This would only apply over the area of the bathroom below.



Exposed deflected bedroom joists over the ground floor bathroom.

The proposal would then be to strengthen the oak joists by adding scribed oak furring timbers, glued and clamped to the top of the existing joists. This would then provide a more robust and level support for the elm boarding, allowing them to be refixed and patched with reclaimed elm boarding where required. This would include an edge cover plank adjacent to the party wall, where there is currently a gap.

If elm cannot be sourced, oak should be used.

We hope that the above is helpful and should you have any further queries, please do not hesitate to contact us.

Kind regards

[redacted]

Paul B Carpenter
PCA Consulting Engineers

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