



30th October 2025

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By Tom.Anderton at 10:35 am, Dec 11, 2025

Geoff Smith

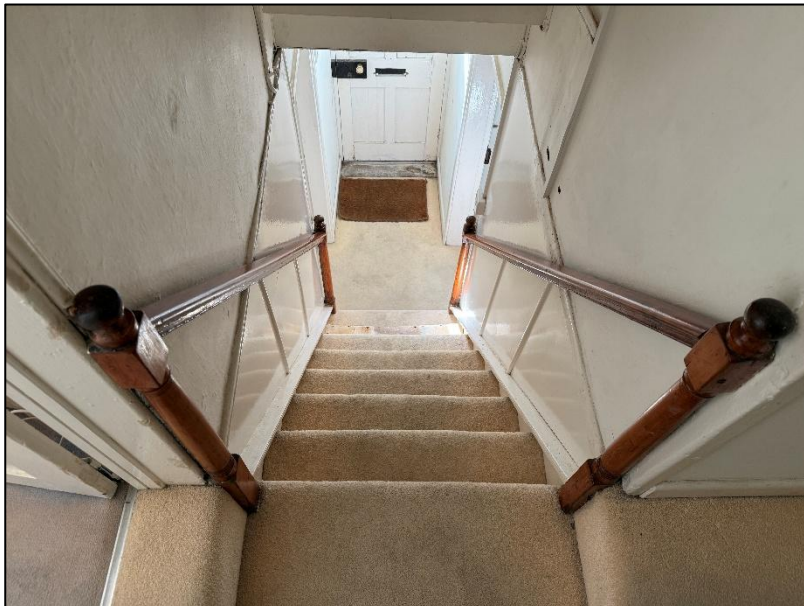
Dear Geoff

Re: STEP COTTAGE, THE BANK, ST MARY'S, ISLES OF SCILLY

Further to our visit to the cottage on Tuesday 7th October 2025 and our limited inspection of the existing staircase and first floor structures, together with our various discussions with the client and yourselves, we report as follows.

Step Cottage is thought to date back to the latter part of C18, is Grade II Listed and set within a Conservation Area. It is evident that it has been altered, extended and upgraded on a number of occasions during the building's life, with the most recent work probably undertaken in the middle to latter part of C20. As outlined, the two areas of the building which we have reviewed relate to the structural adequacy and serviceability of the original staircase and first floor structures.

Staircase



The existing staircase, which is thought to be primarily original, including the stringers, treads, risers, newel posts and handrails, is steep with limited tread length and a high first riser. It is approximately 800mm wide, and set between two walls, the makeup of which varies, both of which have been altered in the past.

The western wall (party wall with the dining room) is predominantly studwork introduced in C20, finished with 12.5mm plasterboard. The area over the doorway

to the dining room, at the southern end of the wall, is thought to be largely original, with plaster and timber laths still in place, overlaid with plasterboard.



Investigation hole over dining room doorway showing timber lathes, with plaster overlaid with 12.5 plasterboard & skim.

The eastern wall on the other side of the staircase appears to be largely clay brick and masonry, with further studwork introduced within the under stair cupboard, partly lined with plasterboard.

The later studwork construction under the stair has provided additional support to the stair flight, and as a result the robustness and structural adequacy of the original stair flight is reasonable.



Current added support timbers under stair flight which would benefit from tidying & enhancing.

Localised repairs are recommended, particularly checking connections between risers and treads, and repairing the second tread at the bottom end of the flight which is split.



Split second tread requiring sympathetic repair.

With all of the above said, there is no doubt that the staircase is difficult to use, very steep and with reduced headroom.

Following the Planning and Listed Building Consent pre-application discussions, concerns have been raised by the Conservation Officer for a loss of the historic fabric, should the staircase be taken out and replaced with one of a shallower pitch.

Consideration has also been given to retaining the existing stair flight and potentially overlaying it with a bespoke staircase of a shallower pitch, which would then result in an additional tread and equal height risers. The top of the stair flight would remain as is, with the start of the stair flight extending approximately 300mm towards the south, encroaching across the current doorways into the lounge and dining room. It is thought that the doors and frames are original but feel it would be relatively straightforward to move these two openings and retain the historic fabric of the doors and frames, relocating them towards the south, in order to provide a more serviceable stair.

With respect to headroom above the flight, the current bulkhead has been altered and adjusted within C20, and would need to be further adjusted to allow for a larger stair void to provide acceptable headroom which in itself may not fully comply with modern building regulations.



Current bulkhead over the stairs altered in C20.

In summary, with respect to upgrading the staircase there are, in our view, three possible options.

1. Repair the existing stairs that currently exist, upgrading and making good the walls on either side, retaining the historic fabric, remediating any poor workmanship, and accept that the stairs are old and difficult to use.
2. Take the existing historic stair flight out completely on the grounds that it really is very difficult to use and at times could potentially pose a health and safety risk if due care and attention isn't taken. However, we would not be able to justify the removal of a stair flight on purely structural grounds, as it is in reasonable condition with some minor repairs being required, and when used, it feels quite robust. If the existing stair flight was taken out, then a new staircase could be introduced of a shallower pitch, allowing to adjust the top landing and the bulkhead and floor over the staircase to increase the size of the stair void and improve headroom, making the stairs easier to use.
3. The third option would be to allow for the retention of the existing historic stair flight and for it to be overlaid with a new staircase, introducing an additional riser and reducing the pitch of the stair, together with altering the ground floor doorways, enlarging the stair void, and adjusting the existing bulkhead and associated elements of first floor as may be required. Further discussions will be needed with respect to the optimum way forward with the existing original newel posts and hand railing, and whether these are adjusted with the hand rail extended or renewed at a pitch to marry with the pitch of the new adjusted stair flight.



Existing original newel posts and handrailing to be adjusted and retained should a new 'over flight' be agreed.

First Floor Structures Over Lounge and Dining Room

The current general construction of these floors, as far as we can ascertain, includes original floor boarding supported by nominal 65/75x105/110 deep joists, set at approximate 650 centres.

There is evidence that the floor boarding was earlier underlined with Tentest fibreboard and in the latter part of C20 this was largely replaced/added to with a plasterboard ceiling secured to battens set between the joists, resulting in less joist depth being exposed to the room below.

The joists include a moulded detail to the lower two corners, and these are thought to be original and part of the initial fabric of the building. The joists are spanning approximately 3.4m, north/south, and on the east side over the lounge there is a single large bedroom.

On the west side there are a series of C20 timber stud walls which are proposed to be reconfigured, allowing for adjustments in the first floor room arrangement. In practise, these various stud walls are helping to stiffen the first floor structure, as the walls are effectively secured to the boarding and to the ceiling above, providing for greater load sharing and, in effect, 'hanging' the floor to a degree.

The floor joists are significantly undersized on both the west and east sides of the cottage but, due to the effects of the first floor walls on the west side, the floor structure is quite serviceable, with no significant resonance within it.

When the first floor stud walls are altered and adjusted we would recommend that the existing joists are propped and the internal timber frame walls removed as required, with the new ones installed ensuring that the soleplate is well fixed to the existing floor structure and the headplate is similarly well fixed to the ceiling structure above. In addition, there would be benefit in sheathing these walls with 9/12mm plywood to provide further stiffness and rigidity. Following the installation of the new walls the temporary propping can be taken out.

On the east side of the building, over the lounge, the joist and floor structure has more deflection and resonance, due to the weakness and under-sizing of the joists coupled with wide joist centres. There is a requirement by the client and the Conservation Officer to ideally retain the existing joists and the current painted ceiling arrangement allowing for the exposed original joists.



Existing painted ceiling appearance with exposed original joists to be retained.

We understand that, as part of the proposed works, the later C20 plasterboard will be taken down to accommodate new services etc. On this basis, we have prepared a sketch detail for strengthening the floor joists allowing for the ceiling to be reinstated in its current position and retaining the current appearance of painted joists and ceiling. This will not be a perfect solution but should stiffen the floor to a degree, making it more serviceable.

As part of the upgrading of the property, when later C20 finishes are removed for adding insulation and adjusting/renewing services etc., the condition of the joist bearings into the external southern wall should ideally be checked, as the initial opening up works has revealed that there has been some rot and deterioration to the joist ends. When probing and reviewing the exposed joist ends which have been exposed, the retained timber appeared quite hard and there was no sign of recent movement, or signs of serious structural distress. As a result, we believe this is not extensive, but it would be prudent to check and remediate as required but ensuring that any additional support is concealed behind the southern wall linings.

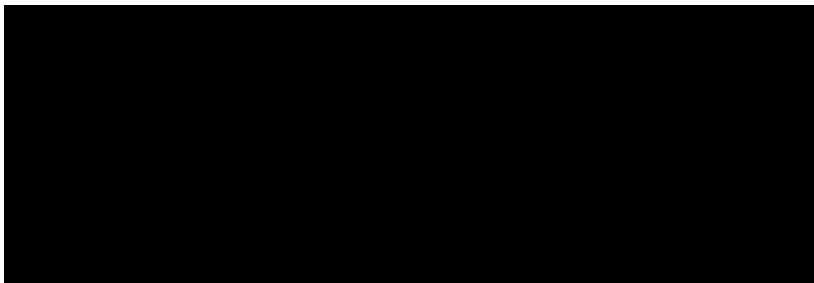


Exposed southern joist bearing showing some rot & longstanding decay.

We would advise that provided the retained timber is reasonable hard, and bearing on hard masonry, and that there has not been an overall loss of timber cross section of more than 1/3rd, repairs may not be required. The wall appeared to be reasonably dry at the time of our inspection.

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

Kind Regards



Paul B Carpenter
PCA Consulting Engineers

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