

The Great Oakley Community Hub Ltd
The Maybush Inn
Farm Road
Great Oakley
Harwich
CO12 5AL

12th Jan 2021

Our Ref: 20-493 / R1

F.A.O. Kevin Thorpe / Terry Richmond

Dear Sirs

RE: Conversion and Extension of The Red House, Great Oakley, Essex C012 5AQ

Following your recent instructions, we have visited the above property and provided herewith our initial report and assessment.

1.0 Introduction & Scope

Current proposals will see the existing building converted and extended to provide affordable residential accommodation for the local community. The new extended structure will contain three self-contained apartments and provide a ground floor extension to the pub.

We have been instructed to undertake a visual inspection within the property and provide conceptual structural design advice to assist in preparation of the scheme for planning. The existing building is in a poor condition and we have been commissioned to assess the feasibility of the proposals and the likely scope of structural work required to facilitate the scheme.

This letter report and all our inspection work has been undertaken based on the limitations and terms and conditions noted in section 6.0 of this report.

2.0 Existing Condition of the existing building.

A structural assessment of the existing structure was undertaken in 2018 by Steven Heard Associates Ltd. This assessment details of the condition of the existing structure and provides recommendations for the conversion of the building. Following on from our own inspection and assessment of the property, we are in general agreement with the findings of the Heard Associates report.

A significant portion of the existing structure has deteriorated beyond normal serviceable limits and requires replacement. Figures 1 & 2 below, show the existing ground and first floor layouts. We have indicated on these plans which of the existing walls we envisage could be retained and those which will most likely need replacement. Additional observations and notes are also provided below regarding the wall retention and replacement recommendations.

The roof structure is inadequate and in very poor condition and needs full replacement.

The majority of the first floor construction needs to be replaced due to its poor condition and/or inadequate construction. Areas are evident where the existing floor timbers have suffered extensively from rot and timber infestation. There are various locations where the floor members are undersized for their span and loadings.

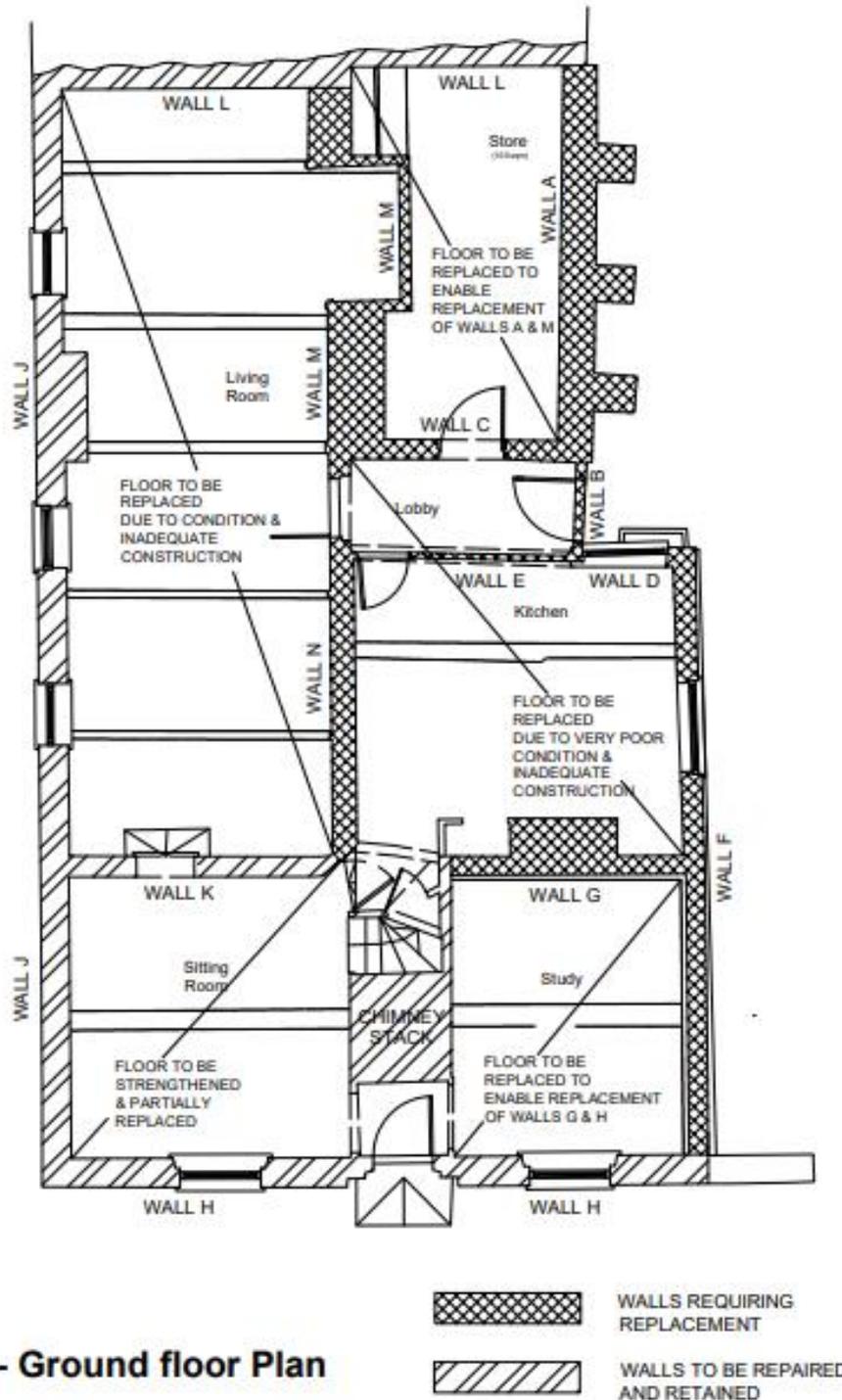


Figure 1 - Ground floor Plan

Davies Burton Sweetlove Ltd
 Consulting Structural and Civil Engineers

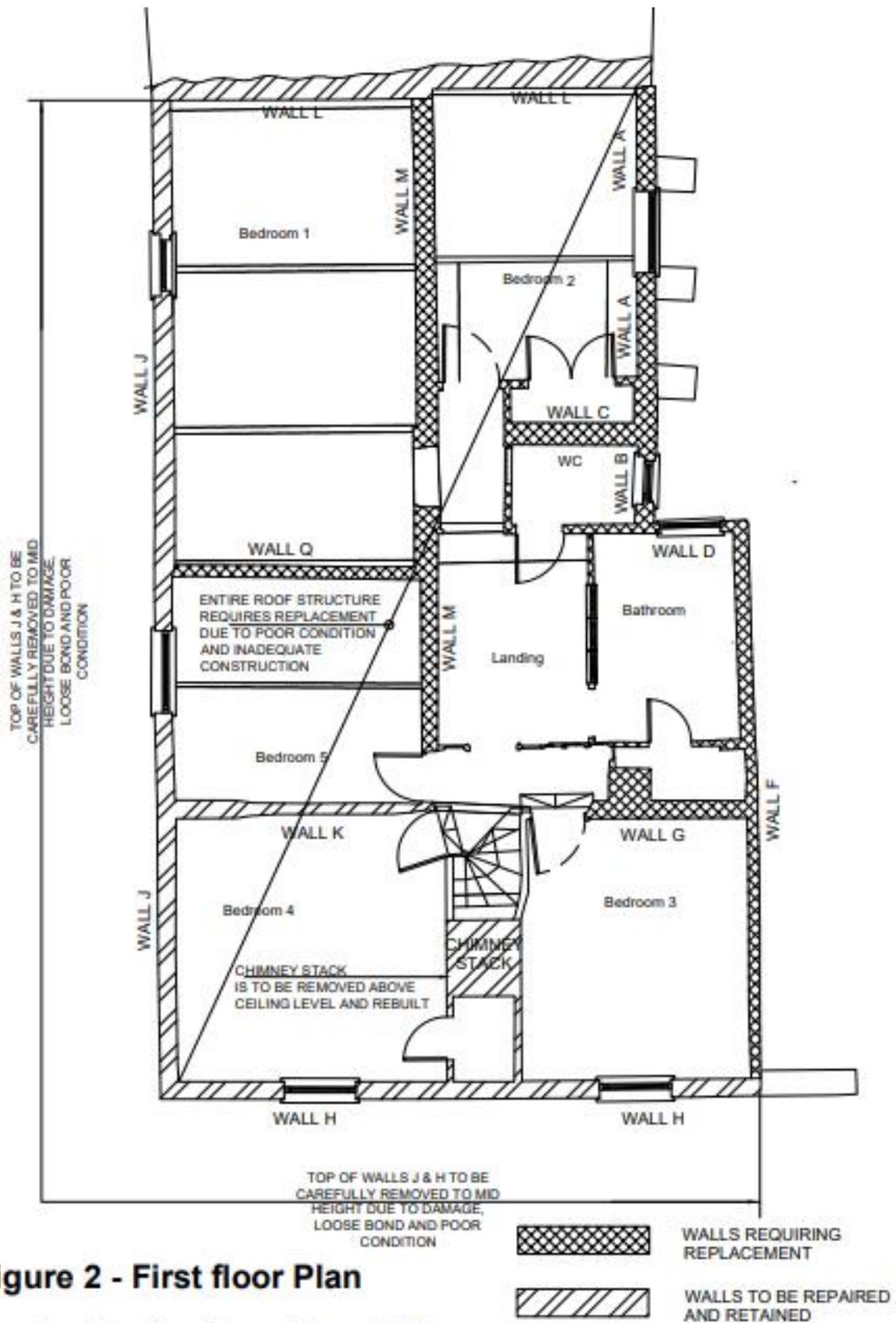


Figure 2 - First floor Plan

Davies Burton Sweetlove Ltd
 Consulting Structural and Civil Engineers

Wall A

This wall has suffered significant lateral movement and damage. The external buttresses, tie bars and pattresses historically provided to prevent the movement of the wall appear to have been ineffective. The alignment and condition of the wall are such that it needs to be replaced.

Wall B

This wall is located above the rear entrance door and has suffered significant damage due to the failure of the lintel over the ground floor entrance and lateral movement of the wall. The condition of this wall is such that replacement would be the most practical and safe option.

Wall C

The required replacement of walls A, B & M will make it difficult to retain this wall. For practicality and safety, we would recommend that this wall is also rebuilt.

Wall D

This wall is located above the rear kitchen window and has suffered significant damage due to the failure of the lintel and lateral movement of the gable wall (Wall F). The condition of this wall is such that it needs to be replaced.

Wall E

The required replacement of walls A, B & D will make it difficult to retain this wall. For practicality and safety, we would recommend that this wall is also rebuilt.

Wall F

Wall F (Gable wall facing the Maybush Inn) has suffered lateral movement and appears to be leaning outward from the building significantly. The wall has been constructed with full length timbers imbedded in the internal side of the wall. These timbers have perished due to rot and decay leaving deep unsupported horizontal chases in the wall that have created points of weakness.

Wall F is not restrained at first floor or roof level and Wall G is not bonded into the gable. At the rear end of the wall, it is un-buttressed.

The first-floor construction above the kitchen adjacent to Wall F is in very poor condition and will need to be replaced.

In consideration to the condition and construction of this wall and that of the adjacent structure, the replacement of the Wall F appears to be the only practical option.

Wall G

This wall is in poor condition and consists of badly bonded masonry combined with embedded timbers. A Chimney Stack is located mid-way along this wall. The required replacement of Wall F and the adjacent first floor construction and roof will make it difficult to retain this wall. For practicality and safety, we would recommend that this wall is also rebuilt.

Walls H & J

The condition of both these walls is such that they could be retained, albeit with the requirement for significant strengthening and repairs. The walls would need to be tied into the new and existing internal walls and first floor construction using "Helifix" type remedial "bow"

and “Cem” ties. The external wall junctions may also need additional tie measures to reinforce the bond to the wall adjacent.

Significant damage is evident to the top section of Walls H & J, due to moisture penetration from above. Loose masonry with little or no bond is evident. We envisage the top portion of these walls will need to be carefully dismantled and rebuilt.

Wall K & L

The condition of this wall is such that it could be retained. The top of the wall would need to be re-built, due to damage. Additional provisions would be needed to tie the wall to the new roof and floor structures each side. This could be achieved using steel straps / fixings. All works to Wall L would be subject to Party wall agreement, as appropriate.

Walls M, N & Q.

These internal walls appear to be formed in timber studwork construction which does not appear sufficient to support the loads of new construction. We recommend that these walls are replaced with more robust construction adequate to be used as a load bearing.

3.0 Alterations to the existing construction required to facilitate the new scheme.

In the proposed scheme the first floor construction will be a compartment floor separating different ground and first floor dwellings. The linings required to achieve this construction will likely result in an increase joist and overall floor depth from that currently existing.

The ground floor construction is also likely to need additional finishes and insulation to meet current regulations.

The headroom in some of areas of the building is already low and there is little scope for alterations to floor and ceiling levels. It is therefore likely that the ground floor will need to be lowered in some areas to accommodate the above. This will possibly result in the requirement to underpin some of the external wall foundations which are likely to be shallow.

4.0 Conclusion

In consideration of the condition of the existing structure and the proposed, scheme there appear to be two options for the existing building :

Option 1 – Façade retention / Partial rebuild.

This option would see the retention of the existing external walls to the Farm Road and High Street elevations. (Walls H & J – See Figure 1 & 2). With the exception of the party wall and internal load bearing wall adjacent to the front room (Walls L & K) ,the remainder of the other existing construction would be carefully dismantled and re-built. To facilitate this scheme a temporary structural framework would need to be constructed outside of the building and this would require the partial closure of Farm road and The High street. These temporary works would be combined with some internal scaffolding and framework to support the walls which are to be retained and strengthened.

We do not believe that a “piece by piece” scheme of replacement / strengthening works is practicable within the existing structure. Whilst schemes and measures can be considered to cater for the myriad structural defects on a case-by-case basis, the overall level of the

intervention required to the existing building would be significant and these works in our opinion would be difficult to undertake, given the limited space and would high risk in terms of safety. The condition of the existing building is such that it appears to be very fragile and whilst we did not notice any signs which might suggest that the building is in imminent danger of collapse, we believe any works which cause significant disturbance or movement to the structure could lead to instability.

Option 2 – Complete re-build

This scheme would see the existing building replaced with a similar replica construction. The careful dismantlement of the building would make it possible any salvage elements of historical interest which could then be refurbished and reused in the re-build, so existing important features can still be retained.

From a structural engineering point of view, a re-build scheme is likely to be a far better option; it will involve considerably less structure, temporary works and risk. The new ground works will also be much easier and safer to undertake, and no underpinning is likely to be required.

From an environmental point of view, a re-build scheme would have little or no disruption to the surrounding community, certainly no more than normal for a construction site. The re-built construction would also be able to incorporate additional levels of insulation and renewable energy supply creating a far more efficient and environmentally friendly building.

5.0 Recommendations.

We recommend that following discussions with the local authority conservation officer permission be sought to proceed with the scheme, based on option 2 noted above.

We recommend that geotechnical and foundation site investigations are undertaken to determine the likely extent and type of new foundations and underpinning that will be required.

We recommend that an asbestos survey is undertaken within the existing building prior to any alteration or demolition work. The recommendations of this survey should be undertaken to make the building safe for alteration or demolition work to be undertaken and also for the ongoing use of the building. All as per statutory requirements and standard industry practice.

Prior to any work or investigation / survey work being undertaken within the existing building we recommend that temporary propping and shoring of the existing structure be implemented to ensure the building is safe and stable. A structural engineer and temporary works designer should be employed in this respect.

The structural design of the extension and modified or rebuild existing building should be designed by a qualified structural engineer and Architectural designer to ensure it complies with current codes of practice and The building regulations.

Adequate “All risks” insurance cover should be maintained to provide continuous cover for the building.

6.0 Limitation of this report and terms and conditions of our engagement.

This letter report and all our inspection work to date has been undertaken in accordance with the Association of Consulting Engineers standard terms and conditions of engagement part 2 – Study for clients.

The following report should not be considered as a comprehensive appraisal of the structural condition of the property, it deals solely with structural matters relating to those stated above and immediately apparent during our inspection. No attempt was made to inspect any parts of the structure which were not visible or were hidden or inaccessible. It is possible conditions exist which have not been identified herein.

Our commission excludes providing any advice relating to contamination or asbestos and/or any non-structural engineering matters.

Our commission does not include for the assessment of any environmental issues, i.e. contamination, flood risk assessment, conservation issues etc and such are outside of our remit and responsibility.

This report is personal to the client, confidential, non-assignable and written with no admission of liability to any third party. No rights are offered, purported or conferred to any third parties. This report should not be reproduced, except in full, and only with our permission. Our client is the Great Oakley community Hub Ltd

The details and outline summary of envisaged required works is provided herein are solely for conceptual purposes and are all to be confirmed. No details in this report in any way provide a final assessment or design and should not be relied on or used for any procurement, sales, costing, construction or any for any other purpose.

We are not qualified to advise on planning or conservation matters. We recommend however that no work is commenced or procured until planning permission has been granted and any pre-commencement conditions have been cleared. Specific agreement is to be obtained from the local authority prior to the removal or demolition of any construction.

We trust the above is clear, but if you have any queries or need to discuss any matters please don't hesitate to contact us.

Yours Faithfully

Davies Burton & Sweetlove Ltd