

The Old Cottages, Mellis Road, Thrandeston, Suffolk.

A schedule of repairs to the timber frame.



We have been engaged by the owners Mr. and Mrs. Wheeler to carry out some repairs to the frame having previously assessed the property at pre-purchase stage and more recently, prior to their application for Listed Building Consent (LBC). This document seeks to more accurately schedule the frame repairs now that LBC has been granted.

This is written as a method statement for the project and an attempt to provide clarity for the local authority (LA), hopefully allowing them to discharge the conditions they have attached to the recent consent. As noted before, some elements of the work remain slightly uncertain until the final opening up has been commenced but now we have removed some sections of render the proposals below should far more accurately reflect the final works.

However, once the project starts, anything found to be significantly worse than predicted and in need of a revised approach will be discussed with the LA before continuing that aspect of the works.

On 19th April 2022 we cut nine small trial holes into the cement render to assess the condition of the outer face of key timber components. The numbered images below serve as a guide and each element will then be examined in more detail where our proposed repairs will be outlined in the hope they meet with LA approval, the condition can be discharged and works can commence.



Above, the south elevation with six sections of render removed and crossframes marked in orange.

Below, the east elevation with four sections of render removed.



1. This bay-length of sole plate is in very poor order with the thin section remaining in a very friable condition. The stud to the right is extremely thin and has no connection to the plate, although it is probably a later, poor-quality replacement anyway.

Areas of wattle and daub infill remain and we would hope to retain these wherever possible but with the entire length of plate being removed and replaced this will be a challenge. If they are stable and solid enough they will be repaired with new daub as required but if they prove too friable they will be replaced with a sheep s wool insulation prior to the exterior rendering being applied.



We propose to remove this length of sole plate and replace it with a new, appropriately dimensioned section of approximately 180mm wide x 125mm 150mm tall. The stud, along with any others in poor condition will have simple patches to the outer face or half-lapped scarfs and fixed to the new sole plate with stainless steel L-brackets.

The reason for using brackets is that the plinth appears in reasonable condition; to use mortice and tenons would require two courses of brick plinth to be removed to allow the joinery to be assembled and given that the plinth appears acceptable this would be an expedient compromise that retains as much historic fabric as possible as well as not disturbing the internal floors too much by rebuilding elements of the plinth.

2. This length of sole plate is also in poor condition with poor quality timber having been used (once again, a later replacement timber) that has subsequently decayed and broken. Internally it had been mostly plastered over to hide the condition of it (see lower picture).



We propose to replace this bay-length plate with a new, appropriately dimensioned section of green oak approximately 180mm wide x 125mm 150mm tall. Any decayed studs will have simple patches to the outer face or half-lapped scarfs and fixed to the new sole plate with stainless steel L-brackets (as discussed above).



3. Where the render was removed this bay of sole plate seems to be in slightly better condition.



We propose that this bay is repaired by raking out any loose timber to the lower/outer half of the plate and packing the subsequent void with broken soft red brick, red tile and coarse lime mortar. This will give the plinth some load capacity while retaining as much of the historic fabric as possible particularly the infill panels above which will be undisturbed. This filler *within* the plate will act as a breathable concrete supporting the less capable sections of sole plate allowing the load from the wall, first floor and roof be resolved, down into the undisturbed plinth and ground below.

Below: the plate viewed from inside.



4. This section of plate is in very poor condition with much of it below the internal floor level. It is quite short and sits between a crossframe and one of the rear doorways.



We propose to fit a new length of plate in this position that will be scarfed somewhere close to the crossframe wherever the plate run becomes sound enough to accept a simple scarf joint. The new green oak section will match the existing in size and be fixed with M10 stainless steel coachscrews then pointed up below with a coarse lime mortar mix.

Below: the plate viewed from inside.



5. This length of plate sits underneath a staircase and behind the oil boiler it is very hard to see from inside as it is essentially flush with the internal masonry floor and almost wholly subterranean! Towards the east gable it ceases to exist at all and has been filled with fletton bricks and concrete.

Although the infill panel looks in passable condition, it has actually slipped down considerably and the wattles are extremely friable. The bottom of the wall is cast concrete which has basically buttressed the wall in the absence of the sole plate and any meaningful connections to the uprights.



The oil boiler will need to be disconnected, possibly also a considerable number of pipes and cables that are all hidden within this corner. The cast concrete will be broken out and a new length of sole plate introduced of an appropriate size and fixed to the (repaired?) studs with stainless steel L-brackets. The infill panels will probably need to be renewed using sheep s wool insulation.

6. The south east corner post is poorly conditioned to the lower 700-800mm with no sole plate running immediately west and although a small, later section of plate has been inserted to the north there is no connection between any of them in this position. To the right/north is an infill panel of fletton bricks laid in hard cement mortar with a modern DPC inserted adjacent to the post.



We propose to lengthen the post with a new section of oak approximately 700mm long with a simple half-lap scarf of approximately 250-300mm fixed with M10 stainless steel coachscrews.

The new oak sole plate in the rear elevation (noted above) will fix to a new section of plate within the gable (see below) and sit underneath the post. Any deficiencies within the plinth will be repaired with a coarse [lime mortar mix](#).

7. This section of gable sole plate appears in poor condition however, much of what is visible here is where a stud is jointed to the plate and thus a mortice is part of this section. To the left, a small section of later timber has been inserted whereas to the right, the original plate timber is reasonably solid for much of the section.



We propose to scarf a new section of plate at around this point, running south, and under the repaired corner post. The scarf timber to be of matching size oak, fixed with four no. M10 x 125mm stainless steel coachscrews and packed up underneath with a coarse mortar mix. The stud to be repaired appropriately hopefully just a patch to the outer face using dry timber but potentially a new section scarfed in at an appropriate length and fixed with M10 stainless steel coachscrews.

8. This is the opposite end of the previously discussed plate and looking at both ends it seems that much of the cross-section remains and is essentially sound. Note the coal tar painted on the outer face and (just visible) the plinth below this is a 19th century attempt at weatherproofing an exposed timber. Exposed plates are quite common, they protrude by about 25mm with the clay render stopped on the upper face. The render is usually limewashed and then during the Victorian era we see coal tar used on the sole plates and plinths below in an attempt to keep the weather out and damp-proof the building. A section of the gable has been replaced more recently with modern treated softwood and a proprietary plastic DPC, this is possibly a previous doorway being infilled during the 20th century.



We propose to rake out all loose material between holes **7** & **8** and then point up/make up with elements of red brick and lime as discussed in **3**. We will also trim the DPC so that it isn't in contact with any historic timbers.

9. The northeast corner post and plates beneath are in good condition, albeit with a void in the front wall (north) sole plate beneath the post. Note the post tenon as well as the tenon (and peg) from the gable sole plate into the front wall plate



We propose to fill the void with red brick and coarse lime mortar as noted between 7 & 8 and in 3.

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