

Our Ref: PM/5291

7th November 2023

Mr G Stevens
Anthony Hicks
Jessamine Farm
Old Romney
Kent. TN29 9SG

Dear Graham,

RE: NURSTEAD HALL, NURSTEAD LANE, LONGFIELD HILL

We write with reference to our recent site visit to the above property.

The purpose of the visit was to inspect cracking over the boiler room external door opening as well as various cracks around the exterior of the property. We comment on each elevation as follows;

North Elevation – Original Property Section

This was discussed in our letter report dated 20th March 2023 and we concluded that the render had become detached from the oak framework behind and that the lathes had become loose. An additional hole was opened up whilst we were on site, and this revealed significant decay to the lathes so these are all likely to need removing back to the original oak framework as originally envisaged.

West Elevation – Original Building

A vertical hairline crack is evident to the corner with the north elevation as well as hairline cracks elsewhere. A small inspection hole was formed which revealed timber weatherboarding directly beneath the external render finish (see plate 1 at the rear of this report). The render finish incorporated eml, which was generally found to be corroding except for the very corners where stainless steel was used. The weatherboarding was showing signs of decay.

Rendering on timber weatherboarding is extremely poor construction and will lead to numerous future problems including cracking, which is clearly evident in this case. We are therefore of the opinion that the render and weatherboarding should be removed and replaced with either new weatherboarding or re-rendered on a suitable render board.

Once the finishes are removed, an inspection should be made of the main oak framework behind to determine its condition and reinforced/strengthened as necessary.

South Elevation – Original Property Section

A vertical crack was present at the corner junction with the west elevation as well as numerous cracking towards the centre of the elevation. A small hole was formed which revealed timber shiplap boarding directly beneath the external render finish. The render finish incorporated eml, which was generally found to be corroding except for the very corners where stainless steel eml was used. The weatherboarding was showing signs of decay.

As per the west elevation, rendering on timber boarding is extremely poor construction and will lead to numerous future problems including cracking, which is clearly evident in this case. We are therefore of the opinion that the render and shiplap boarding should be removed and replaced with either weatherboarding or re-rendered on a suitable render board.

Once the finishes are removed, an inspection should be made of the main oak framework behind to determine its condition and reinforced/strengthened as necessary.

East Elevation and Part North and South Elevations to Modern Extensions

The east elevation of the property comprises a more recent extension.

This extension also comprises a render finish which again shows various hairline cracks. A small inspection hole was formed which revealed lightweight thermalite type blocks directly beneath the render (see plate 2). These thermalite blocks offer a poor substrate to render to as they absorb a high amount of moisture from the render when it is being applied which often leads to cracking. These blocks are also very prone to thermal shrinkage that results in hairline vertical cracking through the blocks (and direct applied finishes).

The vertical cracking would have caused the blocks to have lost some of their integrity, so we would recommend that the cracks are strengthened using heli-bars at 450mm vertical centres, extending 500mm beyond the cracks. However, due to the inherent poor quality of the blocks, it is very difficult to prevent future cracking from occurring elsewhere within the wall. As a result, we would recommend that, following installation of the heli-bars, the wall is battened and counter-battened to receive a render board and re-rendered to suit. Due to the eccentric load with this arrangement, the wall will need to be checked to see if adequate wall ties are present, with allowance being made for possible new remedial wall ties. Alternatively to the render finish, the wall may be able to be weatherboarded after the heli-bars are installed. In both cases, the render should be left in place as it enhances the integrity of the wall.

However, should the client accept these cracks and appreciate that ad-hoc future filling and painting will be required to these elevations, then the heli-bars and re-rendering works may not be strictly necessary at this stage to these more modern walls. Should this approach be taken, then the wall should be monitored for future movement.

Cracking above Boiler Room Opening

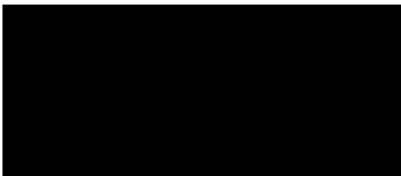
Cracking is evident above and around the boiler room door. The wall contains no finishes internally so the existing lintel and blockwork can be seen. A 65mm deep PC lintel is present, although this does not have sufficient bearings (see plate 3). Cracking is present over and to the side of the opening, and this is considered to be a combination of lintel deflection and thermal shrinkage of the blockwork.

We are therefore of the opinion that this lintel should be replaced with a more substantial concrete lintel with additional bearings and local strengthening at the bearing.

We have indicated the proposed remedial works to this elevation on the attach sketch sheet SKD1.

As the property is listed, all works will of course be subject to Listed Buildings consent, prior to carrying out the works.

Yours sincerely

A large black rectangular box redacting the signature of Paul Molineux.

PAUL MOLINEUX

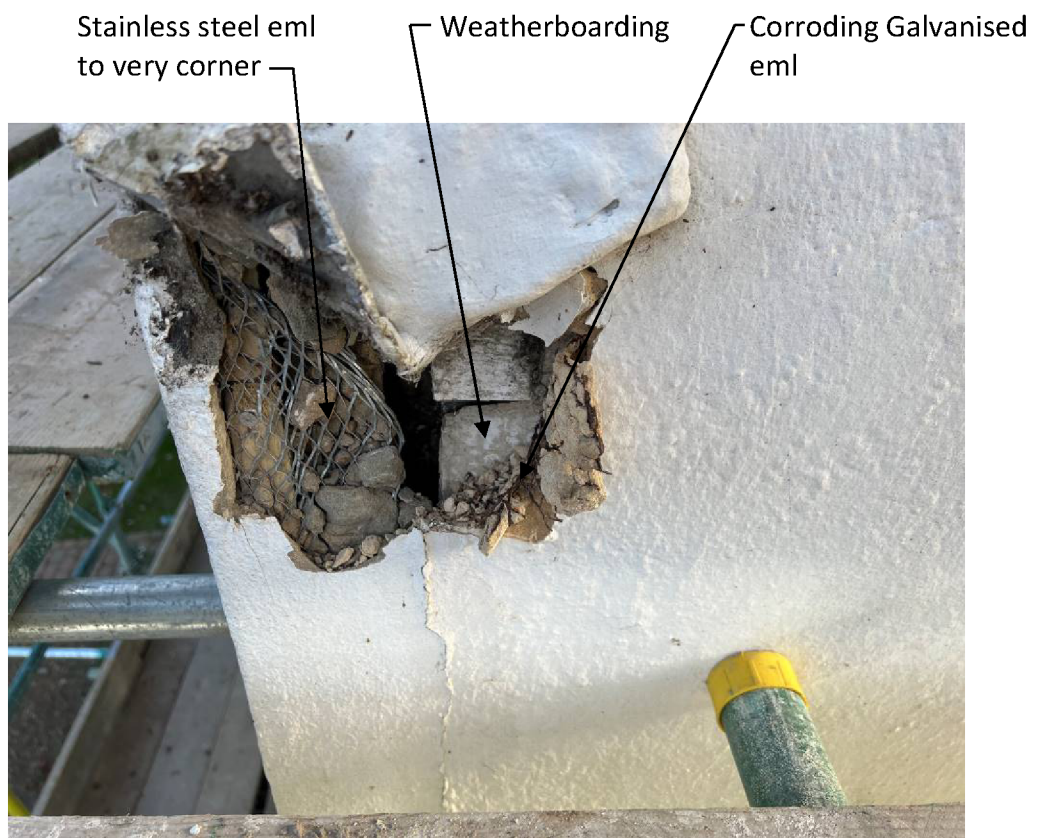


Plate 1 – Opening up to West Elevation to Corner with South Elevation



Plate 2 – Cracking to Render and Through Thermalite Blocks



Plate 3 – Poor Lintel Bearing to Boiler Room Door