31/33 Porthcressa – Chimney leak investigation

Summary

We have undertaken a roof inspection of the subject chimney and an internal inspection of the water damage to the internal finishes and in the loft space. We noted elevated moisture levels and anticipated active water ingress.

We noted several potential causes of water ingress and several recommended repairs which are noted in the recommendation section of this report in detail, these being:

- Provide new back gutter detail to the chimney
- Undertake repairs to the render and redecorate
- Consider removal of the vent to the rear of the chimney
- Clear the roof of moss/ lichen
- Repair the roof felt internally
- Reinstate bird spikes if required, ensuring the render is not damaged

We anticipate that the most vulnerable area and most likely source of water ingress is the current back gutter/ flashing detail to the rear which is were water ingress was noted internally.

We understand that the chimney spans over numbers 33 and 31 and we would suggest that they works should be undertaken to the whole chimney as a joint responsibility, as it was not noted to be particular localised repair to any one side of the boundary line.

History / scope

We were instructed to look at the water ingress to number 33 Porthcressa which is a privately owned property which adjoins number 31 Porthcressa which is owned and managed by CIOS. The inspection was undertaken as part of our existing arrangement with CIOS for the housing maintenance delivery programme.

We undertook our inspection with a drone to assess the condition of the chimney at high level and to be able to view areas which we couldn't see from ground level, and by inspecting internally to look at the water ingress to number 33.

We understand that the water ingress issue has been present for a while to number 33, and to a much lesser extent to number 31.

At the time the weather was dry and sunny.

Internal findings

Internally we noted water staining around the chimney breast to the 1st and 2nd floors of the property. The worse affected areas was on the second floor in the bathroom and the cupboard space. We noted elevated moisture readings to the timber coving to the bathroom generally at around 25% and up to 40+% in a localised area. These elevated damp areas were consistent with were the staining was located and also where the tenant has indicated that they have 'water running down the walls'.

We inspected in the loft space and noted that to the floor joists immediately above the affected area there was elevated moisture readings, but generally and to other areas the timbers were much drier. This highlights that the affected area appears to be very localised to what is the rear right hand side of the chimney (if facing the front elevation).

We did not that the felt underlay to the roof had failed and required refixing, while we did not see this as the cause of the issue, we would recommend that this is refixed to prevent further water ingress.

External findings

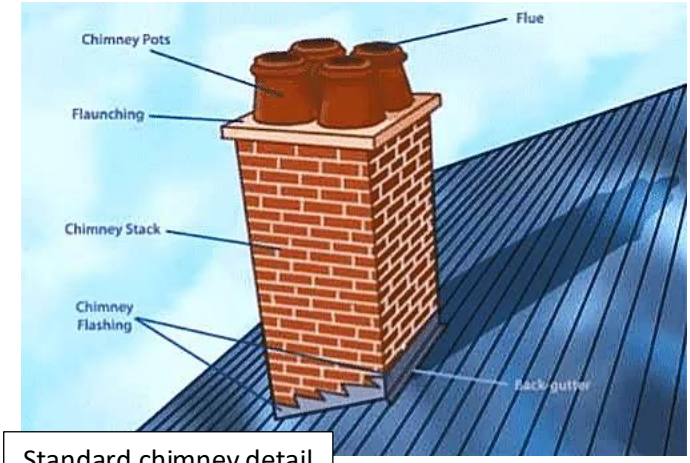
Our external inspection using a drone was able to focus on the localised area where we noted the water ingress internally.

Generally the chimney appeared in a reasonable condition and the flashing generally appeared in good condition. However, while there appears to be a flashing to the rear of the chimney it appears that at the junction between the flashing and the roof covering there is limited apron at the junction between the roof covering and chimney and less than would be typically expected from a back gutter detail (which is intended to prevent water ingress and redirect water from the rear of the chimney). It could be that the detail extends under the roof covering to the rear, however this was not clear on inspection. Nevertheless, this appears to be the area where water is entering the building and therefore that would suggest that the current flashing/ back gutter arrangement to the rear of the chimney is defective or insufficient.

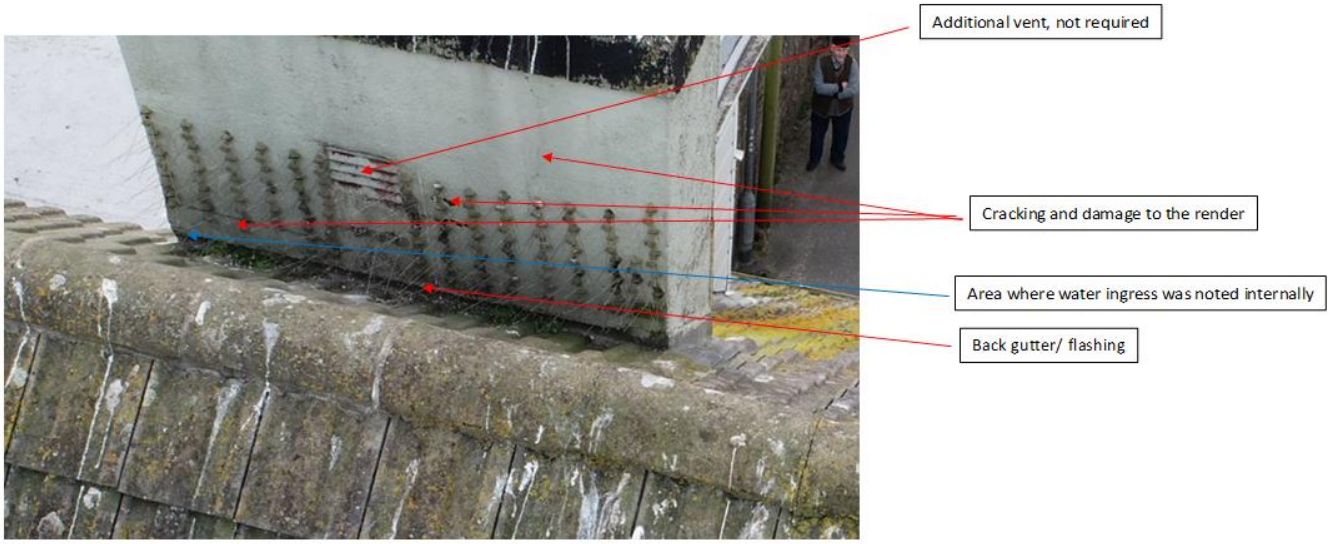
We also noted that around the area there was a build-up of vegetation which can cause damage. We would recommend that vegetation is routinely cleaned back.

We also noted localised hairline cracking to the chimney breast render covering and localised areas of minor damage, particularly to the rear. Hairline cracking can allow water ingress and should be repaired. IF cracks are left exposed them this can lead to water ingress which will exaggerate the issue and lead to further damage.

We also noted a vent to the rear of the chimney as a possible source of water ingress. It should be noted that ventilating unused chimney breasts is best practice, however, this can be achieved through the pot with a cowl to prevent water ingress (which is the case to all 3 pots here). Which brings into question if the vent located on the breast (which is a potential point of water ingress) is required.



Standard chimney detail



Recommendations

Back gutter – We would recommend that the bird spikes and vegetation are removed and that a new back gutter/ flashing is installed the rear of the chimney. The new back gutter should have a sufficient apron detail and lapped over or under the roof covering capturing and redirecting water running down the roof covering. And also provide suitable protection to the low level render covering from water running down the roof.

Vent – We believe that the chimney is adequately ventilated at roof level (providing the pots vents are not sealed) and therefore this vent which is a potential cause of water ingress is not required. While undertaking the works to the chimney it should be considered if this vent could be removed and finished to match the rest of the chimney to remove a potential source of water ingress.

Cracking/ damage to the render – The cracking/ damage to the render is a potential source of water ingress and will get worse over time. While the bird spike are removed we would recommend that the cracks are raked out and filled to match the render covering of the chimney. Following the crack repairs we would consider redecoration of the chimney to provide extra protection to the repaired areas and the render generally.

General – While not the cause of this leak, while roof access is provided we would recommend clearing the roof of moss and lichen which can hold water. Following the works, new bird spikes could be fitted if required, making sure not to damage the render covering. We would recommend repairing the internal felt roof underlay to number 33 which has failed.

Costing

TBC