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AR Structural Design Ltd

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**76 Victoria Street, Kirkwall KW15 1DQ
Structural Defects Report**

Date of inspection: 25/10/17

Limitations of inspection

My inspection of the outside of the building was limited to a visual inspection from the ground. My inspection of the inside of the building was limited to a visual inspection of accessible areas. I was unable to access the loft space. I was unable to access under the suspended timber ground floor or behind surface finishes. My inspection was limited to the issues identified in the Home Report of 15/8/17 by S J Omand

Significant deflection to upper floors

This is not unusual in a building of this age. Over a long period of time, rafters and floor joists will gradually sag (a condition known as "creep"). At the time of construction the floor joists would not have been subject to the strict structural design codes that are currently applicable

Crack to elevation facing 80 Victoria Street

There are hairline cracks in the repaired render. Given the age of the building, I do not consider these to be significant.

Rear Chimney Stack

This is leaning inwards noticeably. I was unable to access the roof in order to measure this. However, from the ground, it appears to be out of plumb by approximately 75mm

The recognised rule leaning walls is: "a wall is usually considered unsafe if it leans to the extent that a plumb line passing through its centre of gravity falls outside the middle third of its base"

In this case of a 800mm wide wall the middle third is 267mm wide. Therefore the critical distance off plumb would be 135mm

Since the 75mm off plumb is less than 135mm, I conclude that the chimney stack is stable

It is noticeable that almost all of the chimney stacks of a similar age in Victoria Street and elsewhere have a noticeable inward lean.

I recommend gaining access to the roof in order to record an accurate measurement of the lean

Report prepared by

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Allan Reid