

**byedesigns**

**VISUAL STRUCTURAL INSPECTION REPORT**

**ON**

**34 PRINCESS STREET, SCARBOROUGH, YO11 1QR**



**ON BEHALF OF  
UNTITLED PROPERTIES LTD**

**JANUARY 2024**

## CONTENTS

	Page
1.0 Brief	3
2.0 General Description	4
3.0 Observations	5
4.0 Conclusions and Recommendations	7

Appendix A – Photographs

## **1.0 BRIEF**

- 1.1 Acting on an instruction from Mr M. Smith, I confirm having visited the above property on 5<sup>th</sup> January 2024 to carry out a visual structural inspection.
- 1.2 The purpose of the visit was to carry out a visual structural survey of the property and prepare a condition report identifying any major structural defects.
- 1.3 The report concentrates on the condition of the property and does not make any conclusion regarding the overall stability.
- 1.4 The weather at the time of the inspection was cloudy and dry.
- 1.5 The building was inspected in daylight by visual means only and with no recourse to carry out intrusive investigation. The external inspection was from ground level. The scope of the inspection is therefore limited to those items which can be seen, and I am consequently unable to advise on any item that was hidden, inaccessible or unseen at the time of the inspection.
- 1.6 All reference to left or right is as viewed from the front of the property.
- 1.7 The report has been initially prepared for the use and reliance of the Client only. The report shall not be relied upon or transferred to any other parties without the written agreement. No responsibility will be accepted where this report is used, either in its entirety or in part, by any other party without consent. Observations noted herein are only applicable at the time of inspection, and only to the areas visible.

## 2.0 GENERAL DESCRIPTION

- 2.1 The property is located on Princess Street, in central Scarborough.
- 2.2 The building is approximately rectangular in shape. The property is bounded by residential properties to the north, east and west, and Princess Street to the south. The ground levels around the property present a general fall from north to south.
- 2.3 The property appeared to be of traditional load bearing masonry construction, with an assumed timber roof and floors bearing on the masonry walls.



Figure 1 – Aerial View of Property

### 3.0 OBSERVATIONS

- 3.1 The semi-detached property consisted of four storeys (plus attic floor). The property appeared to be of traditional load bearing brick masonry construction, which supported a timber roof and timber floors. No opening up works were undertaken to confirm the existing structure.
- 3.2 The front elevation appeared to be of brick masonry construction with an external rendered finish. The elevation generally appeared to be in a fair structural condition, relatively plumb and in line. There were a number of vertical cracks noted in the external render between the window openings, to several floor levels of the building. The cracks were also noted to extend through the window sills.
- 3.3 The rear elevation was of brick masonry construction. Access to the elevation was restricted and a limited inspection was made from a neighbouring property to the north. The elevation generally appeared to be in a poor structural condition, with the wall appearing significantly out of plumb. The brick masonry also appeared to be locally weathered.
- 3.4 The side elevation was of brick masonry construction. Access to the elevation was restricted and a limited inspection was made from a neighbouring property to the north. The elevation generally appeared to be in a poor structural condition, however the wall appeared relatively plumb and in line. The brick masonry appeared to be locally weathered, which was particularly noted to the left-hand side of the elevation. There were vertical cracks noted in the brick masonry between the second and third floor windows. Further vertical cracks were noted in the brick masonry to the right-hand side of the elevation, at the returned end with the rear elevation.
- 3.5 To the front of the property there were a series of brick/block masonry retaining walls, forming the level changes between the property (high) and the car parking space (low). The condition of the retaining walls appeared to be fair. The upper-level brick masonry retaining wall had been part rendered, with a stepped vertical crack noted in the render.
- 3.6 The roof was of traditional timber construction with rafters spanning on to purlins, which were supported by a central attic truss. The roof structure had been altered to form a dormer to the front elevation. The rafters and purlin had been cut back to form the dormer. The rafters were providing a

cantilevered support to the flat roof of the dormer, putting additional loading on to the high-level purlin. The purlin presented a fair degree of deflection at the mid span. There were signs of significant water ingress into the roof and apparent wet rot of the timbers was noted.

3.7 The third, second and first floors of the building were of traditional timber construction, with timber floor joists spanning from the front to the back of the property, with a central brick masonry wall (which had been rendered) providing a load bearing support. There were signs of significant water ingress and apparent wet rot of the timbers was noted to all floors. To the front of the property the timber floor joists were supported by Acrow props, with joist ends missing together with locally missing brickwork to the main elevation walls. At second floor, adjacent to the stairs, there were a series of horizontal mortar joints which had been cut out, with a vertical crack in the brick masonry noted in this location.

3.8 At ground floor the walls had been rendered obscuring the wall condition. The rear wall of the property acted as a retaining wall and was assumed to be of traditional brick masonry construction. The rear wall appeared to be relatively plumb and in line. There were a pair of existing steel beams, together with a timber beam, which were supported by Acrow props. There was also a newer steel beam, with further steel trimmers, supporting the brick masonry chimney above at first floor level. There were signs of significant water ingress from the floors above, with standing water noted to the floor. The ground floor construction was not confirmed, however it appeared to be a ground bearing concrete slab.

## 4.0 CONCLUSIONS AND RECOMMENDATIONS

- 4.1 The front elevation appeared to be of brick masonry construction with an external rendered finish, which obscured the condition of the underlying masonry. There were a number of vertical cracks noted in the render between the window openings, to several floor levels of the building. I would recommend for the render to be locally removed and for the condition of the brick masonry to be further investigated. Any masonry cracks are to be made good and repaired using helifix, or similar, masonry stitching bars installed across the cracks at 150mm vertical centres, installed to manufacturers recommendations. Any damaged brick masonry units are to be replaced with new masonry to match existing. Any damaged window sills are to be repaired/replaced as necessary.
- 4.2 The rear elevation generally appeared to be in a poor structural condition and was significantly out of plumb. The cause of the movement was not evident, however, based on discussions with the adjacent property owners the movement was likely due to historic settlement. Given the limited access available and the one-off nature of the inspection this could not be confirmed. In its current condition there was little lateral restraint provided to the rear wall and there is a risk of on-going movement as a result. As viewed internally the ground floor level, retaining element of the rear wall, appeared to be relatively plumb and in line. The retaining structure requires further investigation/monitoring to ensure there is no on-going cause of settlement. If no on-going settlement is confirmed then the rear elevation wall could be rebuilt plumb and in line. Alternatively, to minimise further movement to the wall additional lateral restraint/ties could be provided at maximum 2m centres, at each floor level and at roof level. The restraints/ties should be provided to the full perimeter of the building. The timber floor joists should be tightly packed to the external walls/central masonry wall. The addition of pattress ties should also be considered between the front and rear elevation, at each floor level, to provide additional lateral restraint. The brick masonry also appeared to be locally weathered, likely due to the age and exposure of the building. I would recommend for any severely weathered/damaged brick units to be locally replaced with new masonry to match existing.
- 4.3 The side elevation generally appeared to be in a poor structural condition. The brick masonry appeared to be locally weathered, which was particularly noted to the left-hand side of the elevation. I would recommend for any severely weathered/damaged brick units to be locally

replaced with new masonry to match existing. There were vertical cracks noted in the brick masonry between the second and third floor windows. Further vertical cracks were noted in the brick masonry to the right-hand side of the elevation, at the returned end with the rear elevation. I would recommend that the masonry cracks are to be made good and repaired using helifix, or similar, masonry stitching bars installed across the cracks at 150mm vertical centres, installed to manufacturers recommendations. Any damaged brick masonry units are to be replaced with new masonry to match existing.

- 4.4 To the front of the property there were a series of brick/block masonry retaining walls. The upper-level brick masonry retaining wall had been part rendered. I would recommend for the render to be locally removed and for the condition of the underlying brick masonry to be further investigated.
- 4.5 The roof structure had been altered to form a dormer to the front elevation. The timber rafters were providing a cantilevered support to the flat roof of the dormer, putting additional loading on to the high-level purlin. I would recommend for the existing timber purlin to be strengthened to limit the roof deflections.
- 4.6 There were signs of significant water ingress into the roof, third, second, first and ground floors with apparent wet rot of the roof/floor timbers noted. I would recommend that the building be made watertight, with all gutters/downpipes cleared to ensure adequate drainage of the roof. The condition of the structural timbers should be confirmed by a specialist timber survey, with repair/replacement of the timbers undertaken as advised.
- 4.7 To the front of the property the timber floor joists were supported by Acrow props, with joist ends missing, together with locally missing brickwork to the main elevation walls. Subject to a specialist timber survey I would recommend for the timber joists to be spliced with new timber to match existing, in order to provide an adequate bearing. The brick masonry to the front elevation should be locally rebuilt and made good.
- 4.8 At second floor, adjacent to the stairs, there were a series of horizontal mortar joints which had been cut out, with a vertical crack in the brick masonry noted in this location. I would recommend that the masonry cracks are to be made good and repaired using helifix, or similar, masonry stitching bars



installed across the cracks at 150mm vertical centres, installed to manufacturers recommendations. Any damaged brick masonry units are to be replaced with new masonry to match existing.

- 4.9 At ground floor there were a pair of existing steel beams, together with a timber beam, supporting the masonry wall over. These beams were supported by Acrow props, and it is assumed that a load bearing pier had been removed. I would recommend for a permanent load bearing structure to be constructed, built off a suitable foundation, to provide support to the existing beams.

**APPENDIX A**

**PHOTOGRAPHS**



Photo 1



Photo 2



Photo 3



Photo 4



Photo 5



Photo 6



Photo 7



Photo 8



Photo 9



Photo 10



Photo 11



Photo 12





Photo 13



Photo 14



Photo 15



Photo 16



Photo 17



Photo 18



Photo 19



Photo 20



Photo 21



Photo 22



Photo 23



Photo 24



Photo 25