

Chartered Surveyors, Engineering Consultants, Planners and Architectural Designers

Specific Structural Report

Property:

Client:

Date of Inspection

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1.0 General Information

1.1 Instructions

You have asked us to comment upon:

Various crack on external brick elevations

You are reminded of the general limitations of the inspection described in the Standard Conditions of Engagement, a copy of which is reproduced at the back of this report.

1.2 Property Address

1.3 Name and address of client

1.4 Inspected by

1.5 Date of inspection

1.6 Weather

During the inspection the weather was dry and sunny.

The weather in previous weeks has been varied.

1.7 Orientation

For the purposes of this report, unless otherwise stated, the front of the property is considered to be that with the two bay windows and central door and all references to the left and right hand are given as if viewing a plan of the property, with the front elevation located to the bottom, and the rear elevation located to the top of the plan.

2.0 General Description

2.1 Type

This is a semi-detached house

2.2 Approximate Age

Although precise dating of the property is not possible we believe the original property to have been constructed circa 1940's

2.4 Situation

The property is situated on an estate of similar housing types

3.0 Construction

The main structure is of cavity brick

The walls have been repointed most probably over 20 years ago

4.0 The inspection

4.1 Front elevation

Above the front door a crack has developed in the "soldier course" and this continues upward though the mortar joints (See Appendix A photograph 1)

Above to the right hand ground floor passage window a crack has developed in the "soldier course" and continues upward though the mortar joints (See Appendix A photograph 2)

Below the ground floor right hand passage window sill there is a crack that steps up from left to right though the mortar beds. At its widest this is less than 1mm in width (See Appendix A photograph 3).

We noted a soil pipe and rainwater pipe that discharges into a manhole adjacent to the gable wall and we are advised that repairs to these drains were completed some two years ago

Other minor cracks do not warrant comment

4.2 Side elevation

No noticeable cracks

4.3 Rear Elevation

Above the rear patio door head there is a crack in the mortar beds that continues upward though the mortar joints (See Appendix A photograph 4).

This opening appears to have been increased in width and height to accommodate the new patio doors and no lintel support appears to have been fitted.

5.0 Conclusions and Recommendations

5.1 All cracks above openings are due to the lack of external lintels. Properties of this age were built without external lintels, the brickwork being set upon the wooden window frames. Over the years the windows have been replaced and the brickwork has dropped with the lack of support

Recommendations

The brickwork above the front door

The brickwork should be jacked-up back to level, the mortar beds tightly packed with slate to create a strong bond and the mortar repointed

The brickwork above the front right hand side passage window

The brickwork should be jacked-up back to level, the mortar beds tightly packed with slate to create a strong bond and the mortar repointed

The crack to the front elevation below the passage window

This is not significant and is typical of some general movement that is well within normal tolerances. See Appendix B, Building Research Establishment Digest 251, category of crack 1. No repairs are considered necessary

The opening to the rear patio door

This should have an external lintel inserted to prevent the brickwork from falling and repointed. Typical lintel types include: IG L10, Birtley LA, Catnic ANG or similar

6.0 Limitations

This inspection report is limited in its scope to the instructions. The inspection was undertaken externally and internally, as necessary, and we have not inspected parts or problems that are not relevant to the request

Many parts of a building such as foundations and sub-floor areas are concealed during construction and we do not disturb these. We are, therefore, unable to report that any such part of the property is free from defect.

This report is for the private and confidential use of the Client for whom the report is undertaken and for the use of their professional advisers and should not be reproduced in whole or in part or relied upon by third parties for any purpose without the expressed written authority of the surveyor.

Signature of surveyor

Date of Report: 2016

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APPENDIX A

1

2

APPENDIX B

Building Research Establishment Digest 251.

Categories of damage based on crack width

Category of	Description of typical damage (Ease of repair in italic type)	Approx crack width in (mm)	
damage			
0	Hairline cracks of less than about 0.1mm are classed as negligible.	Up to 0.1mm*	
1	Fine cracks that can be easily filled during normal decoration. Perhaps isolated slight fracturing in the building. Cracks rarely visible in external brickwork.	Up to 1mm*	
2	Cracks easily filled. Re-decoration probably required. Recurrent cracks can be masked by suitable linings. Cracks not necessarily visible externally. Some external repointing may be required to ensure weathertightness. Doors and windows may stick slightly.	Up to 5mm*	
3	The cracks may require some opening up by a mason. Repointing of external brickwork and (or a possibly a small amount of brickwork to be replaced. Doors and windows sticking. Service pipes may fracture. Weather - tightness often impaired.	5 to 15 mm (or a number up to 3mm)*	
4	Extensive repair work involving breaking-out and replacing sections of walls. especially over doors and windows. Windows and doorframes distorted, floors sloping noticeably. Walls leaning or bulging noticeably some loss of bearing in beams. Service pipes disrupted	15 to 25mm* but depends on number of cracks	
5	This requires a major rebuilding job involving partial or complete rebuilding. Beams lose bearing, walls leaning badly and require shoring. Windows are broken or distorted. Danger of instability	Usually greater than 25mm* but depends on number of cracks	
* Crack width is just one factor in assessing the category of damage and should not be used on its own			

APPENDIX C

Standard Terms of Engagement for Specific Structural Inspection

- 1 We will inspect all reasonably accessible parts of the structure from ground level and other visible areas up to 3 metres in height from ladders, or with the aid of binoculars, where appropriate. No furniture, no floor coverings or floorboards will be lifted or removed unless stated to have been so.
- 2 The report will not include a cost estimate for works to be undertaken unless specifically agreed between the engineer and Client at extra cost.
- 3 Save as hereinafter provided the engineer will use all reasonable skill, care and diligence expected of a reasonably competent engineer in carrying out the survey and preparing the report.
- 4 The inspection will be limited to the brief given by the client
- **5** No site investigations or environmental survey will be carried out and we can give no assurance that the property is unaffected by mineral extraction, landfill or noxious substances.
- **6** That no deleterious or hazardous materials or techniques have been used, that there is no contamination in or from the ground, and it is not landfilled ground;
- **7** Many parts of a building such as foundations and sub-floor areas are concealed during construction and we do not disturb these. It follows, for practical reasons, that we have not inspected woodwork or other parts of the structure that are covered, unexposed or inaccessible and we are, therefore, unable to report that any such part of the property is free from defect.
- **8** This report will be confidential to the Client. It may be disclosed to other professional advisers assisting the Client in respect of that purpose, but the Client shall not disclose the report to any other person. The report should not be reproduced in whole or in part without written permission.