

RHODES & PARTNERS

CONSULTING STRUCTURAL & CIVIL ENGINEERS

GEO-ENVIRONMENTAL ENGINEERS

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STRUCTURAL ENGINEER'S REPORT

at

10 Acacia Crescent, Hazel Grove, Stockport

Date: 3 July 2015

1 INTRODUCTION

1.1 Client

Mr and Mrs Client, Stockport

1.2 Location of Property

10 Acacia Crescent, Hazel Grove

1.3 Purpose of Report

To inspect the property, mainly with reference to the effect of nearby trees and to excavate a trial hole and to provide a Structural Engineer's Report.

1.4 Scope of Report

The inspection carried out was visual only and did not include any exploratory investigation of the property except for the trial hole described. Woodwork and other parts of the structure which were covered or inaccessible were not inspected and we are therefore unable to report that any such part of the property is free from defect. All crack widths are approximate.

All directions given in this report are as viewed from the front of the property. Foundation depths, ground conditions, water levels and workmanship can vary even from one part of the property to another. Therefore the results of these investigations cannot be taken to absolutely represent the conditions across the whole property.

1.5 Date of Inspection

2 July 2012.

1.6 Description of property

The property is a 1950's built, semi-detached house. Concrete interlocking roof tiles on gable ended, pitched roof with flat-roofed dormer window at front and rear. Suspended timber ground floor. The property has been decorated throughout within the last few years (which could conceal any long-standing defects).

2 GROUND FLOOR INTERNAL INSPECTION

Hall

Masonry partition walls to Kitchen and Lounge.
No visible defects of structural significance.

Kitchen (front left)

Masonry partition wall to Lounge. No visible defects of structural significance.

Lounge (rear)

Different ceiling finish for approximately 600mm wide strip underneath line of rear bedrooms' partition wall above. Chimney breast on right hand (party) wall.
No visible defects of structural significance.

Garage (front right)

Bedroom floor above is underlined with chip board.
No visible defects of structural significance.

3 FIRST FLOOR INTERNAL INSPECTION

Stairwell and Landing

Masonry partition wall on right side, stud partition wall on left side.
No visible defects of structural significance.

Front Bedroom (right)

Masonry partition wall to rear bedroom and to stairwell. Crack across ceiling running parallel to front wall **underneath** ceiling paper.
No visible defects of structural significance.

Front Bedroom (left)

Masonry partition wall to rear bedroom. No visible defects of structural significance.

Rear Bedroom (right)

Masonry partition wall to Bathroom. No visible defects of structural significance.

Bathroom

Tiled floor to ceiling on rear wall. Crack across ceiling running front to rear **underneath** ceiling paper. No visible defects of structural significance.

4 LOFT INSPECTION

One 250mm x 75mm purlin on each roof pitch. There is a wide split in the rear purlin near the party wall end with a marked sag and evidence of damp penetration near the chimney. Vertical crack in centre of blockwork inner leaf of gable wall.

5 EXTERNAL INSPECTION

Front Elevation

No visible defects of structural significance.

Left Elevation (viewed from front)

Gable wall. No sign of vertical crack seen from inside the loft. Brick courses sight reasonably level along gable. No visible defects of structural significance.

Rear Elevation

Slight sag in line of roof slope near chimney (on party wall side). Three semi-mature poplar trees (about 20m to 25m high) opposite rear left corner, approximately 13m distant in neighbouring garden. Good grass growth in rear lawn adjacent the poplar trees.

6 TRIAL HOLE

A trial hole was excavated down to formation level at the rear left corner of the house and extended downwards by hand auger to a depth of 2m. The trial hole details are shown on the attached Drawing No. D11595/01. The foundation at the rear is a shallow, concrete strip footing 0.6m deep on generally sandy subsoils with a slight clay content.

7 CONCLUSIONS

- 7.1 The Poplar trees are within theoretical influencing distance of the house foundations at the rear. However, the sandy nature of the subsoils found reduces the possibility of clay shrinkage due to water demand from the poplars. The clayey sand found under the foundations was moist and showed no signs of having dried out. The good grass growth on the rear lawn also shows that there are unlikely to be extensive shallow roots spreading out from the poplars towards the house. There were no obvious signs of subsidence problems on the rear elevations of the adjacent houses.
- 7.2 The last two summers have been extremely dry and have given rise to a large number of subsidence cases on domestic property in this area, due to clay shrinkage under shallow house foundations. However, these poplar trees have not caused any settlement on this house through that same period and the subsoils are generally sandy. The poplars were probably planted in the 1930's at the same time as the houses to the rear were built and have therefore been about their current height for at least ten years.
We therefore advise that on the balance of probabilities, the poplar trees are unlikely after all this time to cause subsidence to this property in the future.
- 7.3 Faulty flashings around the chimney stack have allowed rainwater to penetrate and attack the purlin. The split in the purlin is a long-standing origin but with signs of recent movement, probably due to weakening from the rainwater.
- 7.4 The cracks in the first floor ceilings under the ceiling paper are plasterboard shrinkage cracks at the joints and are not of structural significance.
- 7.5 Since the house was built, a masonry wall has been removed from the rear ground floor of the house to make the original two rear rooms into the present single room. There are no signs of structural movement in the ground floor ceiling or in the wall above and we therefore conclude that the wall above is adequately supported. We understand from the vendors that this work pre-dates their purchase of the property 21 years ago.

8. RECOMMENDATIONS

- 8.1 The rear purlin and adjacent rafters should be inspected for rot etc. by a specialist timber contractor. Providing any rot can be arrested, the purlin section from the split to the end should be strengthened, for instance by coach screwing plywood splice plates or bolting on an additional purlin section. This work should be properly designed to carry the applied loading.
- 8.2 Current Building Regulations require the garage ceiling to be lined with a fire resistant material such as plasterboard.

Peter Graham BSc. C Eng. MICE MStructE

For and on behalf of R Rhodes & Partners (Consulting) Ltd

Appended:

Drawing No. D11595/01

Instruction To Proceed

Client's Guide to a Structural Engineer's Report

Instruction To Proceed:

PRG /11595-001q

I confirm that R Rhodes & Partners (Consulting) Ltd are to proceed with the work on the terms described here and overleaf.

I enclose my payment / have made card payment / have made online payment (*delete as applicable*)

Signature of Client:

Date:

Name:

Landline:.....

Email address:

Mobile:

Methods of Payment:

- by cash in person
- by cheque payable to “Rhodes & Partners”
- online banking: a/c name - R Rhodes & Partners (Consulting) Ltd; a/c sort code – 089299;a/c no - 69391336
- by phone (10.00am - 4.00pm) by debit card (no charge) or credit card (2% card charge)

**CLIENT'S GUIDE TO A STRUCTURAL ENGINEER'S REPORT
BY
R. RHODES & PARTNERS (CONSULTING) LTD**

'The Client'	The person signing the Instruction To Proceed.
'The Company'	R Rhodes & Partners (Consulting) Ltd.
'The Property'	The house or property which is to be inspected and on which the Client has instructed the Company to report.

The Report is a written document which describes the results of an inspection of the Property carried out by a Chartered Structural or Civil Engineer working for the Company. The Report is prepared on the instructions of the Client and is solely for the use of the Client and their professional advisors (e.g. solicitor, chartered surveyor or estate agent). Liability to third parties for all or any part of the Report is specifically excluded.

The inspection will be visual and will cover only the load-bearing elements of the Property and only those which are reasonably accessible. Woodwork and roof coverings will not be inspected and neither will any parts of the Property which are inaccessible or in the ground. Services (such as drains, gas, water and electricity etc.) are not included in the inspection.

The Company will not inspect every square inch of the Property otherwise the fee payable by the Client would have to be substantially bigger. When instructed by the Client, the scope of the inspection will be limited to faults identified by the Client or identified in a previous chartered surveyor's survey, in which case the remainder of the Property will only be briefly inspected and reported on by the Company.

It is not always possible to discover defects which are concealed, the Company's Chartered Structural or Civil Engineer will use intuition and experience regarding inaccessible areas but does not possess X-ray vision!

No tests or exploratory investigations will be carried out but an informed opinion will be given in the Report as to whether faults may exist and whether tests should subsequently be carried out to obtain further information. The detailed design of remedial works is not included in the fee.

When the Company is inspecting a Property which is not owned by the Client, the Company must exercise a degree of care to the occupier. If the occupier of the Property refuses to move obstructions or refuses access to any part of the Property, then the Company must abide by his decision and will record the occupier's refusal in the Report.

The Report will be set out in sections: Introduction, Internal Ground Floor, Internal First Floor, Other Floors, Roof Space, External Elevations, Outbuildings (only where particularly requested), Conclusions, Recommendations.

The Report is not an Insurance or a Warranty regarding the condition of the Property; it is a considered professional opinion given by the Company using reasonable skill, care and diligence, based on their experience in such matters.