ENGINEERS REPORT

for

Interested Underwriters per
Chambers & Newman Ltd
TBA
regarding movement that has taken place at:

261 Goldhurst Terrace, London, NW6 3EP

Name of Insured: Mr R B Goldstein

Policy Number: 63301148

THE GRAHAM HIGH GROUP LIMITED
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Our Ref: L/2012/27371/S/MLL/kh/gpa
Date: 16 October 2012

SECTION 1.00

INTRODUCTION

We have been asked by Interested Underwriters per Oak Underwriting to inspect the subject property, 261 Goldhurst Terrace, London, NW6 3EP which is the property of Mr R B Goldstein, and comment upon cracking to the single storey rear extension.

Our site visit took place on 09 October 2012 and weather conditions were cold but dry.

This Report has been prepared on the instruction of Interested Underwriters per Chambers & Newman Ltd for their sole use in connection with a notification of a Claim under their Insurance Policy. Our comments are based on limited observations of the nature and suspected cause of the damage notified but we have not widened our brief to consider other structural matters.

Our Report does not consider questions of timber or damp, service installations or the general condition of the property. We have not inspected woodwork or other parts of the structure, which are covered, unexposed or inaccessible. We are therefore unable to report that any such part of the property is free from defect.

Comments on the causation of damage are based only on the limited investigations, which have been carried out at this stage and would be subject to review in the light of further information being made available at a later date.

This Report should not be used in the same way as a Pre-Purchase Report. It is limited to the damage, which forms the subject of a Claim made by the Policyholder against Interested Underwriters per Chambers & Newman Ltd.

SECTION 2.00

THE PROPERTY

Please note that all left-hand and right-hand directions within this Report are as though you are facing the front elevation of the property from the road.

A photograph of the front elevation of the property is shown on the cover of this Report.

The risk address on this occasion is a three storey detached house with a basement conversion.

The walls are of load bearing brick construction beneath a pitched, clay tiled mansard roof.

The windows are timber, part double glazed, construction and the property is maintained to a high standard.

To the rear of the property is a single storey extension which was constructed in 1987.

SECTION 3.00

THE SITE

The property stands in a mature residential area on the outskirts of West Hampstead, North London and amongst properties of a similar style and vintage.

The immediate site is gently sloped from the front to the rear and the area comes under the control of the London Borough of Camden.

We are not aware of any unusual features of the immediate site.

Section 3.01

Vegetation

The vegetation which is considered most likely to be involved in this matter is shown on the attached sketch plan. The vegetation is generally the responsibility of your Policyholder. The most significant item of vegetation on this occasion is the London Plane tree which stands in the rear garden, has a height of approximately 12 metres, a diameter at breast height of approximately 1000mm, and stands approximately 4metres from the nearest point of the building.

We have discussed with Mr Goldstein that some reduction measures may need to be put in place in respect of the tree but we will reserve judgement on the extent of work required until the heave risk has been assessed.

Section 3.02

Geology

From our investigations on site we have confirmed that the subsoil in the area is brown London clay with some gravel.

Soils with a clay content will generally have a propensity to shrink and swell with changes in moisture content. That is to say that as the clay is dried its volume will reduce and this can allow downward movement, or subsidence, of the foundations of properties.

The amount of shrinkage and swelling which takes place can vary quite dramatically between different types of soil and can only be quantified by soil testing techniques.

SECTION 4.00

HISTORY

The property was constructed in approximately 1900 and it has been owned by Mr R B Goldstein since approximately 1986.

Damage was first noted by the Policyholder in August 2012.

On this occasion we have not been able to inspect pre-purchase survey report as your Policyholder was unable to locate this prior to our visit.

SECTION 5.00

DAMAGE

Section 5.01

The damage to this property which forms the subject of this Claim relates to cracking to the single storey rear extension.

We would suggest that the extent of damage falls within Category 3 (Moderate) according to BRE Digest 251 Assessment of Damage to Low Rise Buildings (August 1990).

Category	Definition	Crack Width
0	Negligible	Less than 0.1mm
1	Very slight	Up to 1mm
2	Slight	Up to 5mm
3	Moderate	5mm to 15mm
4	Severe	15mm to 25mm
5	Very Severe	Greater than 25mm

Section 5.02

Description of Damage

We would ask you to appreciate that on this occasion we are dealing with a property which is as a result of its age and history of its construction / use it is showing signs of historic distortion. We do not believe these are as a result of current subsidence and these have been largely excluded from the description of damage below.

Externally

This shows the vertical crack to the left side of the extension at the junction with the main building extending to the ground.

Front Elevation

The front elevation of the insured property is fair face brickwork.

On this elevation we noted that the clay tiled mansard roof appeared to be in reasonable condition. We noted a slight diagonal crack through the soldier masonry course over the left side of the left hand first floor window and some very slight historic cracking over the right corner of the left hand ground floor window, but these appeared long standing. We also noted a vertical hairline crack through the centre of the soldier masonry course over the central ground floor window to the two storey bay related which was related to slight deflection of the arch.

We noted no signs of any cracking at the junction between the single storey or two storey bays and the main front elevation and no signs of cracking which would be consistent with current subsidence movement.

Right Hand Elevation

The insured property is constructed flush to the right hand boundary line and the right elevation was not visible.

Left Hand Elevation

The left hand elevation of the insured property is of fair face brickwork.

On this elevation we noted no signs of any cracking above or below the ground or first floor windows. We noted a previous opening mid-way along the elevation at ground floor level which has been in-filled.

At the junction between the main building and the single storey rear extension we noted a tapered crack approximately 10mm wide at roof level narrowing to approximately 2mm when reaching the ground. This appeared reasonably fresh and consistent with rotation of the single storey extension away from the main building.

Rear Elevation

The rear elevation of the insured property is of fair face brickwork.

On this elevation we noted the rear elevation of the main house appeared in reasonable condition for its age. There were some signs of deterioration to some of the mortar joints and general undulations to the roof but no signs of any cracking.

At the junction between the rear elevation of the main buildings and the extension to the right hand side we noted a vertical crack up to 5mm wide at roof level narrowing to hairline when reaching the ground. Below the centre of the threshold door to the extension we noted a stepped crack 2mm wide extending from the bottom of the threshold to the ground. This cracking is consistent with subsidence of the foundations to the single storey extension away from the main building.

Internally

This is a general view of the vertical crack within the single storey extension to the right hand side at the junction with the main building.

Ground Floor Level

In the porch which occupies a position at the centre front of the property we noted that the wall finish was ceramic tile at low level and emulsion on plaster above and the ceiling finish was emulsion on plaster.

In this room we noted hairline diagonal cracks across the ceiling extending from top left corner of the front door through the ceiling rose to the top of the internal door. The cracks did not continue to the walls and we noted no signs of damage which would be consistent with current subsidence movement.

In the hall which occupies a position at the centre of the property we noted that the wall and ceiling finishes were emulsion on plaster.

In this area we noted some minor undulations to the coving and walls consistent with previous repairs but no signs of cracking and no signs of damage which would be consistent with current subsidence movement.

In the dining room which occupies a position at the front right corner of the property we noted that the wall finish was decorative paper and emulsion on plaster and the ceiling finish was emulsion on plaster.

In this room we noted no sign of cracking to the walls or ceiling in the bay reveal. There were some slight undulations to the coving generally consistent with previous repairs and some slight creasing of the wallpaper at the junction between the masonry and the internal partition wall. We noted not signs of damage which would be consistent with current subsidence movement.

In the sitting room which occupies a position at the rear right hand corner of the property we noted that the wall and ceiling finishes were emulsion on lining paper.

In this room we noted some undulations to the coving and walls consistent with general age and previous repairs but no signs of damage which would be consistent with current subsidence movement.

In the kitchen / breakfast room which occupies a position at the rear left corner of the property extending into the single storey extension we noted that the wall and ceiling finishes were emulsion on plaster.

In this room we noted some minor hairline cracks at the wall ceiling junction related to general plaster stresses and shrinkage. At the junction between the extension and the main building we noted a vertical crack to the right hand side with a width of approximately 5mm at ceiling level and narrowing to hairline width when reaching the floor. A similar crack was evident to the internal wall on either side and this extended over the wall ceiling junction to the left hand elevation, the crack increased in width up to 10mm. There was some distortion of the kitchen worktop as it extended to a shelving unit within the extension and also some unevenness to the tiled floor at the junction.

The cracking is consistent with subsidence of the foundations of the single storey extension towards the rear.

In the study which occupies a position at the front left corner of the property we noted the wall and ceiling finishes were emulsion on lining paper.

In this room we noted that the walls and ceilings appeared in good condition with no signs of cracking or distortion of any note.

Lower Ground Floor

In the study 02 which occupies a position at the front left corner of the property we noted that the wall and ceiling finishes were emulsion on plaster.

In this room we noted that the walls and ceilings were in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

In the snug which occupies a position at the front right corner of the property we noted that the wall and ceiling finishes were emulsion on plaster.

In this room we noted that the walls and ceilings were in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

In the games room which occupies a position at the centre right side of the property we noted that the wall and ceiling finish is of emulsion on plaster.

In this room we noted that the walls and ceilings were in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

In the kitchen which occupies a position at the rear left corner of the property we noted that the wall and ceiling finishes were emulsion on plaster.

In this room we noted very slight hairline crack to the ceiling following the line of the plasterboard join but no sign of cracking to the walls and no signs of damage which would be consistent with current subsidence movement.

In the bathroom which occupies a position at the centre left side of the property we noted that the wall finish was ceramic tile and the ceiling finish was emulsion on plaster.

In this room we noted that the walls and ceilings were in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

First Floor Level

In the hallway which occupies a position at the centre left side of the property we noted the wall and ceiling finishes were emulsion on plaster.

In this room we noted a hairline crack at the underside of first floor landing extending to the first flight of stairs probably related to general plaster wear and shrinkage. Otherwise the walls and ceilings were in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

In bedroom 01 which occupies a position at the front right corner of the property we noted that the wall and ceiling finishes were emulsion on plaster.

In this room there was no sign of any cracking at the junction between the bay and main building and the walls appeared in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

In the bathroom which occupies a position at the centre right side of the property we noted that the wall finish was emulsion on plaster with some ceramic tiles to the shower enclosure and the ceiling finish was emulsion on plaster.

In this room we noted that the walls and ceilings were in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

In the washing / boiler room which occupies a position at the right side of the property behind the bathroom we noted that the wall finish was emulsion on plaster with some ceramic tile around the work surface and the ceiling finish was emulsion on plaster.

In this room we noted that the walls and ceilings were in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

In bedroom 02 which occupies a position at the rear right hand corner of the property we noted that the wall and ceiling finishes were emulsion on plaster.

In this room we noted that the walls and ceilings were in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

In bedroom 03 which occupies a position at the rear left corner of the property we noted that the wall and ceiling finishes were emulsion on plaster.

In this room we noted that the walls and ceilings were in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

In the en-suite bathroom to bedroom 03 we noted that the wall finish was emulsion on plaster with ceramic tile in the shower enclosure and the ceiling finish was emulsion on plaster.

In this room we noted that the walls and ceilings were in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

In bedroom 04 which occupies a position at the front left corner of the property we noted that the wall finish was decorative paper and emulsion on plaster and the ceiling finish was emulsion on plaster.

In this room we noted that the walls and ceilings were in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

Second Floor Level

On the landing which occupies a position at the centre left side of the property we noted that the wall and ceiling finishes were emulsion on plaster.

In this area we noted that the walls and ceilings were in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

In bedroom 05 which occupies a position at the front of the property we noted that the wall and ceiling finishes were emulsion on plaster.

In this room we noted that the walls and ceilings were in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

In the en-suite bathroom to bedroom 05 we noted that the wall and ceiling finishes were emulsion on plaster.

In this room we noted that the walls and ceilings were in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

In bedroom 06 which occupies a position at the rear right corner of the property we noted that the wall and ceiling finishes were emulsion on plaster.

In this room we noted a hairline crack over the left corner of the rear window and hairline crack at low level to the wall junction in the rear right corner of the room. These were related to general plaster shrinkage and we noted no signs of damage which would be consistent with current subsidence movement.

In the dressing room which occupies a position at the centre right side of the property we noted that the wall and ceiling finishes were emulsion on plaster.

In this room we noted that the walls and ceilings were in good condition with no sign of any cracking or distortion which would be consistent with current subsidence movement.

In the en-suite bathroom to bedroom 06 which occupies a position at the rear left corner of the property we noted that the wall finish was emulsion on plaster with some ceramic tile to the shower enclosure and the ceiling finish was emulsion on plaster.

In this room we noted some very slight hairline cracking at the wall ceiling junctions but no signs of cracking to the walls and no signs of damage which would be consistent with current subsidence movement.

SECTION 6.00

INVESTIGATIONS

A single trial pit and two boreholes were excavated at the property which revealed the depth of foundation and sub soil beneath.

A CCTV Survey of the drains was also undertaken where accessible.

Section 6.01

Drains

A CCTV survey of the drainage was undertaken from the three manholes along the left hand side of the insured property. The survey revealed that the drains extended from the left side of the single storey extension to the main sewer at the front. The drains in the vicinity of the extension were of plastic construction and were in a good condition with no defects evident. Towards the front left corner of the main house the construction of the drains changed to clay and there were some signs of standing water. There were no defects of any note but we would recommend that the drains are pressure jetted to clear.

Section 6.02

Trial Hole

Trial hole 01 was excavated against the left corner of the single storey rear extension and revealed that the foundations in this location were concrete with an overall founding depth of approximately 700mm below ground level. The soil immediately beneath the foundations was seen to be firm/stiff brown clay with some gravel which was dry at the time of our inspection.

Roots of up to 1mm were located in the soil beneath the foundations in trial hole 01.

Section 6.03

Boreholes

Borehole 01 was sunk through the base of trial hole 01 and to an overall depth of 3000mm below ground level.

The soil located in the borehole was firm/stiff brown clay with increasing gravel to a depth of 1500mm and then becoming pure stiff brown clay beneath. The soil appeared to be dry at the time of our testing.

The borehole was stopped at 3000mm below ground level due to the require depth being attained.

A total of five soil samples have been retrieved from this borehole and sent to the laboratory for analysis.

A number of root samples were located in the soil samples taken from this borehole and have been sent to the laboratory for analysis.

Borehole 02 was sunk through the base of trial hole 02 and to an overall depth of 3000mm below ground level.

The soil located in the borehole was soft/firm gravelly brown clay which became slightly firmer towards the base of the borehole but showed no particular signs of wetting or drying at the time of our testing.

The borehole was stopped at 3000mm below ground level due to the require depth being attained.

A total of five soil samples have been retrieved from this borehole and sent to the laboratory for analysis.

Section 6.04

Soil Testing

A total of ten samples of the sub soil have been taken and sent to the laboratory for analysis. These comprise five from borehole 01 and five from borehole 02. On receipt of this data we will advise further.

The purpose of the testing on this occasion is to try to determine some of the physical characteristics of the soil which will include, amongst other tests, the clay content and plasticity index of the soil, and if appropriate the extent of any desiccation. This test gives an indication of the likely degree by which the soil will shrink and swell with changes in moisture content, and the extent of any deficiencies.

Section 6.05

Roots Analysis

Samples of roots from up to 2500mm below ground level in borehole 01 have been retrieved and submitted to a specialist laboratory in order to determine what species of tree it emanates from.

Section 6.06

Ground Water

None observed.

SECTION 7.00

DISCUSSION

In this case we are dealing with a property of approximately 100 years vintage which is showing some signs of distortions to be expected given its age but it is generally maintained to a very high standard and has been the subject of a high quality basement conversion and single storey rear extension.

Whilst there were some signs of some long standing stresses between the main building and single storey rear extension these are to be expected given the nature of the structure, and the cracking which is the subject of this claim is clearly fresh and has occurred in recent weeks as reported.

The pattern of cracking is consistent with subsidence of the foundations of the single storey extension away from the main building towards the rear. Ground investigations revealed that the foundations of the extension were relatively shallow by modern standards, although consistent with the age of construction. The foundations were found to bear onto clay subsoil which was noticeably drier at the rear when compared to the soil retrieved from the front of the property, and contained roots.

Clay is a plastic material and is therefore susceptible to shrink or swell depending on changes in moisture content. In this case we consider the most probable cause of the movement to have been shrinkage of the clay substrata during dry weather conditions in the latter part of the summer of 2012 aggravated by moisture uptake from the ground by the large mature London Plane tree in close proximity.

We are aware that the property was the subject of a basement conversion in 2008 and the scheme included underpinning of the foundations of the rear elevation of the main house to a depth of approximately 2.8metres. This may have aggravated the differential movement between the two structures.

SECTION 8.00

RECOMMENDATIONS

To assist our conclusions samples of soil and roots retrieved from beneath the foundations have been sent to a laboratory for analysis and we will comment further on receipt of the result.

In most case of clay shrinkage subsidence it is possible to stabilise the foundations by dealing with the cause however in this case we are mindful of the possibility of heave damage should the London Plane tree be removed; given its size, proximity and age in relation to the main building.

To assess whether movement is progressive a period of monitoring is required and monitor studs have been fixed over the main areas of damage. If it is not possible to stabilise the structure by dealing with the cause of the problem, a scheme of underpinning of the existing foundations may need to be implemented.

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For THE GRAHAM HIGH GROUP LIMITED

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Encs: Site Sketch
Trial Pit Sketch
Photograph pages

Copy to: Mr R B Goldstein