STRUCTURAL SURVEYS AND DESIGN
A QuestGates Company

STRUCTURAL REPORT



THE PROPERTY:
2 Manchester Road
Chorlton-cum-Hardy, Manchester
M21 9JG

PREPARED BY:
Jayne Dooley
MEng, CEng, MICE

REPORT REFERENCE
NW13737

PREPARED FOR:
Olivia & Martin Edge

SURVEY DATE:
27th June 2024

STRUCTURAL SURVEYS AND DESIGN
A QuestGates Company

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STRUCTURAL REPORT ON 2 Manchester Road, Chorlton-cum-Hardy, Manchester, M21 9JG

Prepared By:	Jayne Dooley MEng, CEng, MICE	**Approved By:**	Andrew Russell BSc(Eng), MSc, DIC, CEng, FIStructE, FICE
Signed:	[redacted]	**Signed:**	[redacted]
Date:	27th June 2024	**Date:**	27th June 2024

Issue	Revision	Revised by	Revised Date

The appointment of Structural Surveys Ltd shall be governed by, and construed in all respects, in accordance with the laws of England and Wales and each party submits to the exclusive jurisdiction of the Court of England & Wales.

STRUCTURAL SURVEYS AND DESIGN
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CONTENTS

A Survey Summary

B Details of Instruction

C About the Property

D External Observations

E Internal Observations

F Commentary

G Conclusions

H Recommendations

I Limitations

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A Survey Summary

Our recommendations are summarised below. Full details are presented within the body of the report.

We have categorised any observed defects as follows:

Rating	Definition
3	Defects that are serious and require repair, replacement or further investigation urgently
2	Defects that need repairing or replacing, but are not considered serious or urgent
1	No repair is currently needed

Recommendations

3

A. The property exhibits a number of serious structural defects which are considered to pose a significant risk to the future stability and integrity of the house. It is unlikely that Lenders and Building Insurers would view this property favourably. The Client should consider these risks, prior to proceeding with the purchase.

B. In order to determine a suitable system of stabilisation, further detailed ground investigations at depth may be required to determine the characteristics of the underlying stratum upon the site. Such ground investigations would typically be conducted using a borehole rig and window sampling by a consultant Geologist or specialist contractor. These works may include the collection of samples and laboratory analysis by a UKAS laboratory to determine the type, condition and capacity the bearing sub-soils. Depending on ground type, limited testing may also be completed during the site investigation works.

2

C. The areas associated with damp and timber, identified within the property, should be subject to inspection and report by a specialist damp and timber preservation company, registered with the Property Care Association (PCA). Any recommendations within such a report should be acted upon in full.

D. Appoint a specialist drainage contractor to carry out a detailed CCTV survey of the underground drainage system to confirm the extent and location of any defects. Any identified defects should be repaired in full to eliminate the risk of

escape of water from the drains into the surrounding sub-soils.

B Details of Instruction

Address of Property Surveyed	2 Manchester Road, Chorlton-cum-Hardy, Manchester, M21 9JG
Client Name	Olivia & Martin Edge
Client Address	11 Cross Road, Manchester, M21 9DH
Terms of Reference	To investigate and report on the structural integrity of the property and to make recommendations on any structural remedial works considered necessary to maintain future stability and integrity.
Date of Instruction	12th June 2024
Other Information	
Conditions of Engagement	Association of Consultancy and Engineering, ACE 2009, Agreement No.2 (Advisory and Investigatory Services)

C About the Property

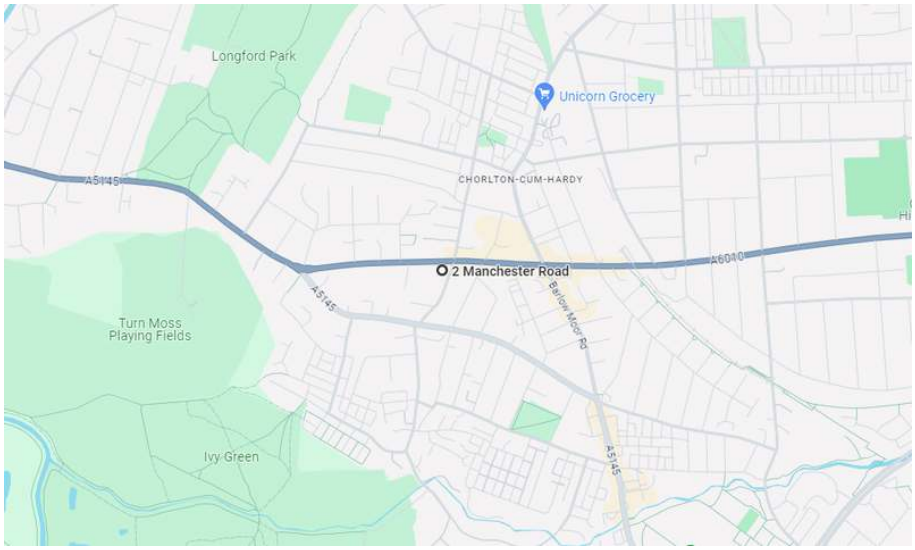


C.1 Description of Property

The property is a traditional, brick built, detached house with a multi pitched roof.

The age of the original property is thought to be around 120 years old.

C.2 Location



The property is located approximately 4 miles south west of the centre of Manchester.

C.3 Local Environment

C3.1 Geology

British Geological Survey (BGS) maps indicate the immediate superficial deposits, which are likely to be supporting the building foundations, are Glaciofluvial Sheet Deposits, Devensian, comprising sand and gravel. The bedrock below this is Wilmslow Sandstone Formation, comprising sandstone.

C3.2 Mining and Mineral Extraction

Reference to the Coal Authority Interactive Maps, indicates that this property is not within influencing distance of past, current or proposed mine workings. The Coal Authority state that a Mining Report is not required for this property.

C3.3 Other

We have been informed that there is an old watercourse running below the property.

D External Observations

D.1 The Site

1

D1.1 Topography:

The ground level across the site is generally level. There are no significant retaining structures within influencing distance of the property.

There is considered to be no risk of slope instability of the site.



Photograph - 3 - Level to front

2

D1.2 Trees:

There are trees growing within potential influencing distance of the property, which could, in certain ground conditions, adversely affect the stability of the foundations. Where the sub-soils are cohesive, clay soils, trees will draw moisture from the clay, resulting in shrinkage of the clay and associated subsidence. This can cause foundations to move downwards. On this site, however, the immediate superficial sub-soils are noted to be non-cohesive, granular materials comprising primarily of sand and gravel. Such soils will not be susceptible to shrinkage. As such the nearby trees will not cause subsidence below the foundations of the building and are not considered to pose a threat to the stability of the property.

At the time of our inspection, the trees, shrubs, hedges, bushes and climbing plants

located upon the site do not appear to be having an adverse effect on the property foundations. However, as a matter of risk mitigation, it would be prudent that all significant vegetation located upon the site is regularly maintained, such as lopping or pruning to restrict growth and overall height.



Photograph - 4 - Front garden



Photograph - 5 - Rear grounds

2

D1.3 Drainage:

The drainage system appears to be a combined storm water and foul water system. It is not known if this discharges into the public sewer. A property of this age is likely to have the original, vitrified clay pipes, which are brittle and susceptible to damage. Ground movements throughout the life time of the property can cause cracking to the pipes and also displacement of the pipe joints. Both forms of damage will allow escape of water into the surrounding soils, which in turn can cause localised softening of clay soils below adjacent foundations, or washing away of granular soils such as sand, if present.

In view of this, it is recommended that the condition and integrity of the underground drainage system is further investigated by a specialist CCTV survey.

Gullies serving the rainwater down pipes and sink waste pipes were noted to be blocked with debris and defective. These should be cleared or repaired to ensure that their function is clear and efficient and does not allow overspill from entering the local ground which could potentially affect the foundations.

It was noted that the rain water downpipe to the rear side of the main property discharges direct to ground. This is not considered to be a good detail and can put the

property at risk of structural movement. Such an arrangement increases the risk of a concentration of water to enter the ground local to the foundations and cause wash out of fines from within the granular soils. This discharge arrangement will require altering to ensure the water is diverted and discharges away from the walls of the property into the underground system or suitably sized and located soakaway.



Photograph - 6 - Front RWP



Photograph - 7 - LHS RWP



Photograph - 8 - LHS RWP



Photograph - 9 - Rear RWP defective



Photograph - 10 - Rear RW & waste pipe defective



Photograph - 11 - Rear wastepipe



Photograph - 12 - Blocked rear RW gully



Photograph - 13 - RHS downpipe

D.2 The Building

2

D2.1 Roof:

All observations of the roof have been made from ground level, with the aid of binoculars.

The roof is a traditional, pitched, timber framed structure, with the main ridge running parallel to the front elevation.

Observation of all roof slopes indicates some in-plane distortion, consistent with greater than normal deflection of the internal supporting timber purlins and significant

distortion to the ridge line.

The roof covering is slate.

We undertook a limited external inspection of the roof from ground level and with the aid of binoculars. This visual, non-intrusive inspection, identified that the roof covering shows evidence of wear-and-tear related defects including: slippage of coverings, moss growth, missing slates and weathered mortar to bedding & pointing etc. This was noted to all roof slopes. These areas need repair. To provide a more detailed appraisal of the extent of work, and associated costings to make good, we would recommend you consult with a professional and competent roofing Contractor pre-purchase.

Slate roof covering of this age may have concealed defects, not visible from ground level. To eliminate the risk of future rainwater ingress, regular routine maintenance of the slate covering will be required.

Inspection of the hidden valley, formed between the roof slopes was restricted due to the site constraints. We therefore cannot confirm the accurate condition and integrity of these roof slopes, including the structure and coverings.

The property is provided with four independent brick built chimney stacks.

There is evidence of cracking and distortions to the chimney stack brickwork. This may be related to sulphate attack on the mortar, from the exhaust gases. The reaction causes the cement paste in the mortar to expand. Often, this expansion will occur on just one side of a chimney stack, depending on the direction of the prevailing wind. As the expansion is on just one side, the stack will tend to distort, off plumb as noted in this instance.

There is also weathering to the brickwork, vegetation growing out of the flaunching and weathering to the mortar joints to the chimney stacks.



Photograph - 14 - Front slopes



Photograph - 15 - Front slopes



Photograph - 16 - RHS slopes



Photograph - 17 - Rear slopes - restricted view



Photograph - 18 - Rear stacks



Photograph - 19 - Front RHS stack



Photograph - 20 - LHS slope to front gable



Photograph - 21 - LHS slopes



Photograph - 22 - LHS stack



Photograph - 23 - Rear slopes



Photograph - 24 - Rear slope



Photograph - 25 - Rear mono pitched slope



Photograph - 26 - Front bay - no view



Photograph - 27 - Front bay roof viewed from bedroom

D2.2 Walls:

The external walls are of solid brick construction, with regular rows of header bricks tying the inner and outer leafs together. With this type of construction, there will be no embedded metal wall ties, as the header bricks are performing the function of ties.

Inspection of the walls was restricted due to vegetation cover, particularly at ground level. We therefore cannot fully confirm the accurate condition and integrity of thes wall.

2

D2.3 Walls - front elevation:

Measurements obtained with the aid of a spirit level, taken on external face of the main front elevation indicate the wall to tilt outwards by approximately 15mm over a height of 1000mm.

The Building Research Establishment (BRE) Digest 475 - Tilt of Low-Rise Buildings, provides classifications for tilting to buildings. Tilting will generally become noticeable when it reaches around 1 in 250 to 1 in 200. Tilts of this magnitude are unlikely to have adversely affected the structural integrity of the house, however at the point of re-sale, they are likely to attract attention. Greater tilts than this are likely to affect the verticality of furniture, cause doors to swing open and possible issues with the falls to the internal plumbing and under ground drainage. As a guide, Digest 475 indicates that remedial works may be necessary for tilts around 1 in 100.

In this instance, the measured tilt is 1:67. This is structurally significant.

Measurements taken with the aid of a spirit level, on the on external face of the front elevation indicate the brick coursing falls to the left by approximately 10mm over a horizontal distance of 1000mm.

The Building Research Establishment (BRE) Digest 475 - Tilt of Low-Rise Buildings, provides classifications for tilting to buildings. Tilting will generally become noticeable when it reaches around 1 in 250 to 1 in 200. Tilts of this magnitude are unlikely to have adversely affected the structural integrity of the house, however at the point of re-sale, they are likely to attract attention. Greater tilts than this are likely to affect the verticality of furniture, cause doors to swing open and possible issues with the falls to the internal plumbing and underground drainage. As a guide, Digest 475 indicates that remedial works may be necessary for tilts around 1 in 100.

In this instance, the measured tilt is 1:100.

The bay window tilts outwards up to 40mm over a height of approximately 1000mm. In this instance, the measured tilt is 1:25 This is structurally significant.

There is significant cracking, up to 10mm in width noted to the stone lintels and brickwork above the bay window.

There is obvious lateral distortion and sagging to the brickwork above the porch area.

There is obvious sagging and serious cracking up to 5mm in width to the stone lintel above the porch opening.

The Building Research Establishment (BRE), Digest 251 - Assessment of Damage in Low-Rise Buildings, provides classifications for visible damage to buildings. After the severe droughts of 1975/76 and 1989/1990, during which many buildings were damaged as a result of abnormal drying shrinkage of clay sub-soils supporting foundations, there was an industry focus on cracking and distortion, with a view to putting this into true perspective. The Digest provides guidance on understanding the severity of the damage and determining appropriate, practical structural remedial works. Categories of damage were developed, ranging from Category 0 - Hairline, cosmetic cracks (less than 0.1mm) through to Category 5 - Major structural damage (cracks greater than 25mm).

Categories 0, 1, 2 will generally require simple cosmetic repair. Category 3 typically will require re-pointing and re-stitching of the brickwork, and doors and windows easing. Category 4 damage may require localised rebuilding of walls. Category 5

typically would include, the need for underpinning or even total rebuilding.

In this property, the observed damage would be categorised as Category 3 (cracks 5-15mm, or several of around 3mm).

The mortar pointing to the front elevation is noted to be weathered in areas. This can adversely affect the long term durability of the bed joints and perpend joints on the wall. The mortar has two functions. Firstly to bond the bricks together for strength purposes and secondly to provide a weather tight wall. As the joints weather, they will become susceptible to rainwater ingress, which may result in internal dampness and accelerate the overall deterioration of the wall. Remedial re-pointing is considered necessary.



Photograph - 28 - General



Photograph - 29 - Vegetation



Photograph - 30 - Visible distortion to brickwork



Photograph - 31 - 5mm cracking to stone lintel



Photograph - 32 - 10mm cracking to lintel and brickwork



Photograph - 33 - Loose brickwork



Photograph - 34 - Bay window tilts 40/1000 approx.



Photograph - 35 - Front wall slopes left 10/1000



Photograph - 36 - Front wall tilts 15/1000



Photograph - 37 - Vegetation restricted inspections



Photograph - 38 - Cracking within porch



Photograph - 39 - Cracking to stone lintel

3

D2.4 Walls - right elevation:

Measurements using a spirit level could not be taken on the right hand side elevation due to the amount of vegetation. However, the wall was visibly tilting outwards.

Cracking over approximately 25mm was noted above the ground floor window to the front room.

We have made previous reference to BRE Digest 251 classification of cracking in walls.

In this specific instance the observed cracking is categorised as Category 4 (cracks 15-25mm).



Photograph - 40 - General



Photograph - 41 - General



Photograph - 42 - Vegetation restricted inspection



Photograph - 43 - Visible tilting of brickwork



Photograph - 44 - Cracking



Photograph - 45 - 25mm cracking

2

D2.5 Walls - rear elevation:

The mortar pointing to the rear elevation is noted to be badly weathered. This can adversely affect the long term durability of the bed joints and perpend joints on the wall. The mortar has two functions. Firstly to bond the bricks together for strength purposes and secondly to provide a weather tight wall. As the joints weather, they will become susceptible to rainwater ingress, which may result in internal dampness and accelerate the overall deterioration of the wall. Remedial re-pointing is considered necessary.

There is noted to be areas of frost damage to the brick facing on the front elevation. Areas of the glazed outer face have spalled away from the brickwork, leaving exposed, permeable brick. These areas will readily absorb rainwater which can freeze during winter months, resulting in further spalling. Attention is required to eliminate this, such as treatment with a silicone based waterproofing agent.

The brickwork was found to be generally in a very poor condition.



Photograph - 46 - General



Photograph - 47 - General



Photograph - 48 - Spalled brickwork

3

D2.6 Walls - left elevation:

Vegetation cover severely restricted inspection, particularly at ground floor level.

Measurements obtained with the aid of a spirit level, taken on external face of the left hand side elevation indicate the wall to tilt outwards by approximately 30mm over a height of 1000mm.

The Building Research Establishment (BRE) Digest 475 - Tilt of Low-Rise Buildings, provides classifications for tilting to buildings. Tilting will generally become noticeable when it reaches around 1 in 250 to 1 in 200. Tilts of this magnitude are unlikely to have adversely affected the structural integrity of the house, however at the point of re-sale, they are likely to attract attention. Greater tilts than this are likely to affect the verticality of furniture, cause doors to swing open and possible issues with the falls to the internal plumbing and under ground drainage. As a guide, Digest 475 indicates that remedial works may be necessary for tilts around 1 in 100.

In this instance, the measured tilt is 1:33. This is structurally significant.

Cracking up to approximately 25mm was noted to the wall.

We have made previous reference to BRE Digest 251 classification of cracking in walls.

In this specific instance the observed cracking is categorised as Category 4 (cracks 15-25mm).

The mortar pointing to the left hand side elevation is noted to be badly weathered. This can adversely affect the long term durability of the bed joints and perpend joints on the wall. The mortar has two functions. Firstly to bond the bricks together for strength purposes and secondly to provide a weather tight wall. As the joints weather, they will become susceptible to rainwater ingress, which may result in internal dampness and accelerate the overall deterioration of the wall. Remedial re-pointing is considered necessary.

There is noted to be areas of frost damage to the brick facing on the left side elevation. Areas of the glazed outer face have spalled away from the brickwork, leaving exposed, permeable brick. These areas will readily absorb rainwater which can freeze during winter months, resulting in further spalling. Attention is required to eliminate this, such as treatment with a silicone based waterproofing agent.

The brickwork was noted to be generally in a poor condition.



Photograph - 49 - General



Photograph - 50 - General



Photograph - 51 - Vegetation restricted full inspection



Photograph - 52 - Tilts out 30/1000



Photograph - 53 - 25mm cracking



Photograph - 54 - Cracking & missing mortar



Photograph - 55 - Brickwork in poor condition



Photograph - 56 - Vegetation restricted inspection

3

D2.7 Walls - rear outrigger:

Measurements obtained with the aid of a spirit level, taken on external face of the right hand side elevation indicate the wall to tilt inwards by approximately 30mm over a height of 1000mm.

The Building Research Establishment (BRE) Digest 475 - Tilt of Low-Rise Buildings, provides classifications for tilting to buildings. Tilting will generally become noticeable when it reaches around 1 in 250 to 1 in 200. Tilts of this magnitude are unlikely to have adversely affected the structural integrity of the house, however at the point of re-sale, they are likely to attract attention. Greater tilts than this are likely to affect the verticality of furniture, cause doors to swing open and possible issues with the falls to the internal plumbing and under ground drainage. As a guide, Digest 475 indicates that remedial works may be necessary for tilts around 1 in 100.

In this instance, the measured tilt is 1:33. This is structurally significant.

Measurements obtained with the aid of a spirit level, taken on external face of the left hand side elevation indicate the wall to tilt outwards by approximately 50mm over a height of 1000mm.

In this instance, the measured tilt is 1:20. This is structurally significant.

The brickwork to the rear elevation, above the access door to the cellar was noticeably distorted and sagging. Some corrosion was noted to the steel beam over the door opening.

Stepped cracking was also noted over the beam.

Vertical and stepped cracking was noted between the ground floor and cellar door openings.

We have made previous reference to BRE Digest 251 classification of cracking in walls.

In this specific instance the observed cracking is categorised as Category 4 (cracks 15-25mm).

There was notable lateral distortion and sagging to the brickwork in this area.

The mortar pointing to all elevations is noted to be badly weathered. This can

adversely affect the long term durability of the bed joints and perpend joints on the wall. The mortar has two functions. Firstly to bond the bricks together for strength purposes and secondly to provide a weather tight wall. As the joints weather, they will become susceptible to rainwater ingress, which may result in internal dampness and accelerate the overall deterioration of the wall. Remedial re-pointing is considered necessary.

There is noted to be areas of frost damage to the brick facing on all elevations. Areas of the glazed outer face have spalled away from the brickwork, leaving exposed, permeable brick. These areas will readily absorb rainwater which can freeze during winter months, resulting in further spalling. Attention is required to eliminate this, such as treatment with a silicone based waterproofing agent.

The brickwork was generally found to be in a very poor condition.



Photograph - 57 - Defective brickwork to LHS



Photograph - 58 - LHS wall tilts out 50/1000



Photograph - 59 - RHS tilts in 30/1000



Photograph - 60 - Brickwork in poor condition



Photograph - 61 - Access steps visibly slope



Photograph - 62 - Cracking & distortion to rear



Photograph - 63 - 1mm cracking



Photograph - 64 - Corroding to steel beam



Photograph - 65 - Cracking & distortion



Photograph - 66 - 25mm cracking

E Internal Observations

E.1 Main Building

2

E1.1 Roof:

The roof space of this property provides habitable accommodation. This is original to the property. As such the linings of the attic rooms obscure the structural roof timbers. Access to view limited areas of the roof structure is not available.

However, there is evidence of damp noted to,the slopes. The excessive deflections noted externally to the roof slopes indicate that the roof structure is defective and not structurally stable.



Photograph - 67 - Rear slope to top landing



Photograph - 68 - Rear slope to left room



Photograph - 69 - Rear slope to right room



Photograph - 70 - Front slope to top landing



Photograph - 71 - Front slope to right room



Photograph - 72 - Front slope to left room



Photograph - 73 - Access to front eaves jammed shut



Photograph - 74 - Purlin to rear slope

2

E1.2 Floors - second floor level:

The suspended timber floor within the bedrooms is noted to slope downward from right to left, by 25mm over a horizontal distance of 1000mm.

The Building Research Establishment (BRE) Digest 475 - Tilt of Low-Rise Buildings, provides classifications for tilting to buildings. Sloping will generally become noticeable when it reaches around 1 in 250 to 1 in 200. Tilts of this magnitude are unlikely to have adversely affected the structural integrity of the house, however at the point of re-sale, they are likely to attract attention. Greater tilts than this are likely to affect the verticality of furniture, cause doors to swing open and possible issues with the falls to the internal plumbing and under ground drainage. As a guide, Digest 475 indicates that remedial works may be necessary for tilts around 1 in 100. In this instance, floor slopes of up to 1:40 are noted.

The distortion is considered structurally significant. In this instance we would consider it unviable to relevel the floors due to the extent of the slopes within the property as a whole.



Photograph - 75 - Left bedroom slopes left 25/1000

2

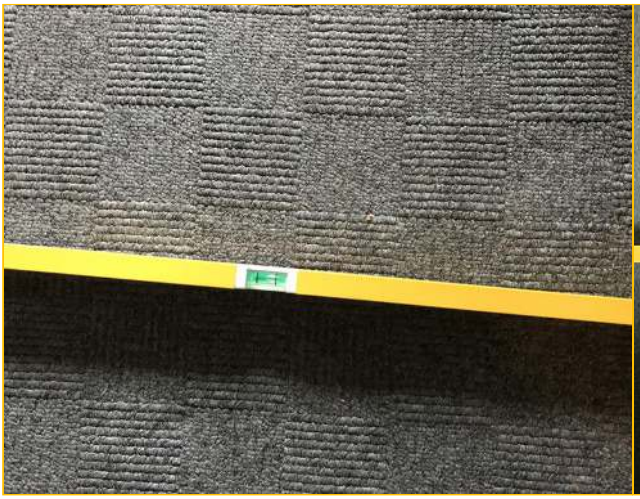
E1.3 Floors - first floor level:

The suspended timber floor within the first floor rooms generally slope downward from right to left, by up to 40mm over a horizontal distance of 1000mm.

The Building Research Establishment (BRE) Digest 475 - Tilt of Low-Rise Buildings, provides classifications for tilting to buildings. Sloping will generally become noticeable

when it reaches around 1 in 250 to 1 in 200. Tilts of this magnitude are unlikely to have adversely affected the structural integrity of the house, however at the point of re-sale, they are likely to attract attention. Greater tilts than this are likely to affect the verticality of furniture, cause doors to swing open and possible issues with the falls to the internal plumbing and under ground drainage. As a guide, Digest 475 indicates that remedial works may be necessary for tilts around 1 in 100. In this instance, floor slopes of up to 1:25 are noted.

The distortion is considered structurally significant. In this instance we would consider it unviable to relevel the floors due to the extent of the slopes within the property as a whole.



Photograph - 76 - Landing slopes left 25/1000



Photograph - 77 - Bathroom floor slopes left 40/1000



Photograph - 78 - Rear en-suite slopes to left 30/1000

2

E1.4 Floors - ground level:

The suspended timber floor within the ground floor rooms generally slope downward from right to left, by up to 40mm over a horizontal distance of 1000mm.

The Building Research Establishment (BRE) Digest 475 - Tilt of Low-Rise Buildings, provides classifications for tilting to buildings. Sloping will generally become noticeable when it reaches around 1 in 250 to 1 in 200. Tilts of this magnitude are unlikely to have adversely affected the structural integrity of the house, however at the point of re-sale, they are likely to attract attention. Greater tilts than this are likely to affect the verticality of furniture, cause doors to swing open and possible issues with the falls to the internal plumbing and under ground drainage. As a guide, Digest 475 indicates that remedial works may be necessary for tilts around 1 in 100. In this instance, floor slopes of up to 1:25 are noted.

The distortion is considered structurally significant. In this instance we would consider it unviable to relevel the floors due to the extent of the slopes within the property as a whole.

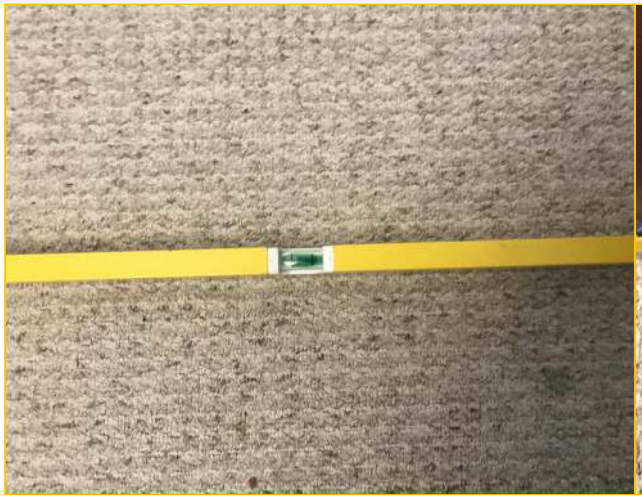
The floor within the rear left room has already had a suspended floor installed on top of the original floor, presumably to level it out.



Photograph - 79 - Hall slopes to left



Photograph - 80 - Slopes left 25/1000



Photograph - 81 - Front left room slopes left



Photograph - 82 - Slopes left 40/1000



Photograph - 83 - Rear right room slopes left



Photograph - 84 - Rear left room raised

3

E1.5 Walls - second floor level:

The walls are noted to tilt. Measurements taken with the aid of a spirit level indicate the tilt to be approximately up to 40mm over a height of 1000mm.

The Building Research Establishment (BRE) Digest 475 - Tilt of Low-Rise Buildings, provides classifications for tilting to buildings. Tilting will generally become noticeable when it reaches around 1 in 250 to 1 in 200. Tilts of this magnitude are unlikely to have adversely affected the structural integrity of the house, however at the point of re-sale, they are likely to attract attention. Greater tilts than this are likely to affect the verticality of furniture, cause doors to swing open and possible issues with the falls to the internal plumbing and under ground drainage.

As a guide, Digest 475 indicates that remedial works may be necessary for tilts around 1 in 100.

In this instance, the measured tilt is approximately 1: 25. This is considered structurally significant distortion.



Photograph - 85 - Stairwell



Photograph - 86 - Stairs visibly slope left



Photograph - 87 - Left wall tilts left



Photograph - 88 - Landing



Photograph - 89 - Right hand sideidedee room



Photograph - 90 - Displaced boarding



Photograph - 91 - Left hand side room



Photograph - 92 - Left hand side room



Photograph - 93 - Left bedroom left wall tilts in 40/1000

3

E1.6 Walls - first floor level:

The walls are noted to tilt. Measurements taken with the aid of a spirit level indicate the tilt to be approximately up to 40mm over a height of 1000mm.

The Building Research Establishment (BRE) Digest 475 - Tilt of Low-Rise Buildings, provides classifications for tilting to buildings. Tilting will generally become noticeable when it reaches around 1 in 250 to 1 in 200. Tilts of this magnitude are unlikely to have adversely affected the structural integrity of the house, however at the point of re-sale, they are likely to attract attention. Greater tilts than this are likely to affect the verticality of furniture, cause doors to swing open and possible issues with the falls to the internal plumbing and under ground drainage.

As a guide, Digest 475 indicates that remedial works may be necessary for tilts around 1 in 100.

In this instance, the measured tilt is approximately 1: 25. This is considered structurally significant distortion.

There are patches of internal dampness to the plaster in the walls at first floor level within most rooms. These patches are elevated well above the height of rising damp and are considered to be a result of direct, lateral penetration of rain water through the solid external wall.

There is no internal cavity in the wall and the solid wall has been able to soak up driving rain water, to the extent that it has passed through the full wall thickness. This is a common problem with older houses, built with this form of construction. It is clear that the outer face of the wall is inadequately protected against water ingress due to general age deterioration and weathering of the external fabric of the building.

There is evidence of water damage to ceilings also.

Within most areas, there are areas of loose, de-bonded plaster. Some of these areas have cracked. In older properties, such as this, lime was often used in the plaster mix, to provide a degree of flexibility. Over the years, impurities within the lime, absorb moisture from the air or from the brick sub-strate, causing the plaster to expand and blow from the wall. The rate of deterioration is accelerated by leaks from defective roofs, rising damp or lateral penetration of rainwater through a solid wall. Significant plaster repairs will be required likely to require full re-plastering of all walls.

Within the front right bedroom and to the landing, in particular, there is noted to be

diagonal cracking, approximately 10mm in thickness, running lower right to upper left. The crack pattern is consistent with foundation movement along this wall, and in particular, downward movement of the partition wall running front to rear.

Vegetation was noted to be growing through the right hand side wall within the front right bedroom.



Photograph - 94 - Landing



Photograph - 95 - LHS wall tilts 25/1000



Photograph - 96 - Defective plaster



Photograph - 97 - Ceiling cracks



Photograph - 98 - Landing



Photograph - 99 - Significant damp & defective plaster



Photograph - 100 - WC



Photograph - 101 - Bathroom



Photograph - 102 - Cracks to ceiling



Photograph - 103 - Distortion to wall



Photograph - 104 - Rear left bedroom



Photograph - 105 - Window head slopes to left



Photograph - 106 - Front right bedroom



Photograph - 107 - Damp & cracking



Photograph - 108 - Damp & cracking to RHS wall



Photograph - 109 - 5mm cracking



Photograph - 110 - 5mm cracking to front wall



Photograph - 111 - 10mm cracking along ceiling



Photograph - 112 - Significant damp to LHS wall



Photograph - 113 - Vegetation growing within room



Photograph - 114 - Front middle room



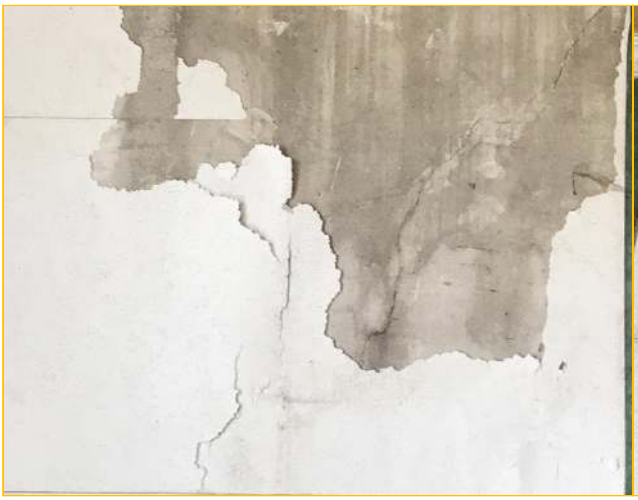
Photograph - 115 - Front middle room



Photograph - 116 - Front left bedroom



Photograph - 117 - Front left bedroom



Photograph - 118 - Polystyrene lining



Photograph - 119 - 2-3mm cracking to LHS wall



Photograph - 120 - LHS wall tilts 30/1000



Photograph - 121 - Rear left bedroom



Photograph - 122 - Rear left bedroom



Photograph - 123 - Ceiling cracks



Photograph - 124 - Damp staining



Photograph - 125 - Left wall tilts out 40/1000



Photograph - 126 - En-suite to rear left bedroom



Photograph - 127 - Cracking to ceiling



Photograph - 128 - Left wall tilts outt 40/1000

3

E1.7 Walls - ground level:

The walls are noted to tilt. Measurements taken with the aid of a spirit level indicate the tilt to be approximately up to 40mm over a height of 1000mm.

The Building Research Establishment (BRE) Digest 475 - Tilt of Low-Rise Buildings, provides classifications for tilting to buildings. Tilting will generally become noticeable when it reaches around 1 in 250 to 1 in 200. Tilts of this magnitude are unlikely to have adversely affected the structural integrity of the house, however at the point of re-sale, they are likely to attract attention. Greater tilts than this are likely to affect the verticality of furniture, cause doors to swing open and possible issues with the falls to the internal plumbing and under ground drainage.

As a guide, Digest 475 indicates that remedial works may be necessary for tilts around 1 in 100.

In this instance, the measured tilt is approximately 1: 25. This is considered structurally significant distortion.

There are patches of internal dampness to the plaster in the walls at first floor level within most rooms. These patches are elevated well above the height of rising damp and are considered to be a result of direct, lateral penetration of rain water through the solid external wall.

There is no internal cavity in the wall and the solid wall has been able to soak up driving rain water, to the extent that it has passed through the full wall thickness. This

is a common problem with older houses, built with this form of construction. It is clear that the outer face of the wall is inadequately protected against water ingress due to general age deterioration and weathering of the external fabric of the building.

There is evidence of water damage to ceilings also.

Within most areas, there are areas of loose, de-bonded plaster. Some of these areas have cracked. In older properties, such as this, lime was often used in the plaster mix, to provide a degree of flexibility. Over the years, impurities within the lime, absorb moisture from the air or from the brick sub-strate, causing the plaster to expand and blow from the wall. The rate of deterioration is accelerated by leaks from defective roofs, rising damp or lateral penetration of rainwater through a solid wall. Significant plaster repairs will be required likely to require full re-plastering of all walls.



Photograph - 129 - Hallway



Photograph - 130 - Cracking to ceiling



Photograph - 131 - Visible tilting to walls & door



Photograph - 132 - RHS wall tilts 40/1000



Photograph - 133 - Front left room



Photograph - 134 - Front left room



Photograph - 135 - RHS wall tilts 25/1000



Photograph - 136 - Defective ceiling



Photograph - 137 - Cracking



Photograph - 138 - En-suite shower room



Photograph - 139 - Front right room



Photograph - 140 - LHS wall tilts



Photograph - 141 - Cracking



Photograph - 142 - Significant damp



Photograph - 143 - Evidence of fungal decay



Photograph - 144 - En-suite



Photograph - 145 - Rear right room



Photograph - 146 - Cracking to ceiling



Photograph - 147 - Rear left room



Photograph - 148 - RHS wall tilts



Photograph - 149 - Kitchen



Photograph - 150 - Visible tiling & wood decay



Photograph - 151 - Utility room - obvious sloping to rear wall



Photograph - 152 - Cracking to rear wall



Photograph - 153 - 5mm cracking partly infilled



Photograph - 154 - Stairs clearly slope left

3

E1.8 Basement:

The perimeter walls to the cellar are faced with brick.

The cellar walls serve in part to act as retaining walls in supporting the higher ground outside. Observations along the plane of each wall indicates clear evidence of lateral distortions and tilting to these walls.

Observations of the cellar walls indicate cracking to the inner faces. Cracks widths over 30mm are noted. These cracks would appear to be associated with historic subsidence.

Significant distortion was noted to the floors, indicating historic ground movement.

The atmosphere within the cellar is noted to be wet and poorly ventilated. Such conditions are likely to lead to wet rot and decay of the floor joists above the cellar. Advice should be sought from a specialist damp and timber contractor as to the most appropriate course of action, such as installation of additional or upgraded sub-floor vents



Photograph - 155 - Access steps visibly slope left



Photograph - 156 - General



Photograph - 157 - Front left room



Photograph - 158 - Significant damp



Photograph - 159 - Floor distorted



Photograph - 160 - Floor distorted



Photograph - 161 - Walls tilt left



Photograph - 162 - 25mm cracking



Photograph - 163 - Front left room



Photograph - 164 - Significant damp



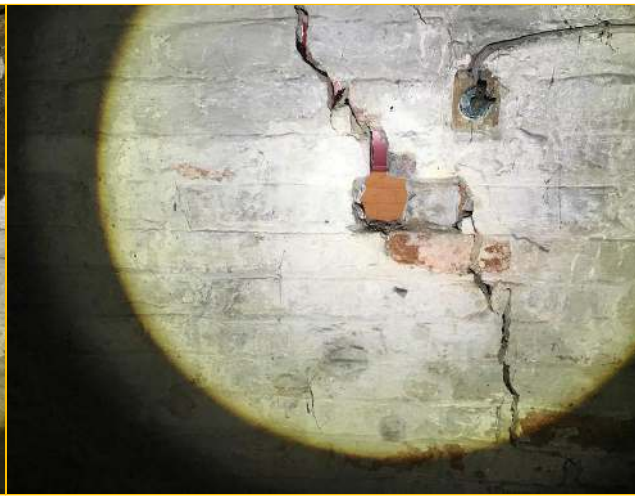
Photograph - 165 - Stepped cracking to front wall



Photograph - 166 - 5mm cracking



Photograph - 167 - Cracking to RHS wall



Photograph - 168 - >30mm cracking



Photograph - 169 - Rear right room



Photograph - 170 - Rear left room



Photograph - 171 - Rear access

F Commentary

We were instructed to undertake a visual structural inspection of the property to identify any structural defects that could be of detriment to stability and also to identify any remedial works necessary to maintain future integrity.

The property has clearly suffered from significant movement at some point resulting in tilting of walls, sloping of floors and structurally significant cracking.

This property clearly has a number of serious structural defects, which will be very costly to rectify. As such, the Client may experience difficulty in arranging suitable buildings insurance for the property. The Client should seriously consider the pros and cons of proceeding with this purchase.

The property is clearly suffering from significant damp issues and evidence of fungal decay, potentially dry rot, was noted.

The building looks to have been empty for some time and a general lack of maintenance may well have contributed to the structural issues exhibited at the property.

The significant vegetation cover to the walls and within the grounds seriously restricted close inspection of the property, particularly the walls at ground floor level.

G Conclusions

1. There is evidence of historic foundation movement to the entire property. The likely cause of this is considered to be subsidence. This movement mechanism does not appear to still be active, but has potentially, adversely affected the future stability and integrity of the property.

2. This property clearly has a number of serious structural defects, which will be very costly to rectify. As such, the Client may experience difficulty in arranging suitable buildings insurance for the property. The Client should seriously consider the pros and cons of proceeding with this purchase.

3. Several areas of damp and timber decay were noted within the property. Damp and timber is considered to be a specialist item and it is recommended that the whole of the property is subject to inspection and report by a specialist damp and timber preservation company.

4. There is considered to be a significant risk that the original, underground drains have been adversely affected by ground movement over the years, and that joints may have opened up and cracks may have developed in the pipe walls. In either case, long term escape of water from any defective pipes poses a risk to the stability of the building foundations. Further investigation is required.

H Recommendations

3 A. The property exhibits a number of serious structural defects which are considered to pose a significant risk to the future stability and integrity of the house. It is unlikely that Lenders and Building Insurers would view this property favourably. The Client should consider these risks, prior to proceeding with the purchase.

3 B. In order to determine a suitable system of stabilisation, further detailed ground investigations at depth may be required to determine the characteristics of the underlying stratum upon the site. Such ground investigations would typically be conducted using a borehole rig and window sampling by a consultant Geologist or specialist contractor. These works may include the collection of samples and laboratory analysis by a UKAS laboratory to determine the type, condition and capacity the bearing sub-soils. Depending on ground type, limited testing may also be completed during the site investigation works.

2 C. The areas associated with damp and timber, identified within the property, should be subject to inspection and report by a specialist damp and timber preservation company, registered with the Property Care Association (PCA). Any recommendations within such a report should be acted upon in full.

2 D. Appoint a specialist drainage contractor to carry out a detailed CCTV survey of the underground drainage system to confirm the extent and location of any defects. Any identified defects should be repaired in full to eliminate the risk of escape of water from the drains into the surrounding sub-soils.

Limitations

I1. Our survey is limited to the structural aspects of the building, such as the roof, floors, walls and foundations.

I2. We have not inspected, nor reported on, non-structural elements such as windows, doors, rainwater goods and internal decorative finishes.

I3. We have not inspected, nor reported on, the plumbing, heating system, electrical wiring, gas or water supplies to the building.

I4. We have not inspected, nor reported on, the integrity of the underground drains or any on-site sewage treatment plants, cess pits, septic tanks. Specialist advice should be sought in this respect

I5. Unless explicitly stated to the contrary, we have not carried out a dampness survey, or a timber infestation survey, and therefore cannot comment on these aspects of the building.

I6. We have not inspected woodwork which is covered or any other concealed or inaccessible parts of the structure and therefore cannot report that any such part of the building is free from defect.

I7. No comment is made in this report as to the presence of new or old mine workings or tunnelling, heavy metals, chemical, biological, electromagnetic or radioactive contamination or pollution, or radon, methane or other gases, underground services, or underground structures, springs and watercourses, sink holes or the like, noise or vibration, pollution, mould, asbestos or asbestos products.

I8. Unless explicitly stated to the contrary, the void below the ground floor has not been examined and therefore we cannot give any opinion on the condition of materials under the floor.

I9. For the avoidance of doubt, The Contracts (Rights of Third Parties) Act, 1999, shall not apply to this Contract.

I10. Our service does not include for confirming the presence or not, of any invasive plant species that may be present on the site such as Japanese Knotweed, Giant Hogweed, Himalayan Balsam etc. This is outside our area of expertise.