# MARSH DESIGN LIMITED

*STRUCTURAL SURVEYS, DRAWINGS & DESIGN CALCULATIONS*

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**PRELIMINARY APPRAISAL SURVEY**
**AT**
**5 Two Gates**
**Holme Lane**
**Slaithwaite**
**Huddersfield**
**HD7 5UJ**




**ON BEHALF OF**

**Mr. & Mrs. Dyson**

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**PRELIMINARY APPRAISAL SURVEY OF 5 TWO GATES, SLAITHWAITE, HUDDERSFIELD HD7 5UJ**

Further to your instruction to carry out a Preliminary Appraisal Survey of the above mentioned property.

We confirm that the following Preliminary Appraisal Survey has been carried out in accordance with the Practice Statements in the RICS Appraisal Manual and the Survey is independent of any interested parties involved in this transaction and conforms to the requirements of the Practice Statements.

The Preliminary Appraisal Survey was undertaken by David Haigh B.Eng. Hons. (Structural Engineer) and Kevin Hill MRICS C.Build E MCABE (Chartered Building Surveyor)

## 1.0 INSTRUCTIONS

1.1 We are instructed by Mrs. Judith Dyson to prepare a Preliminary Appraisal Survey in respect of 5 Two Gates, Slaithwaite, Huddersfield HD7 5UJ

1.2 Prior to the inspection, we were provided with existing layout plans by Bamford Architectural Ltd.

1.3 The inspection was carried out on the morning of Thursday 17th November 2016 at 9.30am. The weather conditions were overcast and wet at the time of the inspection.

1.4 The inspection was carried out from each floor internally and from ground floor externally. The inspection was visual and non-destructive. No opening up works were carried out and we were unable to inspect woodwork or other parts of the structure which were covered, unexposed or inaccessible and are therefore unable to report such parts are free from defects. Re inspection of the dwellings internal structure is to be undertaken following removal of plasterwork and when other opening up works have been carried out. Further structural or other defects not apparent during the survey may then become evident.

1.5 The property was furnished and occupied at the time of the inspection, the presence of close fitted carpets and other floor coverings limited the inspection.

1.6 This report is prepared in accordance with our email quotation, terms and conditions dated 5th October 2016. It has been prepared solely for the benefit of the client stated at Section 1.1 and no liability is accepted to any third parties. This survey cannot be copied or disclosed to any third party without the

expressed agreement with Marsh Design Ltd. This survey may not be divulged, copied, quoted or otherwise reproduced, and/or altered without Marsh Design Ltd expressed consent, and any request for such consent must be in writing. For the avoidance of doubt and for your information such consent is unlikely to be given, due to the confidential nature of this survey.

1.7 No local or formal enquiries of the Local Statutory Authorities or investigations have been made to verify information as to the tenure, the existence of rights of way and easements, etc.

1.8 This report does not guarantee that work carried out in the past has been carried out to statutory/mandatory regulations or to competent manufacturers' recommendations or to British Standards, Codes of Practice, Agreement Certificates, etc

## 2.0 DESCRIPTION

The dwelling was built circa mid 1800's. The exact build date has not been confirmed. We understand the dwelling is not listed or located within a conservation area. The property is detached and extends over three floors. The dwelling is of stone solid wall construction, under a natural stone tiled roof. The property has been extended to the north and west elevations providing a ground floor kitchen and utility area and a first floor bathroom. The extension is of a similar build period and construction as the main dwelling. The property is in a severe state of disrepair and is in need of a full programme of refurbishment and modernisation.

The property comprises of on the ground floor living room, kitchen, utility, 2no stores, lobby, hall and staircase to the first floor. On the first floor consisting of bedrooms 1 and 2, landing and bathroom and staircase to the second floor. On the second floor consisting of bedrooms 2 and 3 and landing. The approximate Total Floor Area is 140m2.

The main property to the front (east), right hand side (north) and left hand side (south) elevations adjoins the garden. The extension to the (east and south) elevations adjoins the garden, to the (north) elevation adjoins the highway and to the (west) elevation adjoins the rear boundary. The extent of the properties boundaries, access rights and responsibilities in terms of repairs and maintenance to boundary fences and walls, do not fall within the scope of this report.

**What the report tells you.**
This report provides comments and a brief overview on the condition of the fabric and structure of the building in relation to

the areas surveyed on the date of inspection, prior to a full and complete refurbishment programme.

This report is an independent opinion of the writers and will provide recommendations on how the works can be rectified if required. The report has been prepared by David Haigh B.Eng (Hons) Structural Engineer and Kevin Hill MRICS C.Build E CABE Chartered Building Surveyor and Chartered Building Engineer.

**What the report does not tell you.**
This report is not a Full Building Survey or Structural Survey. This report does not tell you if concealed elements of the structure are free from defects. This report does not tell you if any other parts or elements of the property, other than the area inspected are free from defects. The report does not advise on the cost or procedure to follow, to rectify any defective work. This report is not an Expert Witness Report suitable for legal purposes.

## 3.0 PURPOSE OF INSPECTION

The purpose of the inspection is to provide a brief overview of the structural stability of the dwelling, provide a brief overview of remedial works required and where necessary provide recommendations on suitable repair methods.

We understand that the property is to be subject to a complete refurbishment and modernisation programme. The side/rear extension is to be completely demolished and rebuilt under the supervision of Bamforth Architectural Ltd and Marsh Design Limited. We have not commented on the condition of the extension. The client is to be aware of the likely requirements in terms of retaining the highways structure at the rear corner of the extension and the likely provision of a road closure and road traffic management.

## 4.0 OBSERVATIONS AND COMMENTS

### 4.1 STRUCTURE

#### 4.1.1 Roof Coverings

Access was gained from within the roof void to view the underside of the roof covering. The main roof covering comprises of natural stone roof tiles incorporating a bitumastic reinforced roofing membrane. The roofing felt is showing signs of significant loss of its quality, having over time become perished and is need of replacement, isolated areas of damage to the felt was also noted. The stone roof covering looks in a relatively acceptable condition. We recommend that the roof

covering is removed, turned and replaced incorporating a breathable roof in membrane.

There is only minor evidence of deflection and sagging to the ridge and plane of the roof structure, we consider this to be normal for a property of this age. The roof structure is commented on in detail in Section 6.

4.1.2 Gutters, Gullies and Downpipes

The gutters are plastic and supported on stone corbels. The downpipes are a combination of plastic and cast iron. We understand all the rainwater goods and down pipes are to be included in programme of replacement along with the gutters.

4.1.3 Walls

The front walls of the property are coursed stone externally and random stone internally with stone cills, heads and mullions. The walls have a rubble stone filled cavity. The overall average thickness of the walls is approximately 500mm in thickness. No electronic moisture meter readings were taken.

There is evidence of significant outward bulging movement to the front elevation wall between the ground floor and first floor windows, internal cracking and misalignment was noted around the windows at first floor level, we believe this to be long standing and there is no evidence of significant progressive structural movement. The likely cause is consolidation over time of the internal rubble fill and inadequate lateral restraint. The floor joists span from front to back and are providing inadequate lateral support to the gable end walls. Bulging is most pronounced at ground to first floor ceiling level, considering the extent of the movement and its visual appearance, we would recommend this section of walling approximately 20m2 in total, is carefully demolished and rebuilt up to first floor level at the same time replacing the cracked and weathered stone, cills and mullions. Temporary support to the upper section of walling is to be maintained at all times.

There is evidence of outward bowing movement to the lower rear section of the left hand side gable wall below first floor level, we believe this to be long standing and there is no evidence of significant progressive structural movement. The likely cause is consolidation over time of the internal rubble fill and inadequate lateral restraint. We recommend this area of walling is stabilised and restrained. We recommend installation of Helifix stainless steel Cemties at 750mm vertical and 450mm horizontal centres.

Localised area of structural cracking was noted to the left hand side gable wall. We recommend these areas are raked out,

strengthened with stainless steel helifix bars and re pointed with a good quality epoxy mortar.

There is evidence of outward bowing movement to the lower rear section of the right hand side gable wall below first floor level, we believe this to be long standing and there is no evidence of significant progressive structural movement. The likely cause is consolidation over time of the internal rubble fill and inadequate lateral restraint. We recommend this area of walling is stabilised and restrained. We recommend installation of Helifix stainless steel Cemties at 750mm vertical and 450mm horizontal centres.

Localised structural cracking and loose stonework was noted at the apex of the right hand side gable wall. We recommend the upper section of wall is rebuilt from approximately 2metres downwards. A further inspection of the wall construction in this area is required once access is available.

Localised area of structural cracking was noted to the rear elevation. We recommend these areas are raked out, strengthened with stainless steel helifix bars and re pointed with a good quality epoxy mortar.

We recommend the installation of steel restraint straps across all wall and floor junctions at ground floor, first floor and second floor ceiling levels to restrain gable end elevations approximately 60no straps to be installed in total. Galvanised strap ties to be installed to all internal wall corners approximately 36no in total. Further confirmation to be provided following exposure of internal wall surfaces.

Several stone mullions require re alignment, of particular note were the stone mullions to the first floor windows on the left hand gable wall. Realignment and or replacement of all defective stone mullions, cills, heads and jambs will be required. A closer inspection of the condition of the high level stonework will be required once scaffolding has been erected and access is available.

The complete dwelling requires re pointing using traditional methods and materials. Any localised areas of structural weakness should be repaired using crack stitching techniques with stainless steel Helifix bars. More information on this type of repair can be found on the Helifix Website.

We understand that all plasterwork is to be removed from the walls and a suitable system of internal dry lining is to be specified incorporating a method of structural damp proofing and insulation. Structural damp proofing is required to wall

areas below ground floor level incorporating a cavity drain membrane, channelling and sump pump. An insurance backed guarantee should be obtained for all damp proofing treatments.

4.1.5 Windows and doors

The windows are timber single glazed casement windows set within the original sliding sash linings. The windows are in a poor state of disrepair and require complete replacement.

The doors are timber and are in a poor state of disrepair and require complete replacement.

We understand that during the refurbishment of this property, a programme of complete replacement of both the windows and doors will be carried out.

## 5.0 FLOORS

5.1 SUSPENDED FLOORS

The upper floors and areas of the ground floor are suspended timber construction. The suspended floors are partly covered by carpets and other floor coverings, limiting access to inspect the floors structural timbers. The floor joists span from front elevation to rear elevation with main support beams spanning from left to right. We noted only minor spring upon impact testing, we noted only minor unevenness in the floors. Cuboidal cracking was noted to timber joists to the underside of the ground floor staircase, indicative of perhaps historic dry rot, there was no evidence to suggest an ongoing problem. There is no evidence to suggest any major structural defects in the suspended floor structure or main support beams, however we recommend the floor structures, along with the main support beams are inspected by a PCA approved timber specialist for beetle infestations, wet and dry rot, particularly at the joist ends embedded in the external walls, following stripping out and exposure during the renovation programme. An insurance backed guarantee should be obtained for all timber and damp proofing treatments. We recommend insulation is installed to the suspended ground floor.

5.2 SOLID FLOORS

The ground floor is a combination of solid and suspended timber construction. No electronic moisture meter readings were taken. The floors were covered by carpet and other floor coverings, no access was gained to inspect the floors. The solid floors appear in a relative satisfactory condition with no undue unevenness or significant defects noted. We understand a replacement flooring system will be installed to the solid floors, incorporating a damp proof membrane and insulation.

## 6.0 ROOF STRUCTURE (INTERNAL)

Ladder access was gained to inspect the roof structure from the second floor landing.

The main roof is a traditional cut pitched roof structure constructed from 1no main principal rafter, collar and struts at mid span, which support 6no purlins. The purlins are traditionally jointed and pegged to the principal rafter and built into the gable ends, the purlins in turn support the common rafters. The common rafters sit on the front and rear elevation timber wall plates. The condition of the timber wall plates and rafter feet could not be ascertained at the time of inspection, it is likely that an element of repair will be required during replacement of the roof covering. Sagging of the rear pitch was noted and will require additional rafters installing to provide re alignment during replacement of the roof covering. The roof timbers show no signs of stress or distortion and appears relatively stable. Inspection of the roof timbers identified localised areas of wood boring beetle infestations, some of which appeared active and will require treatment. We recommend the roof structure is inspected by a PCA approved timber specialist for beetle infestations, following stripping out and exposure during the renovation programme. An insurance backed guarantee should be obtained for all timber and damp proofing treatments.

We would recommend during replacement of the roof covering ventilation is incorporated to prevent condensation forming within the roof void.

We would recommend a minimum of 300mm of rock wool roof insulation is installed at joist level in the roof void.

## 7.0 FOUNDATIONS

The foundations cannot be inspected without undertaking considerable excavations and causing damages to the adjacent hard landscape surface. We will however comment on any issues which we feel may indicate that the foundations and the adjacent landscaped areas have been affected by any external influences.

Certain sub-soil throughout West Yorkshire can be potentially susceptible to shrinkage and heave if excessive amounts of more moisture is added or removed to the soil. Therefore, consideration must be given to the presence of trees and vegetation within the demised premises and within the adjacent properties and/or public highways. The removal of a tree(s) in

their entirety at one time can sometimes have a greater effect on the soil and on structures within the vicinity than leaving the tree in position. We would recommend that any pollarding, crowing, or removal of trees should be undertaken with the advice of an arborist.

Consequently, trees and shrubs should not be allowed or encouraged to grow unchecked and should be periodically inspected and the growth restricted. The uncontrolled growth of trees and other shrubs or vegetation can also have an adverse effect on underground drainage, should this become damaged, the subsequent escape of water from these defective drains could adversely affect the soil causing heave. Heave is the opposite of subsidence; subsidence is a consequence of desiccation (moisture removal). Heave is additional moisture which causes the ground to swell.

Where appropriate within this report we shall advise of any trees that may cause me concern regarding potential influence and/or effects on saturation, whether they are within the demise of the property or other ownership.

## 8.0 GARDENS, WALLS, OUTBUILDING AND TREES

We understand that the grounds of the property will be landscaped during the renovation programme and have therefore not been inspected. The growth of the conifer tree at the front elevation should be restricted.

## 9.0 SOIL WASTE AND VENT PIPES

### 9.1 RAIN WATER DRAINAGE

The surface water discharges into gullies at the front and rear of the property. The location and line of discharge of the rainwater underground drainage network could not be determined on site.

The property is believed to be connected to a combined drainage system.

### 9.2 FOUL DRAINAGE

The specific location and line of discharge of the foul underground drainage network could not be determined on site. No inspection chambers were lifted during the inspection. The drains were not tested for free flowing discharge, should a programme of refurbishment be considered we suggest a CCTV drainage survey is carried out to indentify the drainage network and its condition. The property is believed to be connected to the main sewer network.

## 10.0 SERVICES (UTILITIES)

10.1 ELECTRICS

A detailed investigation and examination of the electrical circuits and wiring has not been carried out and we would therefore advise, should an electrical test certificate not already available, that all the electrics are checked by a NICEIC registered electrician and reported upon accordingly. We understand a complete rewire of the property will be carried out during renovation

10.2 GAS CENTRAL HEATING

A detailed examination and inspection has not been carried out to the boiler, central heating system and we would therefore advise, that should a current gas safety certificate not be available, a GASAFE registered engineer be instructed to carry out an inspection and report accordingly. We understand a complete replacement of the boiler and heating system will be carried out during renovation.

10.3 WATER

We understand that the property is connected to the mains water supply. The stop tap was not located. We understand a complete replacement of the hot and cold water supply will be carried out during renovation.

## 11.0 ASBESTOS

Asbestos is a known hazardous material, it only presents a health risk when damaged or disturbed.

Owners should be aware that at any time that works are undertaken in their property, they must make it known to any contractors, of the presence of asbestos and its location.

Once the material has been tested, and if the analysis proves positive, then the appropriate advice and guidance should be taken from a licensed asbestos contractor.

## 12.0 FLOODING AND RADON GAS

On inspecting the Environment Agency's Flood Maps for Planning (Rivers and Seas), the property is not in an area at risk of flooding.

Radon is a natural radioactive gas that enters buildings from the ground.

Public Health England defines radon Affected Areas as those with 1% chance or more of a house having a radon

concentration at or above the Action Level of 200 Bq $m^{-3}$

The joint PHE-BGS digital Indicative Atlas of Radon in the United Kingdom presents an overview of the results of detailed mapping of radon potential, defined as the estimated percentage of homes in an area above the radon Action Level. Maximum radon potential for this area is 5-10%. Further advice can be obtained from Public Health England.

## 13.0 BRIEF SUMMARY

The property is generally in a state of disrepair and requires a programme of major refurbishment and renovation. Apart from the structural stabilisation and crack stitching works required to the external walls, in our opinion the property is in a relatively stable structural condition with all structural movement long standing and non progressive. The comments made in this report are based on bringing the property into a habitable condition only on a like for like basis. Having considered the property in its entirety whilst there are a number of major repairs and replacements which need to be addressed, we do not feel these are insurmountable, providing they are taken on board with full expectation of what is needed.

## 14.0 LIMITATIONS

We have not inspected woodwork or other parts of the structure, which are covered, unexposed or inaccessible, and we are therefore unable to report that any such parts of the property is free from defect.

We are not aware of the content of any environmental audit or other environmental investigation or soil survey which may have been carried out on the property and which may draw attention to any contamination or the possibility of any such contamination. In undertaking our work, we have been instructed to assume that no contaminative or potentially contaminative uses have ever been carried out in the property. We have not carried out any investigations into past or present uses, either of the property or any neighbouring land, to establish whether there is any contamination or potential for contamination to the subject property from these uses or sites, and have therefore assumed that none exist.

This report is provided for the stated purpose and for your own sole use. It is confidential to you and your professional advisers. We accept responsibility to you alone and that the report has been prepared with skill, care and diligence reasonable to be expected of a competent Chartered Surveyor and Structural Engineer, but we accept no responsibility

whatsoever to any parties other than you. Any such parties rely upon the report at their own risk. Neither the whole nor any part of the report nor any reference to it may be included in any published document, circular or written statement nor published in any way without my written approval of the form or context in which it may appear.

Signed:



Mr David Haigh B.Eng (Hons)

Date: 21st November 2016

Signed:



Mr K Hill MRICS C.Build E MCABE

Date: 21st November 2016

**APPENDIX 1**
**PHOTOGRAPHIC SUMMARY**




**Plate 1**
Bowing to front elevation wall, requires demolishing and rebuilding. All elevations require re pointing.




**Plate 2**
Defective stone mullions, cills and heads require re aligning and or replacement.




**Plate 3**
Bowing to front elevation wall




**Plate 4**
Side extension to be demolished and rebuilt.




**Plate 5**
Right hand side gable wall elevation requires reducing from apex down and rebuilding




**Plate 6**
Rear elevation




**Plate 7**
Localised structural cracking to rear elevation.




**Plate 8**
Localised structural cracking above door to front elevation.




**Plate 9**
Traditional cut roof structure.




**Plate 10**
Internal surfaces require a system of dry lining, damp proofing and insulation.




**Plate 11**
Internal surfaces require a system of dry lining, damp proofing and insulation.




**Plate 12**
Misalignment of mullions on first floor windows, left hand gable wall.