WARD ASSOCIATES CONSULTING ENGINEERS

WARD

Flat 1, 37 Gascony Ave, London, NW6 4NB

Structural Survey report

June 2016

Project No. 2198

Ward Associates Consulting Engineers

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Revision History

Rev	Date	Purpose/Status	Comments
-	June 2016	Information	First Issue

SURVEYOR:
Mr G J Beaven, MEng (Hons) CEng MICE

1. GENERAL INFORMATION

1.1. Ward Associates Consulting Engineers Limited have been commissioned by Thompson McCabe Ltd, to prepare a structural report for the renovation of an existing domestic property at Flat 1, 37 Gascony Ave, London, NW6 4NB.

1.2. This report is for the private and confidential use of Thompson McCabe Ltd and is not to be reproduced in whole or in part or relied upon by any third party for any purpose without the express and written authority of WARD Associates Consulting Engineers Ltd.

1.3. The property was inspected by Mr G J Beaven MEng (Hons) CEng MICE on Wednesday 8th June 2016. The weather was wet and raining at the time of the survey.

1.4. All directions are given as if facing the front of the property and looking towards the rear.

2. GENERAL DESCRIPTION

2.1. The property is a bay fronted middle of terrace dwelling. The property has previously been split into three flats. Flat 1 comprises of the ground floor of the property. Flat 2 and 3 are above.

2.2. The accommodation briefly comprises:-

- Entrance Hallway
- Kitchen/Lounge
- Bedroom 1 – Front double
- Bedroom 2 – Rear double
- Bathroom
- Ensuite to bedroom 2
- Rear Garden

3. CONSTRUCTION AND CONDITION

3.1. Chimney Stacks, Flashings and Soakers - Not inspected as part of survey.

3.2. Roofs and Valleys - As the flat is at ground floor and there are two flats above the majority of the roof is covered by the flats above and was not inspected as part of this survey. A small single storey extension has previously been installed to the rear of the property to increase the size of the rear bedroom. This section of roof is pitched with a bitumen felt. The felt appeared relatively new and in a good condition. A bubble to the felt was noted but not considered significant. No evidence of water ingress was noted internally.

3.3. Rainwater Goods – Not inspected as part of survey

3.4. External Walls and Elevation - No DPC was noted to the external elevations. It was noted that the pointing to the rear extension was recent and likely consistent with the time of construction. No cracks were noted to the external masonry around the rear extension.

Evidence of previous repairs was noted to the side elevation in the rear garden around the window to the ensuite bathroom. Evidence of repointing to the side elevation was noted but these were not considered significant.

Brick spalling was noted to the brickwork forming the arch over the door into the front bedroom. It is advised that these bricks will require replacing in time.

It was noted that the decking to the rear was raised approximately 3 brick courses above the internal ground level. It is advised that a gap should be maintained between the decking and the brick face to prevent saturation of the brickwork which could cause damp internally. This gap would also ensure any vents from the building are not blocked.

The front elevation comprises a mixture of brick, render and large bay window. The front yard was flag paved. No significant defects were noted externally at ground floor during the inspection.

3.5. Boundary Walls – Not inspected as part of survey.

3.6. Damp Proof Course - There is no evidence of a damp proof course to main walls, although this could be concealed by internal and external wall surfaces. External ground levels at the rear are too high in comparison with internal floor levels. Where possible, these should be lowered to a minimum of 150mm (6 inches) below internal floor levels in order to minimise the risk of damp penetration occurring.

Moisture testing of the internal walls at low level indicated moisture in the range of 12-20% typically. Although no evidence of rising damp was noted during the inspection. It is recommended that a full examination of the property by a Damp Proofing Association registered contractor in undertaken and any essential works found necessary completed. All works to be carried out under an insurance backed, long term and transferable guarantee.

3.7. External Joinery - Fascias and soffits are of softwood construction and it is difficult to fully ascertain their condition from ground level. Nevertheless, they would benefit from some rubbing down and redecorating on a periodic basis.

Windows and doors at ground floor are painted timber. Paint peeling and blistering was noted to the bathroom window and the front bedroom external door. It is advised that some rubbing down and redecorating of the timber doors and windows will be required on a periodic basis. It was noted that paint peeling and blistering was evident internally to the window in the bathroom. This is likely due to the high levels of moisture found in bathrooms. It is advised that this window

is rubbed down and repainted. An extractor fan should also be installed to minimise the moisture exposure of the window.

3.8. Ceilings - The ceilings appear to be of plasterboard construction, with smooth painted finishes. Downlights had been installed to all ceilings.

3.9. Internal Walls and Partitions - Internal walls and partitions are of mixed solid and lightweight construction, with a plastered finish. Minor hairline cracks were note to wall in the hallway, bathroom and front bedroom but these were not considered structural and should be raked out, taped and jointed as part of the renovation works.

3.10. Floors – The ground floor appears to be solid construction but due to finishes inspection was not possible. It is unlikely in a property of this age and type that the solid floors have the benefit of a built in damp proof membrane, which in its absence can encourage damp penetration to occur and upgrading could prove necessary. Bathrooms and WC floors are often affected by dampness, due to leaking pipes, condensation etc. A closer examination is warranted when the coverings can be lifted. Future remedial repairs may prove necessary. All floors were covered with carpets or other fixed coverings which were not lifted.

A drop in floor level of 40-50mm was noted into the cupboard below the stairs. It was noted that section of timber had been installed below the skirting board to fill the gap. It is not thought the movement is recent but it is advised that the floor in this area is inspected once the floor finishes have been lifted to determine the likely cause.

3.11. Internal Joinery - Windows and doors were generally in a good condition. The bathroom window requires rubbing down and painting. It was also noted that the window lock was broken. The external door to the front bedroom was also not closing correctly and requires some adjustment to the bottom lock.

3.12. Internal Decoration - These are a matter of personal choice and you may wish to redecorate.

4. STRUCTURAL FORM

4.1. It was noted that the property had previously been renovated to convert the property into three flats. It was noted that the majority of internal walls are stud construction and likely non-load bearing.

4.2. It is though the existing construction is a solid concrete ground floor slab with timber floors and timber roof above. Given the floor layout above and non/load bearing walls noted at ground floor it is assumed that the first floor joists span between party walls and external walls. See Appendix A for assumed floor spans.

5. PROPOSED WORKS

5.1. A copy of the existing plans is shown in Appendix A. A copy of the proposed plans is shown in Appendix B.

5.2. The proposal is to change the internal layout of the property at ground floor to move the bedrooms to the front of the property and the kitchen/lounge to the rear.

5.3. To create the revised layout several internal walls are to be removed and new internal stud walls built. From the survey it is thought that the walls to be removed are non-loadbearing. See Appendix A and B for plans.

5.4. It is advised that the existing joists at first floor should be checked ensure they are in line with the assumptions shown in Appendix A. They can be checked by removing the ceiling at ground floor. This should be confirmed prior to commencing any demolition of existing walls. If any difference is noted to the joist span then the Engineer should be notified and no demolition of walls should be undertaken until the Engineers instruction is received.

5.5. The new walls should be built in stud construction off the existing ground floor slab.

5.6. The proposed works also include creating a large opening to the rear of the property. It is advised that the existing lintel is replaced with a Catnic CX90/100 lintel to suit the required opening . A copy of the structural calculations is shown in Appendix C. The lintel specified assumes the wall construction is 100mm external brick, 100mm internal block and 100mm cavity. This should be verified on site prior to ordering the lintel. The existing masonry should be dry packed above the lintel.

6. CONCLUSIONS

6.1. It is assumed that the first floor joists span left to right between party walls and the existing internal walls are non-loadbearing. It is advised that the existing joists at first floor should be checked ensure they are in line with these assumptions. This should be confirmed prior to commencing any demolition of existing walls. If any difference is noted to the joist span then the Engineer should be notified and no demolition of walls should be undertaken until the Engineers instruction is received. Refer to Appendix A for assumed span and walls to be removed.

6.2. To form the large opening at the rear of the property a Catnic CX90/100 lintel is proposed. Refer to Appendix B for details.

6.3. A drop in floor level is noted in the cupboard below the stairs. The movement is not considered recent but it is recommended that the floor in this area is inspected during the works.

6.4. Moisture content reading of 12-20% was noted to the internal walls. No evidence of rising damp was noted to the walls internally. It is recommended that a full examination of the property by a Damp Proofing Association registered contractor in undertaken and any essential works found necessary completed. All works to be carried out under an insurance backed, long term and transferable guarantee.

6.5. It was noted that the external decking is approximately 3 masonry courses above the internal floor level. It is advised that either the level is dropped or a gap is maintained between the external masonry and the decking.

6.6. A selection of photos form the inspection are shown in Appendix D.

7. LIMITATIONS

You are reminded that access was limited during the inspection and it is not possible to confirm that unseen areas are free from defect. Some maintenance and repair will require the co-operation of adjoining owners. The property was occupied and furnished at the time of our inspection. The presence of floor coverings throughout prevented a full inspection. No ladders were raised for close inspection of the upper parts of the building. Our inspection was made entirely from ground level.

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Many parts of the building such as foundations and sub floor areas are concealed during construction and we do not disturb these. It follows, for practical reasons, that we have not inspected woodwork or other parts of the structure that are covered, unexposed or

inaccessible and we are, therefore, unable to report that any such part of the property is free from defect.

As far as the service installations (gas, electricity, hot and cold water, space heating and drainage) are concerned, inspection of these is not covered within this report. The suitability of the mains supplies and acceptability of the installation connected to them is something on which the water and electricity companies have the final word. Underground pipes and rainwater downpipes or gullies were not traced or tested.

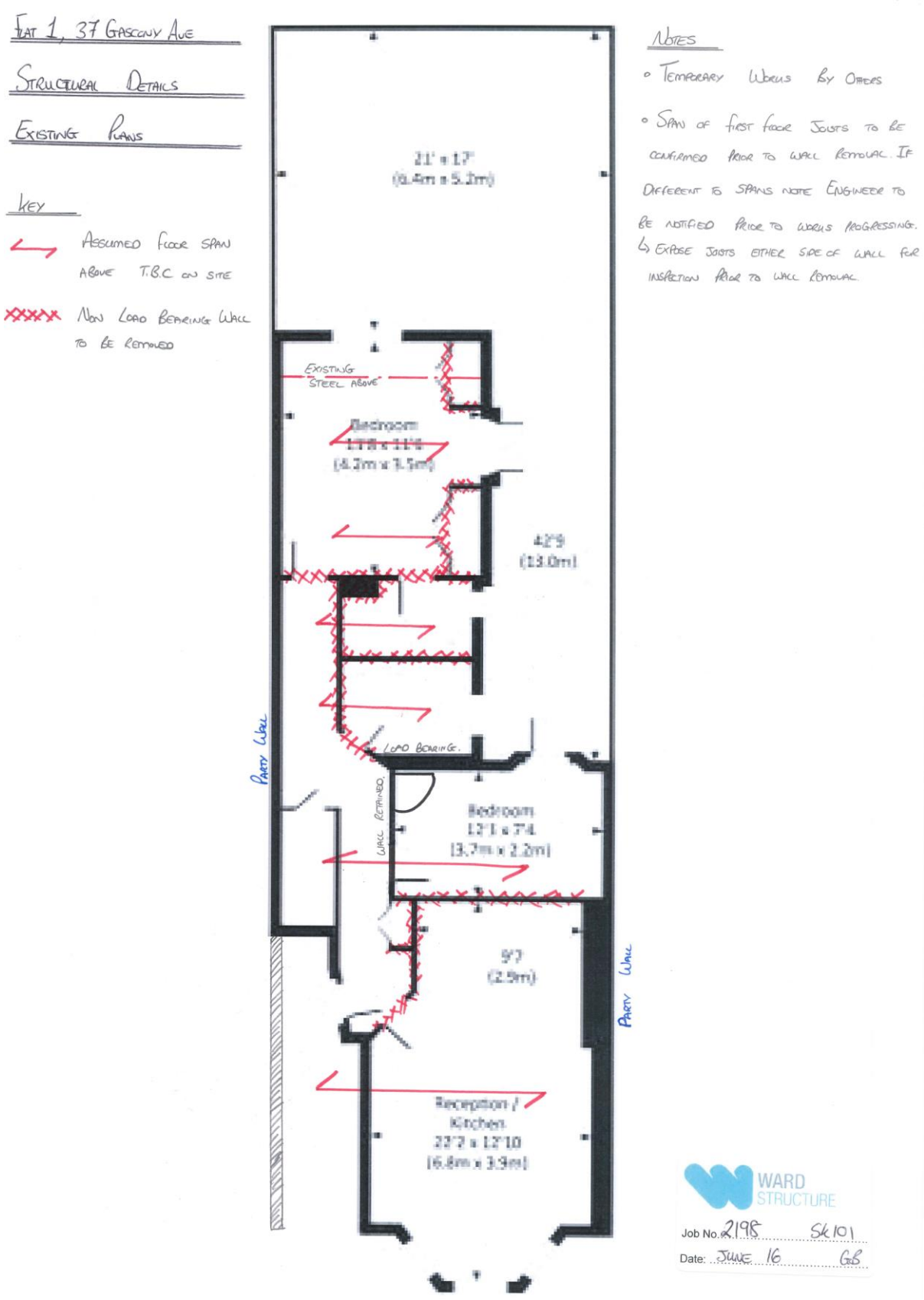
The calculations of the load bearing capacity of floors have not been carried out and we can give no opinion to their strength or suitability for your purposes.

In drafting this report, we have limited comment to more material matters and, in particular, we have not listed individually such minor items as slightly loose door or window fittings or minor decorative blemishes which have no structural significance.

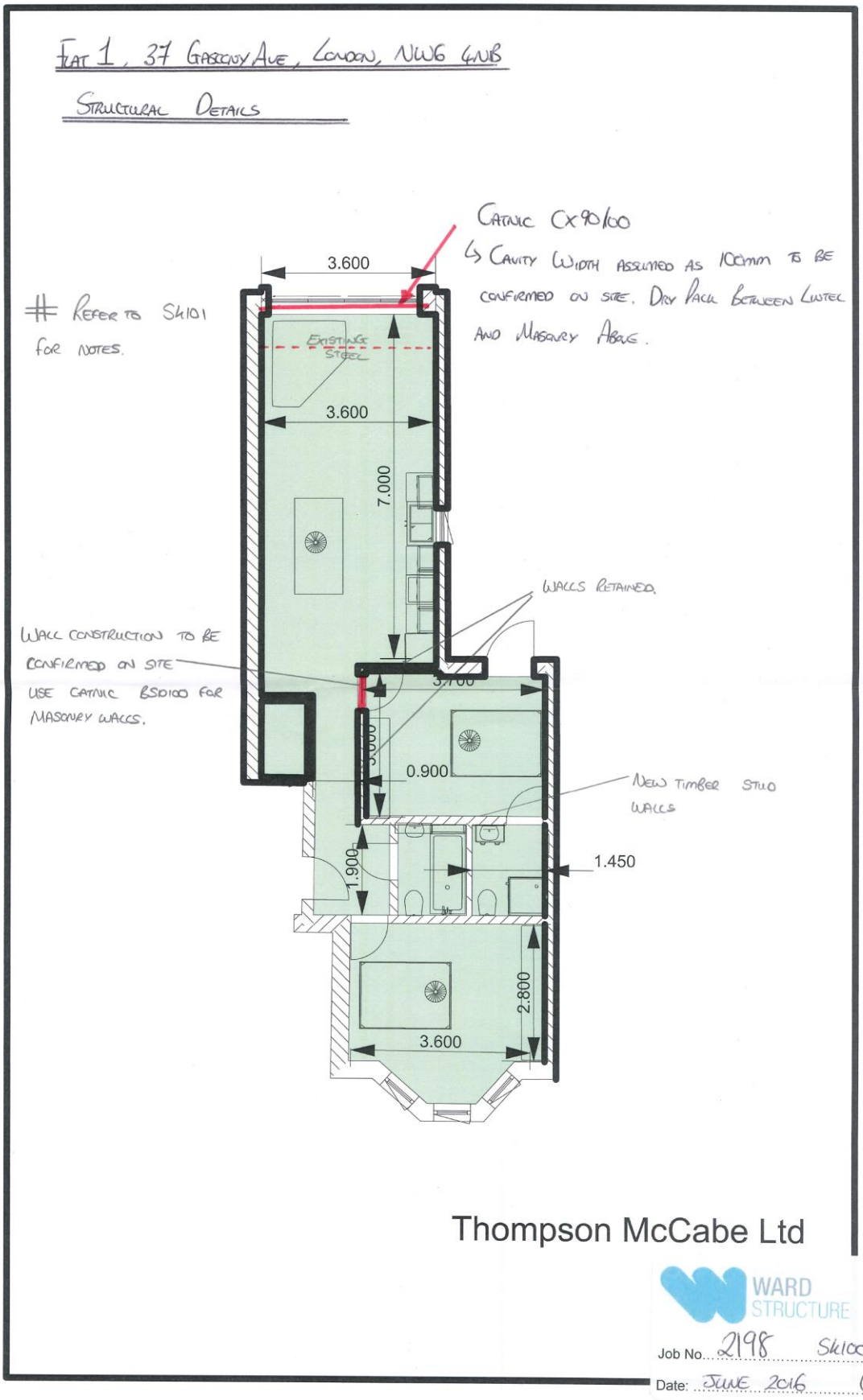
8. ADDITIONAL ADVICE

Asbestos is considered a health hazard in certain circumstances and although commonly used in building in the past, its use now is severely curtailed and is only permitted in specialised and controlled conditions. Its use in asbestos cement products is not considered hazardous if the products are left undisturbed however workmen, including decorators, who carry out repairs and renovations should be advised of its presence so they may take appropriate safety precautions. Similarly, safety precautions should also be taken when carrying out any DIY work. Further advice on this safety topic may be obtained from the environmental health office of your local council. Normally the removal of asbestos products from buildings has to be carried out by especially licensed firms operating to stringent safety standards which can prove an expensive exercise. However, small quantities of asbestos cement products may be removed without utilising the specialists expensive facilities although obviously reasonable safety precautions should be taken to prevent the creation of dust, the spread and inhalation of dust by all persons within the building either during the operations or afterwards and the removed material disposed of to the appropriately licensed tip, the location of which can be ascertained from your local council. Asbestos cement products used for roof coverings are fragile and should not be walked upon without appropriate safety precautions and the provision of adequately sized crawler boards properly supported.

APPENDIX A – EXISTING PLAN



APPENDIX B – PROPOSED PLAN



APPENDIX C – STRUCTURAL CACULATIONS

WARD ASSOCIATES (CE)	Project	Job No.
WARD	Gascony Ave	2198
		Sheet No.
		Date. June 2016
		Engineer GB / Check

Ground Floor Flat 1
37 Gascony Ave,
London,
NW6 4NB

Synopsis

The following calculations are for residential renovation to an existing domestic property.

Loading

Roof:

Dead -	Slate, Tiles, Battterns, Felt		= 0.55	
	Rafters and insulation			= 0.2
	Ceiling and Services			= 0.15
		Total		= 0.9 kN/m2
Live -	Snow and Access			= 0.75 kN/m2

Floors:

Dead -	Boards/Plywood			= 0.15
	Joists			= 0.3
	Ceiling and Services			= 0.15
		Total		= 0.6 kN/m2
Live -	Residential			= 1.5 kN/m2

Walls:

100mm Block = 2.0kN/m2
Cavity wall - 100/100 = 4.0kN/m2
Timber stud = 0.5kN/m2

WARD ASSOCIATES (CE)

Project: Gascony Ave

Job No.: 2198

Sheet No.:

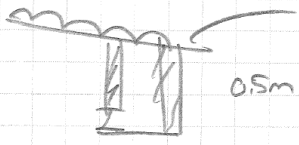
Date: June 2016

Engineer: GB

Check:

REAR DOCK

OPENING MAX = 3.4m



$W_{DEF} = (1.4 \times 0.9 + 1.6 \times 0.75)1$

$= 3.24$ kN/m

$W_{WALL} = 2 \times 2 \times 0.5 \times 14 = 2.8$ kN/m

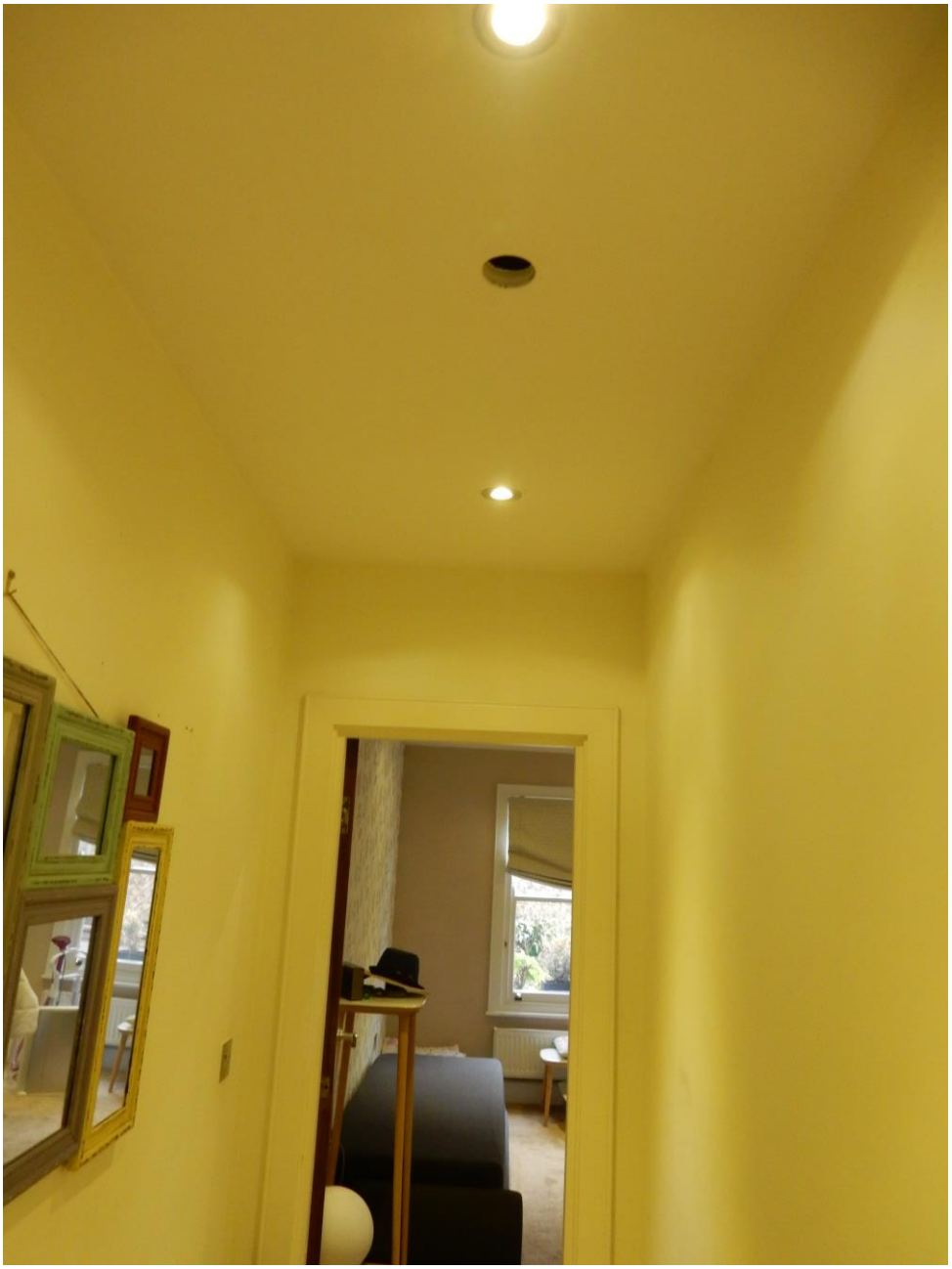
$W_T = 6$ kN/m

$W_T = 6 \times 3.4 = 20.4$

USE CATNIC CX90/100 - CAVITY WIDTH TBC ON SITE

APPENDIX D – SITE PHOTOGRAPHS

PLEASE NOTE THAT THE PHOTOGRAPHS ARE NOT AN ILLUSTRATION OF ALL DEFECTS AT THE PROPERTY. THEY ARE TO GIVE YOU GUIDANCE ON ITS GENERAL CONDITION. THE PHOTOGRAPHS SHOULD NOT BE VIEWED IN ISOLATION. PLEASE NOTE THAT THERE MAY BE SOME DEFECTS IN THE PHOTOGRAPHS WHICH ARE NOT REFERRED TO IN THE MAIN TEXT.



Photograph 1 – Hallway

Photograph 2 – Rear Bedroom

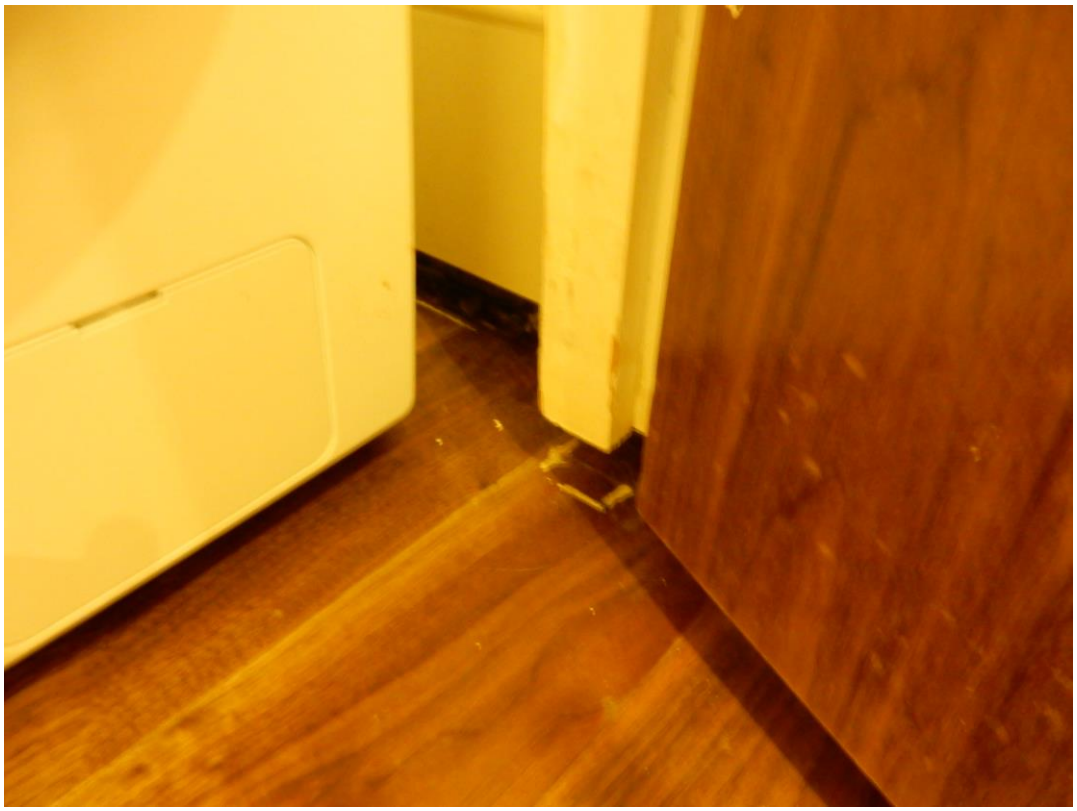
Photograph 3 – Existing Rear Extension

Photograph 4 – Raised decking above internal floor level

Photograph 5 – Rear bedroom

Photograph 6 – Main bathroom – Window above bath – Paint peeling and blistering.

Photograph 7 – Front bedroom – External door not shutting properly. Adjustment required.



Photograph 8 – Gap between skirting board and floor in cupboard under stairs.

Photograph 9 – Previous repairs to dropped floor to cupboard under stairs. Infill installed to skirting.

Photograph 10 – Rear and side elevation with brick spalling noted and evidence of previous repairs.

Photograph 11 – Front Elevation

Photograph 12 – Front Elevation