

JOB REF: SDR

SPECIFIC DEFECTS REPORT

Relating to Cracking to the Plasterwork Due to Dampness

Victorian Terraced Property in London



FOR

Mr A Client

Prepared by:

INDEPENDENT CHARTERED SURVEYORS

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CONTENTS

INTRODUCTION AND INSTRUCTION

SYNOPSIS

CONSTRUCTION SUMMARY

EXECUTIVE SUMMARY

INSPECTION

SURVEY FINDINGS

SUMMARY UPON REFLECTION

LIMITATIONS

INTRODUCTION AND INSTRUCTION

We have been instructed by Mr A Client to prepare a report relating to cracking to the plasterwork (specific locations of which are identified later on within the report).

We have carried out a visual inspection of the property.

The instructions have been carried out under our standard terms and conditions which are available on our website and have been forwarded to you prior to our confirmation of instruction.



Front Elevation



Rear View



An example of the hairline cracking to the rear wall of the bathroom



An example of the hairline cracking to the right hand wall of the Kitchen

SYNOPSIS

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You advised us that you have recently moved to the property, moving in approximately nine months ago. You had become increasingly concerned with the hairline cracking which is occurring to the plasterwork within the property.

You advised us that this cracking occurred in the kitchen, the lounge and dining room area and the hallway and landing and bathroom. Also the cracking to the bay window. We would add that this is generally to the rear of the property.

We carried out a visual inspection of all rooms and have had sight of your original survey by A N Other Surveyors (of which we have read the summary section). We have also entered the roof space (right hand side only) and have viewed your property from your adjoining (rear) neighbour's garden.

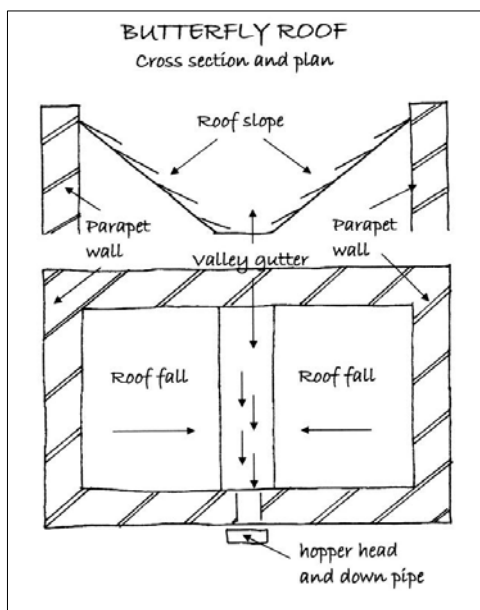
We have drawn our evidence from these observations and knowledge of this type of construction.

CONSTRUCTION SUMMARY

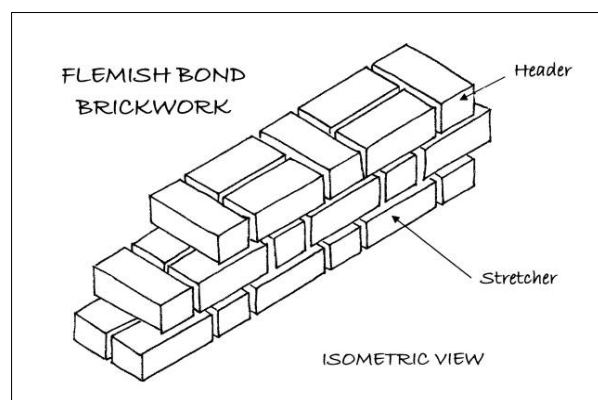
External

- Chimneys: Brick chimneys.
- Main Roof: A butterfly roof (sometimes known as a London Roof) clad with a slate adding to the main property on a cut timber roof structure. The rear roof is single pitched and clad in slates with the single storey extension having a flat felt roof. Please see sketch below.
- Gutters and Downpipes: Plastic.
- Soil and Vent Pipe: Cast Iron
- Walls: A mix of a yellow London common brick with some detailing in softer red brick in a flemish bond construction which has been repointed in cement. Please see sketch below.
- External Joinery: There is a mixture of different types and styles of windows.
- Foundations: Not inspected but we would anticipate a step brick foundation in this age of property.

Butterfly Roof Sketch

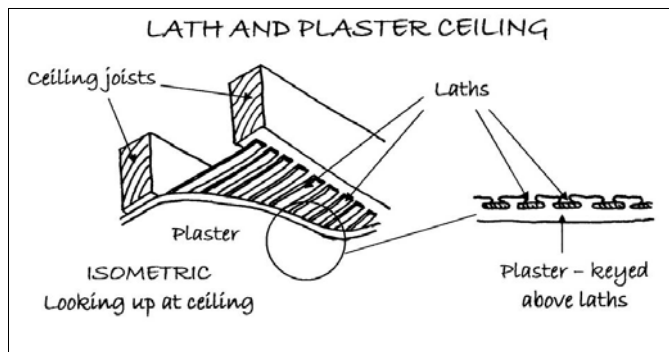


Flemish Bond Brickwork Sketch



Internal

Ceilings:	We believe that these are a mixture of the original lath and plaster and some plasterboard (assumed)
Walls	Originally Lath and Plaster which we believe some have been re-plastered, probably with a modern plaster (rather than a lime based plaster) to the areas which have been damp proof coursed, which we suspect is the whole of the ground floor.
Floors: Ground Floor:	Suspended Timber Floor with a concrete section to the kitchen (assumed)
First Floor:	Joist and Floorboards (assumed) which may have imbedded timbers (to the external walls)



We have used the term 'assumed' as we have not opened up the structure.

EXECUTIVE SUMMARY

Executive summaries are always “dangerous” as they try and encapsulate relatively complex problems in a few precise and succinct words. Having said that here is our executive summary and recommendations:

From our discussions with yourself and general visual investigations, we believe that the hairline cracking relates to:

1. Dampness generally getting into the Property.
2. Dampness being restricted from coming out of the property.
3. Possible Shrink/Swell (freeze) issues relating to the subsoil.
4. Possible Drainage Problems?
5. Foundations and Straight Joints.
6. Window openings to Brickwork Ratio.
7. Heating Levels and Condensation.
8. Suspended Timber Floor.
9. Repair to Bay Windows.

ACTION RECOMMENDED

- (a) Re-point in a lime based mortar to allow the property to breathe and therefore dissipate any moisture which penetrates it.
- (b) Have a closed circuit television camera to check the condition of the manholes, which may then result in the drains being lined. This we believe is likely to be affecting your neighbour's property as well as yours.
- (c) Checking of gutters and downpipes next time it rains to ensure that they are catching the water, as water being discharged down your walls will also have an impact on movement to the property.

Please see the Survey Findings Section of this report for more detail.

Time Line – A brief history of the structure

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This is taken from our discussions with yourself and based upon a general knowledge of this type of property.

1880's / 1890's	Property originally constructed
During the War Years	Conversion from Gas Lighting to Electric Lighting
1960's	Last 50 years Reroofing of the butterfly roof as we noted a sarking felt.
1970's	Last 40 years the addition of central heating which has meant that floorboards would have been lifted to allow the placement of pipes, and it is also likely that the chimneys would have been blocked at this time, causing a general increase in heat.
1980's	Damp proofing work is included. Re-plastering.
1990's	Last 10-20 years a plastic based paint was added.

We would summarise that generally over the years the building has had alterations and modifications as have many buildings of this age. The modifications in this case have changed the building from a breathable building with the addition of the new material and modern methods of making the building watertight. The two are not wholly compatible and differential movement occurred.

INSPECTION

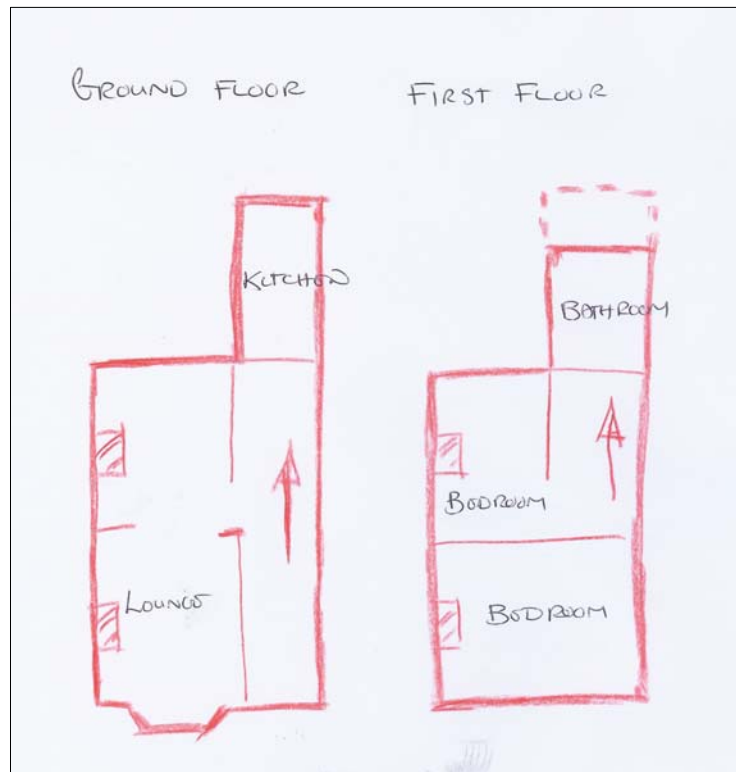
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We carried out a visual inspection of all rooms and have also viewed the right hand roof and briefly viewed your survey which was carried out by Colleys Surveyors although we haven't gained access to the first floor or the ground floor.



SURVEY FINDINGS

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From our discussions with yourself and general visual investigations, we believe that the hairline cracking relates to:

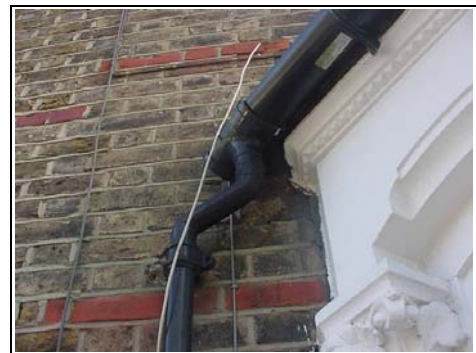
1. **Dampness generally getting into the Property**

Dampness is getting into the property from a variety of sources for example, the butterfly roof area. The parapet wall needs repointing, possibly having a coping stone added to stop water getting in from the top and we also noted some slates displaced to the butterfly roof, particularly to the perimeter which need bedding into mortar. There is also some repointing required to the rear flat roof flashing.



Defective Parapet Wall to the front of the property which is allowing dampness in to the front wall.

We would also ask that you stand outside the property next time it's raining heavily (!) and check that your gutters are actually catching the rain water, particularly guttering which is visible from the rear bedroom (in this case you will be able to stay in the dry and watch the guttering!). This is a common area where water overflows the guttering and gets into the structure. We also think that a similar thing is happening where the gutter and downpipe are getting overloaded to the front bay. Unfortunately you will have to go outside to view this.



Smaller downpipe to the bay window (which could get blocked and lead to water discharging down the wall in this area which causes additional dampness





There are signs that this area has been repointed which is probably due to the gutter overflowing above (this was viewed from the rear bedroom)

View of your butterfly roof with the missing mortar to either side of the valley gutter

The cement mortar coming away to the flashing of the flat roof

2. Dampness being restricted from coming out of the property

The Walls are no longer breathable as they were originally constructed due to them being repointed in a cement mortar externally and internally having a modern plaster, together with having the original slate damp proof course (assumed) and an inserted damp proof course (assumed). Any moisture which gets into the wall will have difficulty in getting out again. This is resulting in spalling to the face of the brickwork, particularly the softer red bricks.



bricks.

3. Possible Shrink/Swell (freeze) issues relating to the Subsoil

The Clay subsoil upon which the property sits will shrink and swell depending upon its moisture content. Generally most of London is built

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upon clay. Some of the clay is affected more by water (being happiest when it has a water content of 40-60%). In addition to this we believe that the recent cold weather may have affected the brickwork and foundations (-8 we believe was recorded in some areas of London) which in turn may have caused some cracking internally. We are still however investigating this. We would add that we have looked at several properties with similar issues recently.

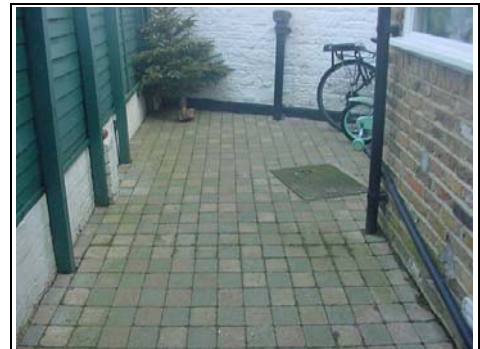
4. Possible Drainage Problems?

The cracking to your neighbour's property could indicate that there is a leak on the drainage route which is relatively common in this age of property. The movement which is visible to their property indicates that there may be shrinkable clay in the area. Above this percentage it expands causing what is known as heave although this in itself turns to dust causing what is known as settlement.

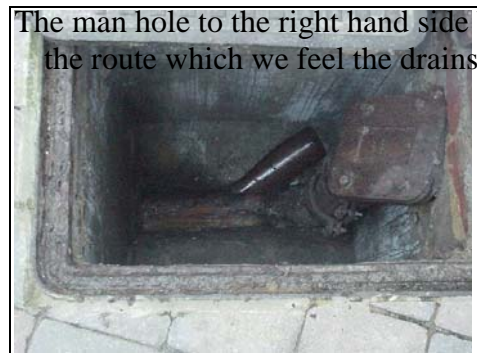
The rear extension will also have added additional weight as we discussed. We did a very basic mains test where the taps were left to run for approximately 15 minutes. The amount of water that passed through the drains was in line with what we would expect.



Your neighbour's wall with a crack where it has been extended



The man hole to the right hand side being along the route which we feel the drains will take



5. Foundations and Straight Joints

The rear extension of the property will also have added additional weight in this area and as we discussed the foundations of the original property are likely to be approximately three hundred millimetres (one foot) and a step brick foundation with the extension having been built in the 60's will have had a concrete foundation (what is known as a strip concrete foundation) which are likely to be at least a metre deep.



We also noticed that there is a straight joint between the original property and the new property (shown in the photograph) which indicates a modern brick laying system has been used rather than the traditional tooth and bonding system which in our experience tends to allow more movement.



We also noted to the front of the property that originally it was built with a straight joint on the left hand side. This means there can be some additional movement to what we would traditionally see in terraced property.

6. Window openings to Brickwork Ratio

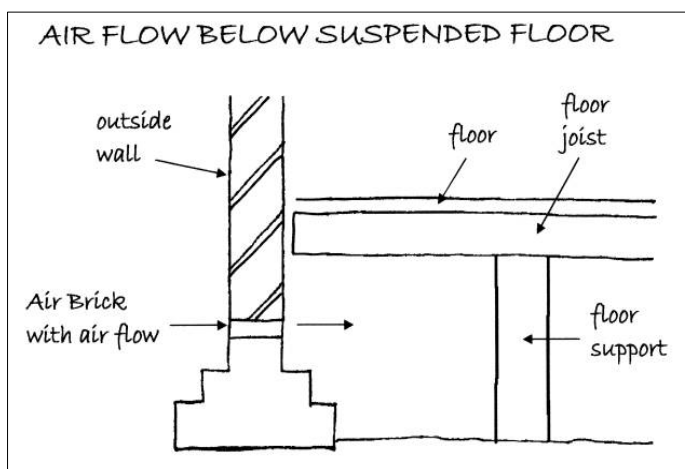
Window openings within a property create weaknesses. This property has a relatively large number of window openings, albeit it is nothing unusual for this style of property and we would add that it is a terraced property so it has little room to move, however it has had additional weight put onto it by the rear extension and also it has the standard bay window to the front of the property which generally have a lack of foundations. This also tends to cause movement. We feel there has been a twisting in the property. There may also be deterioration to the floor joists (particularly in the rear bedroom -if you recall our impact test – literally jumping up and down). There was more than average deflection which means there may be problems with the joist ends which sit into the wall.

7. Heating Levels and Condensation

This is your first winter in the property and therefore your heating levels may be higher than the previous occupants. We noticed condensation to some of the windows which tends to be exasperated when there are young children in the house.

8. Suspended Timber Floor

As an aside with a suspended timber floor to the front of the property and a concrete floor to the rear of the property, the concrete floor can affectively be acting as blotting paper, as there is no way that any moisture underneath the floor can escape in this section and this again could be adding to the cracking in the kitchen area.



9. Repair to Bay Windows

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It appears that a repair has been carried out in years gone by to the window sill which involved applying an additional coat over the top on the original sill. This has now failed due to lack of bonding agent (or reinforcements). It is very difficult to advise on a repair method until we see the extent of the condition of the original sill.



De-lamination of Bay Window Sill

We would like to point out that this is not a building survey and have merely added these points. We would refer you to the survey that you have had carried out.

SUMMARY UPON REFLECTION

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The Summary Upon Reflection is a second summary so to speak, which is carried out when we are doing the second or third draft a few days after the initial survey when we have had time to reflect upon our thoughts on the property. We would add the following in this instance:

There will always be an element of movement within this property. Unfortunately the mixing of old and new materials such as the original lime mortar and the modern cement mortar together with the original lime plaster and modern gypsum plaster will cause cracking.

The important thing is to start allowing the property to breathe and therefore the dampness within the walls can dissipate.

We would add that this is a one off inspection and as such is limited.

The Building Research Establishment and most insurance companies in our experience recommend monitoring for at least a year as there is a possibility of movement.

If you would like any further advice on any of the issues discussed or indeed any that have not been discussed! Please do not hesitate to contact us on 0800 298 5424.

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LIMITATIONS

Specific Defects Report

1. Conditions of Engagement

Please note: references to the masculine include, where appropriate, the feminine.

Subject to express agreement to the contrary (which in this particular case has been none) and any agreed amendments/additions (of which in this particular case there have been none), the terms on which the Surveyor will undertake the Specific Defects Report are set out below.

Based upon a visual inspection as defined below the Surveyor will advise the Client by means of a written report as to his opinion of the visible condition and state of repair of the specific problem or problems only. In this instance specifically relating to the hairline cracking to the kitchen, the hallway and landing area and to the bathroom.

2. The Inspection

a) Accessibility and Voids

The Surveyor will base this report on a visual inspection and accordingly its scope is limited. It does not include an inspection of those areas, which are covered, unexposed or inaccessible. Our visual inspection will relate to the specific defects shown to us only.

b) Floors

We have not opened up the floor structure. We have only carried out a visual inspection and any conclusions will be based upon our best assumptions. We can open up the floor if so required at an additional fee.

c) Roofs

We have inspected the right hand roof. We have carried out what is known as a "head and shoulders" inspection of the right hand roof (i.e. we have not gained access to the roof) and we have not viewed the left hand roof.

d) Boundaries, Grounds and Outbuildings

The inspection will not include boundaries, grounds and outbuildings unless specifically stated (none stated).

e) Services

No services inspected.

f) Areas not inspected

The Surveyor will have only inspected those areas identified within the report. His report will be based upon possible or probable defects based upon what he has seen together with his knowledge of that type of structure. If you feel that any further areas need inspection then please advise us immediately.

g) Specific Defects Report

As this is a report upon a Specific Defect we do not offer any comment or guidance upon reactive maintenance and/or planned or routine maintenance items.

h) Whilst we have used reasonable skill and care in preparing this report, it should be appreciated that the Chartered Surveyors cannot offer any guarantee that the property will be free from future defects or that existing defects will not suffer from further deterioration;

3. Deleterious and Hazardous materials

- a) Unless otherwise expressly stated in the Report, the Surveyor will assume that no deleterious or hazardous materials or techniques have been used in the construction of the property. However the Surveyor will advise in the report if in his view there is a likelihood that high alumina cement (HAC) concrete has been used in the construction and that in such cases specific enquiries should be made or tests carried out by a specialist.

4. Contamination

The Surveyor will not comment upon the existence of contamination as this can only be established by appropriate specialists. Where, from his local knowledge or the inspection he considers that contamination might be a problem he should advise as to the importance of obtaining a report from an appropriate specialist.

5. Consents, Approvals and Searches

- a) The Surveyor will assume that the property is not subject to any unusual or especially onerous restrictions or covenants which apply to the structure or affect the reasonable enjoyment of the property.
- b) The Surveyor will assume that all bye-laws, Building Regulations and other consents required have been obtained. In the case of new buildings and alterations and extensions, which require statutory consents or approval the Surveyor will not verify whether, such consents have been obtained. Any enquiries should be made by the Client or his legal advisers.

Drawings and specifications will not be inspected by the Surveyor. It is the Clients responsibility to forward any drawings and specifications that he has or knows the

whereabouts of to us to include information in our report. If these are not forthcoming we will make our best assumptions based upon the information available.

- c) The Surveyor will assume that the property is unaffected by any matters which would be revealed by a Local Search and replies to the usual enquiries or by a Statutory Notice and that neither the property nor its condition its use or intended use is or will be unlawful.

6. Fees and Expenses

The Client will pay the Surveyor the agreed fee for the Report and any expressly agreed disbursements in addition.

7. Restrictions on Disclosures

- a) This report is for the sole use of the Client in connection with the property and is limited to the current brief. No responsibility is accepted by the Chartered Surveyors if used outside these terms.
- b) Should any disputes arise they will be dealt with and settled under English law;
- c) This report does not fall under the Third Parties Rights Act.

8. Safe Working Practices

The Surveyor will follow the guidance given in Surveying Safely issued by the Royal Institution of Chartered Surveyors (RICS).

9. Weather

It was a cold winters day.

APPENDIX 1

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PROCESSES USED

1. General Appraisal

General appraisal of building, its age, use, general construction form and condition, noting any unusual aspect of its materials structural character, and changes made (especially recent), potentially relevant information – for example, recent or ongoing nearby construction, nearby trees (proximity, species and maturity) and soil type.

2. General Appraisal of Cracking

Please note we have not recorded width, direction or taper etc.

3. Assessment

Make a first assessment of severity according to the list below; then seek a cause or causes, but with time and effort at this stage in proportion to supposed severity.

Typically it is considered that there are seven causes of structural movement and we look to identify whether structural movement falls under one of these seven headings:

- i. Lack of strength
- ii. Lack of continuation
- iii. Material decay
- iv. Dimensional instability
- v. Sub-soil and foundations
- vi. Overall instability
- vii. Alterations and misuse

4. Consider Causes of Cracking

Consider whether the cause or causes are likely to lie:

- i. in the cracked part itself or
- ii. in associated parts which impose forces (tension, compression, shear, rotation and bowing) on the cracked part.

If ii, consider whether the forces arise from within the building itself (e.g., dead or live loads, deflection, creep or sway) or from external sources affecting the entire building (eg, wind loads or snow loads) or from changes in its support (eg, settlement of made ground, erosion by leakages, poor compaction of fill, seasonal volume changes under shallow foundations in

clay, longer term volume changes, mining subsidence, local excavation, swallow holes or landslip).

5. If diagnosis indicates foundation movements as a probable cause and there is reason to believe that movements might be progressive, take account of published guidance (eg, Building Research Establishment Digests) to decide whether long term monitoring is necessary.

Distinguish between:

- **settlement:** downward movement caused by compression of the ground by foundation loads. Settlement does not crack buildings – only differential settlement potentially does so; damage due to consolidation of poor or made ground usually becomes apparent within the first ten years (e.g. Building Research Establishment Digests)
- **subsidence:** downward movement caused by activity in the ground. However, in the absence of trees, progressive subsidence on shrinkable clay (i.e. continuing beyond the duration of a drought) is most uncommon (Building Research Establishment Digests). Where clay soils are involved see also Building Research Establishment Digests current at the time of writing this report).
- **heave:** upward movement caused by activity in the ground