SPECIFIC DEFECTS REPORT - CRACKING

Cambridge
Cambridgeshire

FOR

Mr E

Prepared by:

INDEPENDENT CHARTERED SURVEYORS

Marketing by:
www.1stAssociated.co.uk
0800 298 5424

CONTENTS

INTRODUCTION AND INSTRUCTION

(all directions given as you face the property)

We have been instructed by Mr E to prepare an independent report to survey and inspect XXX Cambridge, Cambridgeshire CB21 relating to cracking.

We have carried out a visual inspection of the property. This is a non-evasive inspection.

The weather was misty at the time of the inspection.

We are registered with the Royal Institution of Chartered Surveyors and are members of the Independent Surveyors Association,

Qualifications: Chartered Building Surveyor

The work has been carried out as per our standard Terms and Conditions of Contract which have been emailed to you as part of the confirmation of our instructions. If you would like further clarification please do not hesitate to contact us.

SYNOPSIS

Mr E advised that whilst there have been cracks in the property he noticed recently that additional cracks have become visible. We have also been asked to consider these and other issues.

1.0 The main focus of the report is to advise on the cracks throughout the property.

2.0 To consider alterations and improvements to the outbuildings.

3.0 To look at alterations and improvements to the main building, divided into

- 3.1 Kitchen
- 3.2 En-suite shower room (without making the property from four into three bedrooms); and
- 3.3 Office
- 3.4 Extending the property

SITUATION AND DESCRIPTION

We appreciate that you are living in the property but this gives us a record in time of what it is like at the time of our inspection.

This is a two storey timber framed property that has been extended and altered over the years, including a conservatory extension to the rear and re-roofing from thatch to tile and an increase in the roof pitch to accommodate the first floor rooms better.

The gardens surround the property to include off-road parking, a range of trees and drainage to a septic tank to the rear of the property.

We believe that the property was built in the 16th/17th Century, although it has had a lot of amendments since this date. If the age of the property interests you, you may be able to find more from your Deeds.

Front View

Rear View

Left hand side

Right hand side

Putting Life into Perspective!

Some of the things that were happening around the time the property was built:

1666	The Great Fire of London
1681	Oil powered street lights are put up in London
1783	Britain recognised American Independence
1750	The start of the Industrial Revolution
1793 – 1800	The Grand Union Canal was built

1.0 Traditional Timber Frame Structures

Before we discuss your property here is some general information on timber frame structures.

Timber frame buildings were the way we built most buildings for many centuries, although few survive from before 1500 and there are many examples of later construction. We continued to build in timber to the 1800 century, mainly using Oak and Elm which were local materials at the time, but as timber supplies reduced other timbers were used and then we moved to non-local materials as transport systems developed by sea, canal and railway.

1.1 Main Timber Frame Walls

Traditional timber frame buildings work as whole units, with the walls and roof being one unit, being built in bays with infill panels usually of wattle and daub or similar, which over the years has then been typically replaced with other materials such as brick. This is opposed to a modern constructed property, where the roof and walls act separately and the load is distributed through the length of the wall, as opposed to via a structural timber frame as we have in traditional timber frame buildings.

1.2 Alterations over the years – three cottages into one and increasing of roof height

Any property of this age will have alterations and amendments over the years. However, this property has had major alterations converted three cottages into one large cottage. In addition to this we are aware there has been the adding of a new roof structure, with the change of roofing materials from thatch to tiles.

For the record, here are some of the photos that you kindly showed us

1.3 Why isn't it a Listed Building?

Most old properties of this style are Listed as Grade II. Our understanding from discussions with yourself is that the property is not Listed. We think this is probably because there have been a lot of alterations to the original structure, but equally it could be because the Local Authority has missed listing this building. So, if you do carry out any alterations you may discover the Local Authority wish to list the building.

We would add that in our experience having a building listed is not the problem that it is sometimes made out having a listed building is, providing you are carrying out sensible alterations and amendments to the property.

1.4 Looking after an old period property

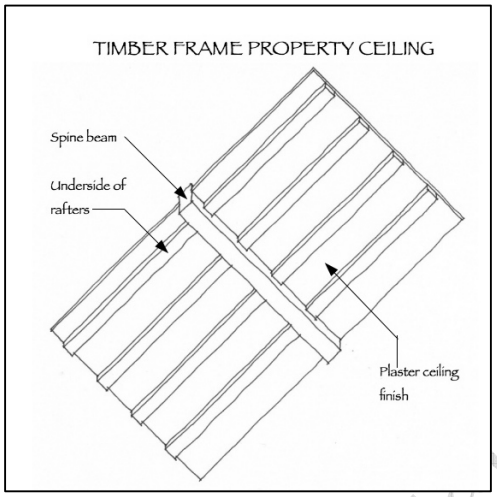
We feel there is a lot to be gained from having a reasonable knowledge and understanding of the building that you live in and also it can save you money and a report such as this is an excellent way of developing this knowledge. However, we would also recommend the joining of something like the Society for Protection of Ancient Buildings, or National Trust or English Heritage, which are the better known ones.

We would draw your attention to the Society for Protection of Ancient Buildings (Spab.org) as they run maintenance courses which they make interesting! We feel they are good value for money too.

1.5 Alterations and amendments to the structure to change how it works

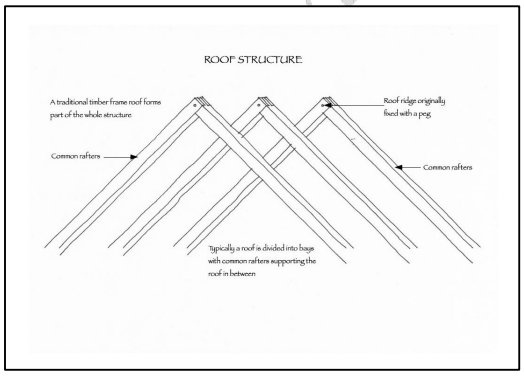
This property originally works on a structural timber frame, which is visible with the various beams that you can see throughout the property. The property has what is known as a primary timber structure, which is the main structural elements, and include things such as a spine beam, which runs through the centre of most of your rooms (and again we do appreciate that you are living in the property and can literally look up at this point to see the beams).

Spine beam

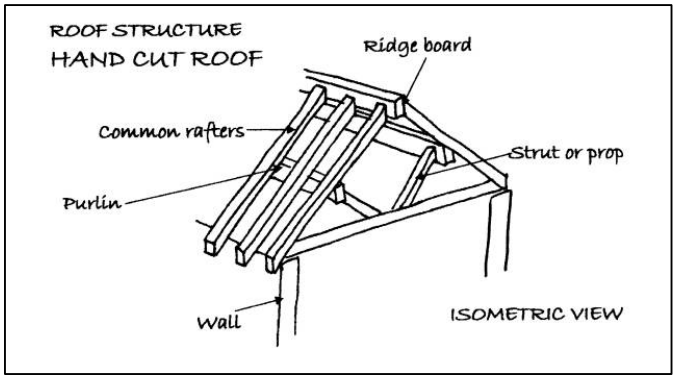


There are also other primary timbers, such as the soul plate that runs around the base of the property at floor level (you can probably guess that from the name). These are often prone to rot and woodwormn. Then you have the posts which are the vertical timbers with the roof trusses joining this all together. As mentioned, this would work as one integral unit.

However, in this instance the alterations, particularly the adding of the new roof, has resulted in a fundamental change in the characteristics of the property. You now have within the roof what is known as a hand cut roof. In some areas, as far as we can see, this is working separately from the original roof.



Original timber frame roof

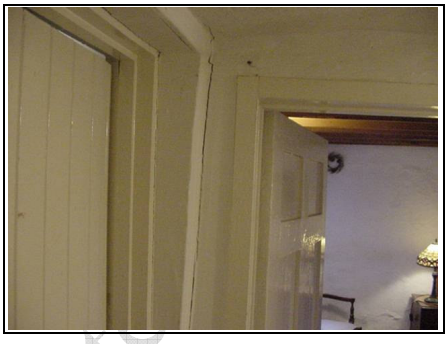


New roof structure

2.0 Movement / Cracks

2.1 Historic Movement

Many older properties have historic movement, sometimes being as old as the original initial settlement. We can see in this instance that there has been movement over the years, which the occupiers of the property have effectively adjusted the structure and lived with, for example, the positioning of the door frames in the wall structure.



Vertical door frame sits into non-vertical wall

2.2 Historic Repairs

We can also see some older style repairs to the structure from the post war era to the rear of the lounge where restraints/ties have been added to the floor joists, and also to the first floor right hand side bedroom restraints/ties have been added to the roof structure.

Metal ties / restraints visible to floor joists

Old ties in right hand bedroom

All of this indicates that there has been movement in the past. In this particular case we believe it is for the following reasons:

2.2.1 Original under-sizing of the timbers

Not that unusual in older properties, as remember these were built on almost a trial and error basis.

2.2.2 Alterations to the property

As mentioned, ranging from conversion into one property to the addition of the roof.

2.2.3 Woodworm, wet rot and dry rot

Possible active woodworm in kitchen

As with any good property of this age there will be some woodworm and wet rot, although we have not seen any dry rot, and this is not usual, but is one of the worst things that can happen to a property. There is more information with regards to this in the This indicates that there has been movement in the past. In this particular case we believe it is

.

3.0 What has caused the most recent movement?

As a general statement we would say that the majority of movement visible is to the rear of the property. This is both historic movement and what we would term as new movement. We believe this is because the rear of the property is the original weak area of the structure and in addition to this it has various external factors that affect it over the seasons:

3.1.1 The rear foul water drainage

As you will no doubt recall, we lifted the manhole to the rear of the property and found some blockages.

Drain one to rear right hand side

Blocked drain

ACTION REQUIRED: You need to have your drains unblocked. Ideally a closed circuit TV camera report carried out to establish the condition and to see if they are leaking. This is likely to cost a few hundred pounds. We would recommend that you give lots of cups of tea to the people carrying out the work and watch the video that they produce whilst they are actually so they can explain it if at all possible.

3.1.2 The rear rainwater drainage

As with many older properties, the rainwater is discharging directly onto the ground. However, in this case, due to the large concrete slabs, rather than the rainwater dissipating into the ground open area it is then being directed back towards the building or via the various cracks that we could see in the slabs. We have talked more about these slabs later on within this report.

Where does the rainwater go, other than helping the plants to go?

Cracking to ground near bathroom

Water logging to rear left hand side allowing grass to grow

3.1.3 Trees and Vegetation

The property is surrounded by trees and hedges that require various different amounts of water depending upon the seasons. Autumn is always an interesting time as this is a time when the various plants slow down in their growth and therefore reduce the amount of water they require, but equally it is also a time when we have heavier rainfall. This means there is more water in the ground and what is known as the water table levels generally tends to rise.

Willow tree to rear

Where you have a timber frame building, such as this, that has little foundation this can affect it considerably, causing cracks to open up or re-open, or sometimes seemingly appear from nowhere.

particularly the willow trees. Also other plants have an influence as well.

3.1.4 Concrete Slabs

Part of the puzzle that you have given us with this property is why there are concrete slabs around the outside of the property. These are large concrete slabs and we cannot imagine any reason why a builder would wish to put in such large concrete slabs unless there is a reason for it, and the only thing that we can think is that when the alterations were carried out underpinning was carried out. This is where foundations are put underneath the existing foundations (in this case ironically there would be next to no foundations).

Unfortunately, in years gone by when insurance claims were made over zealous engineers were employed (sometimes known in the surveying industry as times five men, i.e. they find the solution and multiply it by five). A lot of concrete was poured in the ground and this unfortunately is one of the last things that a traditional timber frame construction property requires.

Concrete surrounding building

Concrete slabs around prop that indicate that major work has been carried out to foundations

3.1.5 How do we find out more?

We assume there are no records as you would have shown these to us. The only other way would be to actually dig down in one area to check what foundations are underneath the property. However, there is another feature of these concrete areas and they do direct the rainwater either away from the building, which is what they look to do from the front of property or towards the building, which is what they look to do to the rear of the property.

4.0 New movement or seasonal movement and either way should I be concerned about it?

You showed us a variety of areas of new movement to the property together with a number of areas of older movement (forgive us for not listing all of these). We feel they relate to seasonal movement, with particular emphasis being on:

Cracking to chimney breast beam

4.1 the leaking drain

4.2 the rainwater pipes

4.3 the lopsidedness of the structure

4.4 and the seasonal issues that autumn brings, such as the slowing down of the plant growth and the increase in rain.

Cracking to right hand side of breast of beam in adjacent cupboard

We feel that if these issues are then the movement in the property will be reduced and it will not reach what we would term as tipping point.

5.0 Is the movement progressive or non-progressive?

From an insurance point of view you need to understand and establish if the movement is what is known as progressive or non-progressive. It is generally considered that non-progressive is movement as the property settles into its new position and progressive is movement that is continuing to move. We feel in this instance you have progressive movement but it can be reduced and slowed down to avoid getting to the tipping point where it becomes known as structural failure.

INSPECTION

Our inspection has been specifically related to the issues detailed below:

Visual Inspection

Our inspection has taken the format of a visual inspection:

1. External of the property of the
   i. front
   ii. rear
   iii. side

   We have had the benefit of a x 16 lens on a digital camera

2. Internal of the property

   We have had access to all rooms, although it was for a limited time to the right hand side bedrooms.

3. Roof space, viewed

4. Surrounding areas

   i. front area
   ii. rear area

5. Spoken with owner/occupier

6. We have not had the benefit of talking to the neighbours.

7. We have utilised a Protimeter for measuring dampness

Please see appendices at the end of the report relating to woodworm

EXECUTIVE SUMMARY

Executive summaries are "not ideal" 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:

1.0 Making an insurance claim

We do recommend you make an insurance claim advising them of the cracking and ask them to say "we are advised that a chartered building surveyor feels that these cracks could be progressive".

2.0 The Way Forward

We would recommend the following course of action:

2.1 The rainwater all around the property be given a path to travel away form the property.

2.2 The drains have a closed circuit TV camera report to check that they are not constantly leaking and you buy a set of drainage rods to clean the drains if you are that way inclined or get to know a good drain cleaner.

2.3 You ring up the local water board to check that your water supply pipes are not leaking. If you tell them you think they are then they will normally do a check for you.

3.0 Extending the Outbuilding

We spoke about making the outbuilding into an office or making it into a habitable granny annexe type area. To do this you would need planning permission and building regulations, as well as the extension.

You mention about a friend of yours advising that you may need to put deep foundations in. This, in our experience, is only the case when there are tree roots within the excavated foundations. The foundations will be deep either way when compared with the original outbuilding which are likely to be next to nothing (as they are in the main house).

An alternative may be to increase in insulation in the outbuilding using Kingspan solid insulation and a lining board and improve the electrics. Try using the space in the warmer months to see if this suits the way you wish to work.

Outbuilding

4.0 Design within the house

We would always focus on kitchens and bathrooms. We feel these not only help sell houses in years to come but are also very practical and offer some luxury in a house.

5.0 Kitchens

We would ask a kitchen designer, or three or four, to come and visit the property and ask them for their ideas using 3D sketches on how to develop the existing kitchen.

We would also suggest that you, for the purpose of having an idea, ask in turn you can make the kitchen into a dining room. We are suggesting this because the current dining room is much larger than the kitchen and it seems a better use of the space available, although we do appreciate that extra drains, etc, will have to be added.

6.0 En-suite Bathroom

We have found over the years that en-suite bathrooms have become more important; the number of these in the average property seeing to be ever increasing. We would therefore recommend that you proceed with the shower room amendments and the dormer window as soon as possible.

We would be more than happy to put a planning application for you if you so wish, together with building regulations as well.

Planning Permission Defined

Planning Permission looks at the aesthetics of how alterations blend in or affects adjoining properties and the location.

Building Regulations Defined

This looks at the way the alterations have been carried out from a good practice point of view and health and safety point of view.

7.0 Office

As discussed, to have an outside office, or an office away from the building, can be difficult working wise, although you do have the outbuilding and it is empty.

8.0 Large extension to the rear or to the side

You certainly have enough land and facilities to put in a large extension to the rear or the side.

ANCICIPATED COST: We would expect costs to be in the region of £35,000 to £75,000 depending upon the quality of finish and the exact size.

SUMMARY UPON REFLECTION

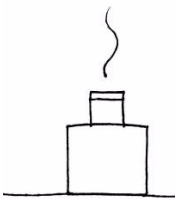
The Summary Upon Reflection is a second summary so to speak, which is carried out when we are doing the second or third draft a few days after the initial survey when we have had time to reflect upon our thoughts on the property. We would add the following in this instance:

If the insurance company wishes to monitor the property we would be more than happy to comment further. Our concern with monitoring is that in some cases it can leave marks and tell tale signs on a building that a surveyor will note when you come to sell the property and who will therefore feel there are problems. Therefore an insurance company needs to take care in the way that they monitor the movement. They will typically monitor the movement for one year, as recommended by the Building Research Establishment. This gives them a full range of how the seasons affect the property.

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.

PHOTOGRAPHIC RECORD OF THE PROPERTY

EXTERNAL



CHIMNEY STACKS AND FLUES AND DORMER WINDOWS

Chimney Stacks

Left hand chimney – where there's movement

Left hand chimney

Dormer Windows

Front dormer window

Rear dormer windows

ROOF COVERINGS AND UNDERLAYERS

Moss sitting on roof indicates that property is not getting sufficient sunlight

ROOF STRUCTURE AND LOFT

(ALSO KNOWN AS ROOF SPACE OR ATTIC SPACE)

New roof structure

GUTTERS AND DOWNPIPES

Downpipes discharging to rear left hand side

Close up

TREES

FASCIAS AND SOFFITS AND BARGEBOARDS

Plastic bargeboard

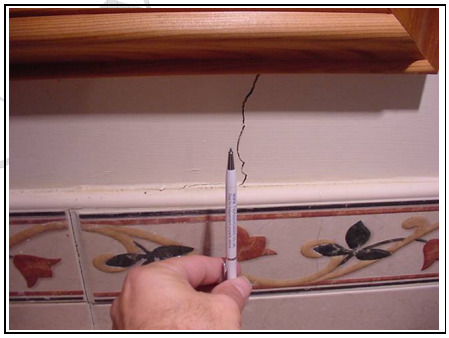
INTERNAL

Cracks to right hand chimney

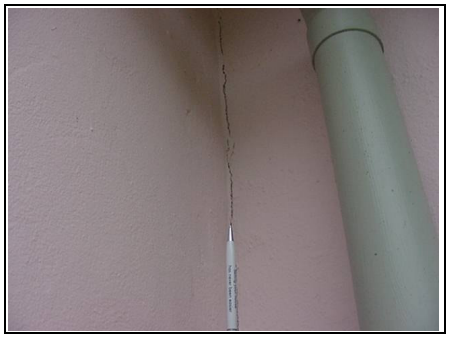
Spine beam and floor joist – filler in timber supports indicates previous repairs

Old lime wash within utilities room

Cracking in utilities room



Cracking to bathroom



Cracking to bathroom

It is our policy not to offer a conclusion to ensure that the Building Survey is read in full and the comments are taken in context.

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

REFERENCES

The repair and maintenance of houses
Published by Estates Gazette Limited

Life expectancies of building components
Published by Royal Institution of Chartered Surveyors and Building Research Establishment

Surveying buildings
By Malcolm Hollis published by Royal Institution of Chartered Surveyors Books.

House Builders Bible
By Mark Brinkley, Published by Burlington Press

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.

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 extra fee.

c) Boundaries, Grounds and Outbuildings

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

d) Services

No services inspected

e) 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.

f) 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.

g) 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).

APPENDICES

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 of the Cracking**

   Make a first assessment of severity according to the above list; 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 (e.g. wind loads or snow loads) or from changes in its support (e.g. 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. Make an approximate first assessment of temperature-induced size changes and, if applicable, size changes due to initial expansion or contraction and to reversible moisture-induced size changes. Compare estimated changes with crack widths and spacings and joint widths and spacings; relate to any changes of section or of construction or materials. Consider whether any of these size changes are of the right order of magnitude to be responsible, alone, for the cracks; check that the first assessment is consistent with the age of the crack.

6. Consider possible chemical causes: corrosion of metals, sulphate attack on ordinary Portland cement-based products and materials, alkali silica reaction (reactive aggregates), carbonation (of cement-based products, especially sheets). In all cases check whether the constituents for reaction are present and the conditions are favourable to the reaction.

7. For each potential cause identified by these initial assessments, seek a mechanism linking cause and effect. (If that was the cause, how did it produce this effect?) Accept as possible causes only those for which a possible mechanism can be found; re-examine those causes, seeking further evidence that confirms or denies their existence.

8. When a possible cause is thus identified, seek answers to the following questions.

    i. Are the constituents and conditions confirmed to be, or to have been, present?

    ii. Is the mechanism one that can be confidently accepted?

    iii. Is the supposed cause consistent with the evidence obtained at 2 above?

    iv. Is the potential order of magnitude of the cause consistent with the observed effects?

    If the answer to either i, ii or iii is no, provisionally discount that cause. If the answers to i, ii and iii are yes but the answer to iv is no, consider whether other causes are also present and contributing to the observed effects.

9. Avoid the assumption that a cause is correctly diagnosed until all other reasonably possible causes have been examined and discounted; do not overlook the considerable probability that more than one cause is operating. Recognise that the first assumptions may be overturned as the investigation yields further information; also that the first general appraisal of the building may later need to be more specific in the light of that further information.

10. 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 (e.g. 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

CONSTRUCTION SUMMARY

External

Chimneys:	Two brick chimneys (originally there was a central brick chimney as well)
Main Roof:	Pitched, clad with concrete tiles
Roof Structure:	Modern cut timber roof
Flat Roof:	Over conservatory
Shallow Pitched Roof:	Over utilities room
Gutters and Downpipes:	Plastic
Soil and Vent Pipe:	Plastic
Walls:	Finished in render, brickwork to left hand gable end
External Joinery:	Predominantly painted timber casement windows with two York windows
Foundations:	Not inspected

Internal

Ceilings:		Lath and plaster and Gypsum plaster (assumed)
Walls:		Lath and plaster and Gypsum plaster (assumed)
Floors:	Ground Floor:	Solid underfoot assumed tile on earth bed
	First Floor:	Joist and floorboards, assumed embedded timbers
Services:		Not inspected other than drains to rear

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

ACCOMMODATION AND FACILITIES

All directions given as you face the property

Ground Floor

The ground floor accommodation consists of:

1) Lounge (left hand side)

2) Entrance hallway

3) Cloakroom with bath

4) Kitchen

5) Utilities Room

6) Dining Room

7) Office/right hand end lounge

First Floor

The first floor accommodation consists of:

1) Master bedroom left hand side

2) Bathroom (adjacent to master bedroom)

2) Double bedroom to right hand side

3) Single bedroom to right hand side

4) Double bedroom to middle left hand side

Woodworm Treatment

Woodworm, most good old houses will have some

If you have an older property and you see holes or dots in your timber, the best thing is not to panic. The holes look almost like someone has been throwing darts in to a timber. It is more than likely that the holes are old and the woodworm has long since gone. Alternatively, in many decades of surveying, we would say that even where there is an outbreak of woodworm that is active (more about how rare this is in a minute) it takes an awful lot of woodworm holes to cause any structural problems. I kid you not, I have kicked enough timbers and put knives in enough timbers to establish their structural integrity over the years and there have been very few where the woodworm is causing structural damage.

We would always recommend having a report to establish whether you have active woodworm before you pay to treat woodworm that's been dead for a 100 years!

Specialist woodworm companies

Before we go any further, let us talk about specialist woodworm companies and how they can afford to give you free surveys. This is because, you guessed it, the surveys aren't really free, they are a way of giving you a quote, very much like a builders quote is free. If all these companies went around giving free surveys, and gave independent impartial advice, they wouldn't be in business for that long. In our experience, the vast majority of properties may have woodworm holes but they don't have active woodworm and they certainly don't have woodworm that is active to the extent that it is causing structurally significant damage and if it did, which is very unlikely, the specialist woodworm company's surveyor would know if it was a structural problem.

The specialist woodworm treatment companies are there to treat woodworm, therefore they will normally produce a well worded large report advising you that, to be on the safe side, you will need to carry out woodworm treatment, which is ideal because that is what they do. You do need to think of these companies as chemical selling companies.

So, now let us tell you a bit about woodworm.

Types of woodworm you are likely to find

Death watch beetle

Apart from its terrifying name, you only need to be concerned if you have oak or willow within your property, which tends to be older properties. Interestingly, it is probably most commonly found in church roofs (if you do live in an old church roof please give us a call, as we would love to see your property and would give you a free survey, in exchange for a cup of tea!). The death watch beetle likes a moisture content of 16% plus on the timber (death watch beetles are quite fussy about the environment they live in), so if you reduce the moisture content in the area then it kills of the beetles, or they leave.

Common furniture beetle (it may be a common furniture beetle but it is still fussy)

This is, as the name suggests, far more common. If affects most woods. This beetle also likes a moisture content of 16% plus. Again, reduce the moisture content and you will reduce the common furniture beetle. Interestingly enough, when we have found it in quite modern properties and wondered why, and have spoken to other surveyors, particularly older surveyors, it is generally thought that the woodworm is brought in on older pieces of furniture that has been acquired. Often this is put down at the base or top of the stairs when the

furniture is brought in, so these are areas where we find the common furniture beetle. We were told by an older surveyor (or he would probably prefer to be known as experienced) that much of it was brought in when timber boxes used to be used for house removal. The hole is normally one to two millimetres in diameter. We would emphasise that it is usually no longer active, as this is a flight hole.

What is frass and why is it important?

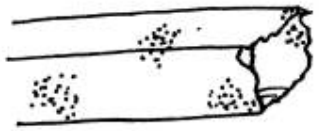
One way of seeing if woodworm is active, because this is what we are looking for, is to see is there is any frass. Before you ask what frass is, this is simply the chewed up sawdust that the beetle leaves behind. Therefore, if it is relatively recent there should be some frass about. We simply tap the timber to see if there is any frass (this works particularly well in a roof in torchlight). We also needs to examine the colour of the frass as well; a light coloured dust and a light coloured hole indicates this is relatively recent. Obviously if it is a darker coloured frass, or darker coloured hole, it means it is older and the woodworm may have gone.

Unfortunately, having undisturbed frass is not easy on floorboards and floor joists, etc, as the mere act of walking on the floorboards can create frass, but don't worry, in these areas there are other ways of discovering whether there is woodworm.

The fussy woodworm

We would just reiterate that woodworm like damp conditions, therefore, if you reduce the dampness in an area you kill the woodworm. They are also really keen on sap wood, which is the juicy timber between the heart wood, which is at the centre of the tree, and the bark, though it has to be said that some of them like eating the dry wood veneers; it has been said by experts that they are probably attracted by eating the animal glue.

The first cuckoo of spring, nice to hear, but is also a good time to see woodworm



The spring is the time of year when woodworm breed and lay their eggs. We have heard some people say it is in April/May and others say it is in July (which seems a late spring to us). It is at these times that you can see the woodworm. It is recommended that you put tissue over the woodworm holes to see if they force the way through the tissue (they are obviously alive if they do this). They also tend to congregate around areas, such as areas of natural light, i.e. roof windows, or the roof access if they are in the roof, or by windows and doors if they are in the floor.

Finally, one of the big mysteries: our older surveyor (we mean experienced) has seen woodworm holes through lead, which, to us, was either a very determined woodworm that we wouldn't like to come across, or something else; we are not sure what!

Woodworm treatment companies use poison to kill the beetles, or do they?

Woodworm specialists do use a poison that they spray around on timber surfaces. This always intrigues us, as there are many surfaces that are hidden, or indeed not accessible, and obviously the woodworm is deep in the timber during most of its life, apart from in spring time, which is why it the best time to apply a poison spray if you are going to use it.

How do I treat woodworm if I don't use a poison spray?

This is a question that we have been asking ourselves for years. There was at one time flypaper for beetles and we thought this was the perfect answer, but we don't seem to be able to get it any more. There is, of course, the ensuring that the areas are well ventilated and dryer than the 16% moisture content and you can also paint apply a poison to the surface of the timber. Probably the most satisfactory one in our mind is to ensure that moisture content has been reduced.

More About Seasonal Movement

1.0 It is quite commonly said that the seasonal movement in properties is built out of traditional timber frame, but we find it is not until people actually live in them and actually experience this phenomena that they truly understand it and the cracking that can occur with it. Effectively, a traditional timber frame building was quite a light structure and it had rigid elements which was the traditional timber frame carcass, for want of a better term, of the building. This was then in-filled with relatively light material; traditionally wattle and daub and a lime based render externally and a lime based plaster internally, with various regional variations of this.

Originally it would likely have had some sort of thatched roof, particularly likely if the pitch of the roof is steep. They would generally have been surrounded by plants and trees, etc.

They would of course have had a nearby well for water with sanitary being very basic.

When these properties were built cracking in the walls was almost the last thing on everyone's mind, they were more concerned with the basics of living. Interestingly, the older materials would have accommodated movement better and also people years ago would not have noticed the cracks as much.

2.0 What has changed since this time?

Several things have changed since this time which have affected cracking in buildings:

2.1 We are more aware of the problems cracks can represent.

2.2 We have also added many facilities; from chimneys, which add a rigid element to a traditional timber frame structure which without this was quite moveable and flexible. We have added foul water supply and drainage, which in turn can leak, and we have added rainwater drainage, usually by changing the roof material.

2.3 After the Great Fire of London thatch was effectively banned on houses. This led to many changes of roof materials. This in turn meant that we had drainage for the roofs, which tended to be discharged around the building.

Therefore we now have a situation where we have added rigid elements into the structure and have added rainwater and foul water to the grounds around the building; the first being discharged into the ground and the second being transported away from the building, but the foul drains could leak.

Additionally, with this we have also introduced a garden area closer to the house.

3.0 Ground Water

What this means is the ground water and the sub-soil conditions around a property have changed and have become far more susceptible to the seasonal changes. For example, during the winter months the rain is now discharged around the building with the plant growth that we have in summer to dry out the area. This will vary depending upon the weather and types of trees and vegetation surrounding the property.

We also have drains potentially leaking, probably along the lines of 80% of all drains from this era leaked and discharged into the ground.

We then have the more rigid chimney and the heavier roofs, all onto almost no foundations.

In more recent years we have added central heating which has dried out the structure.

All in all it is not surprising that we do get cracks in older properties.

There are other elements that we have added, such as electrics and re-plastering in a modern gypsum plaster that simply cannot cope with movement or dampness.