RESIDENTIAL BUILDING SURVEY

XXXX Ravensden, Bedfordshire, MK44 XXX



FOR

Mr X

Prepared by:

INDEPENDENT CHARTERED SURVEYORS



Marketing by:

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INTRODUCTION

Firstly, may we thank you for your instructions of XXXX; we have now undertaken an independent Building Survey (formerly known as a Structural Survey) of the aforementioned property. This Survey was carried out on XXXX.

The Building Survey takes the following format; there is an introductory section (which you are currently reading), which includes a synopsis of the building, and a summary of our findings.

We then go through a detailed examination of the property starting with the external areas working from the top of the property down, followed by the internal areas and the buildings services. We conclude with the section for your Legal Advisor and also attach some general information on the property market.

We are aware that a report of this size is somewhat daunting and almost off-putting to the reader because of this. We would stress that the purchase of a property is usually one of the largest financial outlays made (particularly when you consider the interest you pay as well).

We recommend that you set aside time to read the report in full, consider the comments, make notes of any areas which you wish to discuss further and phone us.

We obviously expect you to read the entire report but we would suggest that you initially look at the summary, which refers to various sections in the report, which we recommend you read first so that you get a general feel for the way the report is written.

As part of our service we are more than happy to talk through the survey as many times as you wish until you are completely happy to make a decision. Ultimately, the decision to purchase the property is yours but we will do our best to offer advice to make the decision as easy as possible.



REPORT FORMAT

To help you understand our Report we utilise various techniques and different styles and types of text, these are as follows:

GENERAL/HISTORICAL INFORMATION

This has been given in the survey where it is considered it will aid understanding of the issues, or be of interest. This is shown in "italics" for clarity.

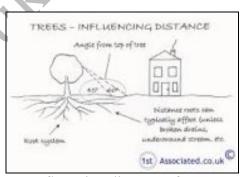
TECHNICAL TERMS DEFINED

Throughout the Report, we have endeavoured to define any technical terms used. This is shown in "Courier New" typeface for clarity.

A PICTURE IS WORTH A THOUSAND WORDS

We utilise photographs and sketches to illustrate issues or features. photographs a pencil, pen, circle or arrow has been used to highlight a specific area. The sketches are not 100% technically accurate; we certainly would not expect you to carry out work based upon the sketches alone.





Influencing distance of trees

ORIENTATION

Any reference to left or right is taken from the front of the property, including observations to the rear, which you may not be able to physically see from the front of the property.

ACTION REQUIRED AND RECOMMENDATIONS

We have used the term ACTION REQUIRED where we believe that there are items that you should carry out action upon or negotiate upon prior to purchasing the property.

Where a problem is identified, we will do our best to offer a solution. However, with most building issues, there are usually many ways to resolve them dependent upon cost, time available and the length of time you wish the repair/replacement to last.



SYNOPSIS

SITUATION AND DESCRIPTION

This is a two storey detached building which has had considerable alterations and amendments over the years. The property is accessed via a narrow lane with some relatively large farm vehicles using it at the time of the survey.

There is a detached double garage / annex and there is also a separate office. There are large surrounding gardens with a pond to the far side of the garden. property and gardens sit on a sloping site.

This is a Grade II Listed building; extract follows. The listed building shows this as being a 17th Century farm building although we would add there has been many changes and alterations to the building.

If the age of the property interests you your Legal Advisor may be able to find out more information from the Deeds.

LISTING INFORMATION FROM BRITISHLISTED BUILDINGS.CO.UK

Description: XXXX

XXXX, Ravensden, Bedford Borough MK44 XXXX

Grade: II

Date Listed: 18 August 1983

English Heritage Building ID: XXXX

Former farmhouse. C17. Colour washed rough cast over timber frame. Thatched roof with plain bargeboards. L-plan, 2 storeys. Substantial 4-stage stone chimney stack to S gable end. E elevation: various C20 2-light horizontal sashes with glazing bars, 5 to ground floor, 4 to first floor. C20 glazed additions door. One storev lean-to within angle.

Listing NGR: XXXX

ACTION REQUIRED: Your legal advisor needs to check and confirm all of the above.



Putting Life into Perspective!

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

1603	Elizabeth I dies in Richmond palace
1605	Remember, remember the 5 th November! Guy Fawkes' plot to blow
	up the Houses of Parliament is foiled!
1622	The Gregorian calendar marks January 1 the first day of the year
1642	The English Civil War between the Roundheads and the Cavaliers
	begins
1653	Oliver Cromwell becomes Lord Protector of England
1660	Charles II, known as the Merry Monarch restores the monarchy
1666	The Great Fire of London starts in a Bakers' in Pudding Lane
1681	London streets are lit up using the first oil powered street lights
1694	The Bank of England is founded, now based in Threadneedle Street,
	London
1718	British convicts transported overseas
1750	The start of the Industrial Revolution
1783	Britain recognised American Independence
1793 - 180	On The Grand Union Canal was built
	essociated. Co





Location Plans







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EXTERNAL PHOTOGRAPHS



Front view ~ Aerial View - 360 Photo ~



Rear view ~ Aerial View - 360 Photo ~



Left view ~ Aerial View - 360 Photo ~



Right view \sim Aerial View - 360 Photo \sim



Garden ~ Aerial View - 360 Photo ~



Road

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ACCOMMODATION AND FACILITIES

(All directions given as you face the front of the property)

Ground Floor

The ground floor accommodation consists of:

- 1) Entrance hall
- Boiler and electric cupboards off entrance hallway 2)
- Cloakroom middle front 3)
- Kitchen front left 4)
- 5) Dining room rear left
- Informal dining area 6)
- Study 7)
- Main lounge 8)
- Family room 9)
- 10) Staircase centre



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First Floor

The first floor accommodation consists of:

- 1) Double bedroom front left
- 2) Single bedroom rear left with small mezzanine with middle roof access
- 3) Bathroom middle rear
- 4) Walk through master bedroom with small en-suite and walk in cupboard
- 5) Bedroom right with small mezzanine which gives access into right roof



Outside Areas

There is a detached double garage / annex and there is also a separate office. There are large surrounding gardens with a pond to the far side of the garden. The property and gardens sit on a sloping site.

Finally, all these details need to be checked and confirmed by your Legal Advisor.



INTERNAL PHOTOGRAPHS

The following photos are of the internal of the property to help you recall what it looked like and the general ambience (or lack of).

Ground Floor



Entrance hallway



Cloakroom



Kitchen front left



Dining room rear left



Study

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Main reception room



Main reception room



Inglenook fireplace



Informal dining room



Stairs

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First Floor



Landing



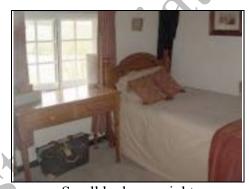
Bedroom front left



Bedroom rear left



Mezzanine/roof access area in rear left bedroom



Small bedroom right



Mezzanine/roof access to right roof

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Master bedroom



Master bedroom



Walk in cupboard



En-suite wash room



Bathroom middle rear

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SUMMARY OF CONSTRUCTION

External

One brick and stone chimney Chimneys:

One chimney hidden within the roof space to left

Main Roof: Pitched, thatched with straw

Main Roof Structure: A frame open coupled roof originally, much of the

timbers have been replaced with cut timber roof,

mixture of old and new

Plastic Gutters and Downpipes:

No gutters and downpipes to thatch

Internal plastic Soil and Vent Pipe:

Mixture of some older original timber frame and Wall Structure:

modern blockwork

Wall Finish: Modern cement painted render onto relatively

modern blockwork and some older original timber

frame (assumed)

Plinth: Blackened plinth to base, originally this would have

been stone, often then changing to brick and more

recently may have been made concrete.

Bargeboards: Timber

Fascias and Soffits: Timber

Windows and Doors: Timber single glazed with secondary glazing, many

are horizontal sliding sash otherwise known as York

windows

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XXXXX, Ravensden, Bedfordshire, MK44 XXX

Internal

Ceilings: Mixture of Lath and plaster and modern plaster

(assumed)

Perimeter Walls: Lime based plaster, modern plaster and exposed

stonework

Internal Walls: Traditional timber frame structure visible in some

areas. Mixture of solid and hollow (assumed)

Floors: Ground Floor: Mixture of concrete on tiles and suspended timber

floor to lounge area (advised original boards were

lifted and re-laid) (all assumed)

First Floor Joist and floorboards (assumed)

Floors slopes/undulates to ground and first floor

Services

We believe that the property has a mains water supply, septic tank, electricity and propane gas (all assumed).

Viemann boiler (model - Vitodens 100) is located in Heating:

the services cupboard off the hallway.

Electrics: The electrics are located in a cupboard off the

hallway

Propane gas located in the garden Gas:

Drainage: The manhole is located adjacent to the garage

Septic tank located close to the garage

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

Note; this is a listed building and it is important you read the article on thatch at the end of this report so you understand what you are taking on when you re-thatch a listed building.

ACTION REQUIRED: Your Legal Advisor needs to check and confirm the above and advise us of anything they require further clarification on before legal commitment to purchase the property.



EXECUTIVE SUMMARY



Summaries are not ideal as they try to précis often quite complex subjects into a few paragraphs. This is particularly so in a summary about someone's future home when we are trying to second-guess what their priorities are, so it is important the Report is read in full.

It is inevitable with a report on a building of this nature that some of the issues we have focussed in on you may dismiss as irrelevant and some of the areas that we have decided are part of the 'character' of this property you may think are very important. We have taken in the region of 600 photographs during the course of this survey and many pages of notes, so if an issue has not been discussed that you are interested in or concerned about, please phone and talk to us before you purchase the property (or indeed commit to purchasing the property), as we will more than likely have noted it and be able to comment upon it; if we have not we will happily go back.

We have divided the Executive Summary into 'The Good', 'The Bad' and 'The Ugly', to help distinguish what in our mind are the main issues.

Once you have read the report we would recommend that you revisit the property to review your thoughts on the building in light of the comments we have made in this survey.

The Good

Survey reports often are full of only the faults and general 'doom and gloom', so we thought we would start with some positive comments on the property!

- The property offers extensive accommodation ranging from the relatively old 1) (although do read our comments) to the relatively new garage and annex and the office area.
- Secluded location.
- Potential.

We are sure you can think of other things to add to this list.

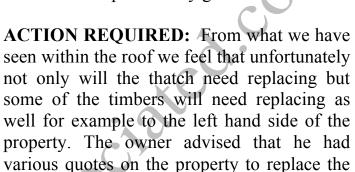


The Bad

Problems / issues raised in the 'bad' section are usually solvable, but often need negotiation upon. However, a large number of them may sometimes put us off the property.

1.0) Thatch

The thatch is nearing the end of its life. We believe that you will have to budget for a replacement thatch. With a listed property it is not just as simple as replacing the thatch, you need to obtain approval and consent. It will more than likely be considered a significant part of this building and as such it may well be closely scrutinised exactly what you are going to do. From what we can see within the roof we feel that unfortunately not only will the thatch need repair/replacement some of the timbers will need repair/replacing as well for example to the left hand side of the property from a limited view what we could see was not in particularly good condition.



thatch from memory ranging from £14,000 -



Thatch in poor condition



Stitch in time to thatch, rods added to hold thatch in place ~ Aerial View - 360 Photo ~

£35,000. We have not seen these quotes and we have estimated our figure below, the quality of these quotes all the companies understanding if the building is listed or not. However, in addition you need to add work to the roof structure and also consultation work you need with the Conservation Officer.

ANTICIPATED COST: In the region of £35,000 - £40,000; please obtain quotations. The whole of the property will need full scaffolding probably a tin covered roof over the top of it. As mentioned we believe there may be other associated work to the thatch roof. We do also believe there have been some structural problems in the roof and some woodworm in the roof from years gone by, possibly active.

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Please see the article on thatched roofs in the Appendices and the legal cases that have recently taken place on Grade II Listed buildings between Historic England/English Heritage (representing the government) and local authorities against owners of buildings which have assort to re-thatched their buildings.

Please see the Roof Coverings Section of this Report.

2.0) Roof structure

We have divided the roof structure into three areas, the left, middle and right side. We had reasonable access to the middle roof although much of it was covered with insulation, we had no access to the left roof and we could only view it from the middle roof as there was no direct access into it from what we could see. The right roof had a limited view due to both the insulation and lots or stored items although we did move some of them. From what we can see the roof structure has been replaced and repaired over the years.

The owners advised during our question and answer session that when they moved in in the 1990s they had had an engineer look at the building and then carry out work. We can see metal plates which we believe are structural bracing/supporting elements of the roof on the left side and also within the property.



Plan view of the three roof structures



Brace at base of timber to left roof

ACTION REQUIRED: We would recommend that your solicitor specifically asks in writing is there any more information with regard to the metal plates/structural work which effectively are tying/holding the building together. Unfortunately, metal plates add a relative stiffness to what is traditionally a fairly soft building on a timber frame so they can in themselves cause problems if not designed appropriately.



Mixture of new and older timbers to the centre roof

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Please see the Roof Structure Section of this Report.



Timber to the right roof

Woodworm in roof 3.0)

Over the years we have come across lots and lots of woodworm and we normally say any good old property tend to have some woodworm. Having said that most of the woodworm is no longer active and has died off many years ago and in addition to this although there may be holes rarely is it what we term as structurally significant? However, in this instance there does look to be active woodworm in the roof as well as old Knife going completely into timber woodworm in the roof. Unfortunately, that where we tested it with a knife, our knife went directly into the timber and we would then consider that



common rafter

this maybe becoming structurally significant. By this we mean that the timber has been weakened by the woodworm.

Unfortunately, the environment with insulation being added can improve the woodworm and encourage to breath from what we understand. There is a fair amount of insulation in the roof; all of this will have to be removed to properly view the roof to assess the damage to the timbers. We do feel that some of it is what we would term as a structurally significant in nature although there is of course woodworm in the roof that is not structurally significant. We found woodworm to the centre roof and we believe it also to the left roof.



Woodworm and soft rot

We would add that we do feel that woodworm is generally blown out of all proportion by wood treatment companies that have a vested interest in spraying chemicals on it (which in itself is a discussion point of whether you should spray chemicals in a building such as this). We do in this instance feel it is worth further investigation and certainly should be budgeted for.

ACTION REQUIRED: If you have immediate plans to re-thatch the property then the whole of the roof structure could be looked at, at that point. If not, a much closer examination of the roof with the insulation removed needs to take place. However, from what we have viewed so far we would expect approximately ten to twenty percent of the roof to have been affected with woodworm to the point where we put a knife into it relatively easily/has potential to be structurally significant.



Woodworm

ANTICIPATED COST: We would recommend setting aside £2,500 - £7,500. The reason why the figure is relatively large is we do think there is a likelihood that there are problems with the roof structure. There is an element of estimation on what we are commenting on as we have not had access to the left side of the roof, we would be able to comment further if direct access to the left side of the roof was formed and if insulation was removed. We do feel we have to warn and advise about the worst case scenario; please obtain quotations.

Please see the Roof Structure Section of this Report.

4.0) <u>Tiled roofs</u>

The property has a relatively shallow roof and as such water can sit on it and we noted that the tiles are starting to spall. We would recommend that work is carried out in this area.

We have also found that wind driven rain can get in this style of roof if it is not repaired.



Displaced tiles and in need of repair
~ Aerial View - 360 Photo ~

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Spalling to tiles ~ Aerial View - 360 Photo ~

ACTION REQUIRED: Re-tile. You will need to use old tiles.

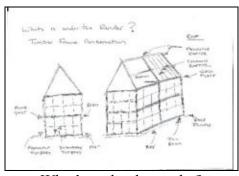
ANTICIPATED COST: £2,500 - £5,000; please obtain quotations.

Please see the Roof Coverings Section of this Report.

Mixture of old and new **5.0**)

For example, what is underneath the render?

This is likely to have originally been a traditional timber frame building with primary structures and additional secondary structures then infill panels between which can be seen in the adjoining sketch. Infill panels normally start out and then over the years are replaced.



What's under the render?

We can see in the roof either modern blockwork or an old type Ashlar stone and in this case it is coursed meaning it is laid in level-ish levels.

Ashlar defined

A cut and shaped stone as opposed to a rough shaped stone.



It is very difficult to confirm what this is without getting right into the left roof (as you are aware we have not been unable to get into this roof). However, we are leaning towards it being modern blockwork rather than Ashlar stone although Lime stone is available relatively close in the area as there were stone quarries almost everywhere. We think given the age of the property it is likely to originally been timber framed and then has had interventions/alterations on one of these they may well have been replacing the timber frame with blockwork walls.

However, with the thatch roof and a trodden earth floor with tiles together with a timber floor.

Over the years there have been many alterations, some of which we can see that the builders at the time did not understand the implications of what they were doing using modern materials on older buildings such as the cements that have been used as well as being against the legal requirements of a Listed building. We can also see some relatively recent work to the stone chimney with cement which again is not appropriate and will harm the building (see comments on lime every time within the Walls Section of this report).



Cement repairs on stone chimney



Replacement of original floorboards

The result of this is that we have a structure that was once timber frame, probably wattle and daub and some stone, probably a Jurassic limestone being in this area. The area is relatively rich in stone with clunch chalk being available on the Chiltern/Dunstable Downs and brick clay not being that far away in Bedford (Bedford being famous for being one of the largest producers of brick in Britain).

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Having said all of that, the areas where we could see the inside of the structure we could see blockwork. Blockwork would have been typically used in the 1960's/1970's so we suspect there has been a lot of replacement work here.

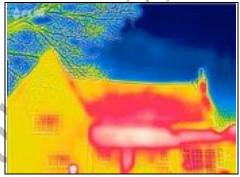
The only way we can really understand and analyse this building in this particular case is to open it up.



Blockwork

Thermal imaging

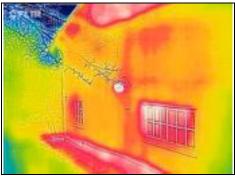
In addition to this we have also thermal imaged the property to see if this gives us any further clues and our evidence shows relatively low heat loss from the wall structure indicating that there is considerable replacement of the walls. Without opening up the walls we cannot confirm this but we do believe the thermal imaging information and the visual information in the roof give a good indication that over fifty percent of the walls have been replaced.



Thermal image showing heat coming out of thatch and tiles but not through what we believed was timber frame building



Heat coming out of floor, windows and roof to rear of property and little sign of the timber frame



Thermal image indicates left side may be timber frame

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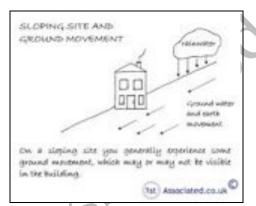


ACTION REQUIRED: We recommend opening up:

- 1. The left roof area and allow proper access to re-gain. The owner has specifically asked in writing by your legal adviser when they are aware of any rebuilding of the walls.
- 2. We recommend areas of render is removed so you can see the existing structure. We would add that unfortunately it is difficult to be conclusive if the usual indicators are not consistent.

6.0) Sloping site and building leaning side to side

Historically this building has had a considerable amount of movement leaning from side to side. Also as it is on a sloping site it is integrally more unstable than the property on a level site.



Sloping site



Sloping site towards pond





Sloping site ~ Aerial View - 360 Photo ~



Slope towards pond

When you are in the property you can see the extent of the slop on the property, in particular you can see that there has been a considerable amount of packing under the furniture.



Furniture propped on uneven floors

Buttress

We can see there is an old buttress to the front of the property indicating long term movement in the property. Where the buttresses are would indicate the movement of the property is from sideways from left to right (all directions given as you face the front of the property).

Buttress defined

Structural element that is added to give support.



Buttress

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Metal braces – more evidence of movement

We can also see metal brackets in some areas of the property. Specifically, we can see them in the left roof and we can also see them in the middle wall of the left hand room. These indicate there has been historic movement in this property. It is very difficult from a one off inspection to conclude whether it is still what is known as progressive.



Brace at base of timber in left roof



Brace added in middle wall on left side

Hairline cracking – further evidence of movement

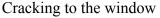
There is hairline cracking visible to some of the internal walls where the wall and ceiling joists meet and there is also hairline cracking to the gable end of the property. You do have to remember that the whole of this property has been repainted in the last few years hiding any usual indications. Again, these cracks are indicating sideways movement left to right.



Hairline cracking to right gable ~ Aerial View - 360 Photo ~









Hairline cracking in master bedroom



Cracking in far right bedroom

ACTION REQUIRED: Ideally we would recommend the existing owners take out an insurance claim, advising that the cracking has been noted by a structural surveyor (this should cost them nothing other than time to write the letter). This usually means that the insurance company will carry out a monitoring exercise (the Building Research Establishment recommend monitoring any cracks for a minimum of one year) to establish if there is any progressive movement. Your future liability will be limited to the cost of the excess on the insurance providing the insurance company is happy for you to take over the insurance claim.

Your solicitor needs to ensure this is a legally watertight process and ensure your liability is limited to paying the excess on the insurance only.

Monitoring is the only true way of establishing in this particular case of whether it is still moving (which it probably is not due to the amount of wall replacements although it is very difficult to confirm without opening up the walls, etc).

7.0) Painted render hiding any issues

We can see that the render has been painted over. When discussed during our question and answer session the owner advised that it was the last few years. We can see moss where it has not been painted over properly. The painting of the render has hidden a lot.

We would also comment that the render appears to be a cement based render. The owner, during our question and answer session, advised this was already present when they bought the property.



Moss visible



The listing describes a rough cast render which normally relates to a lime based render and this is certainly not the case as far as we can see.

ACTION REQUIRED: Ideally as mentioned we would like to open up a section of the render just to see what it is made of. We would also be able to see what is behind it. We would be looking for opening up to be on the left hand side of the property.



Moss showing through painted render

8.0) Dampness

In various areas we found dampness coming in through the stonework for example and we can also see sulphate where there is orange/brownish staining where the soot is being drawn through.

We feel that you will probably have to accept this as a characteristic of this building, given the materials used, the fact that it is on a sloping site and that the house is in the way of that slope, that there will be some dampness.



Damp on gable wall ~ Aerial View - 360 Photo ~



Dampness coming through and various repairs



Dampness coming through plaster in right bedroom

– Marketing by: ———





Testing for dampness in fireplace stonework



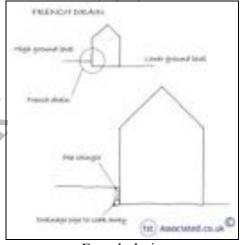
Dampness in stone

ACTION **REQUIRED:** We would recommend the adding of a French drain around the property. Currently there are paving slabs around the property which unfortunately discharge water against the building.

The design of the thatched roof means that it does not have rainwater gutters and downpipes and as such any water literally drips off close to the building.

The detailing between the chimney and the left gable could be improved we believe with improvements to the leadwork. believe it is best to talk to the Conservation Officer about this so they understand that you understand the importance of the chimney and the historic value of the chimney as a whole.

You can see the full extent of the slope of the site with the pond directly behind the rear of it. You do need to remember that



French drain



Paving around property

you will be getting not only water from your adjacent gardens but also from the adjacent fields and road, etc.

ANTICIPATED COST: £5,000 - £10,000; please obtain quotations.



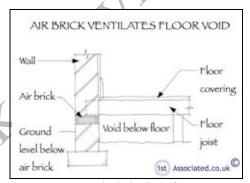
9.0) Suspended timber floor in lounge area

We are advised there is a timber floor in the lounge area which is typically a suspended timber floor. We cannot see anywhere where this has been vented which in a building such as this can lead to wet rot, dry rot deterioration.



We were advised original floorboards were sanded and reshaped

ACTION REQUIRED: Add vents. We would also recommend opening up a section of the floor. The owner advised that the timbers used in this area were the original timbers but in our experience they would not have been that size or that cleanly cut. He did then comment that he had had them sanded, planed and then put back.



Suspended timber floor

10.0) Listed Building alterations without permission

We believe a lot has gone on at this property that simply would not be acceptable today and may not have been acceptable when it was carried out. Having said that things have changed over the years and particularly our attitude towards conservation of older properties and the laws relating to older properties. There is some fairly major work that will need to be carried out to the thatching and the tiled roof. We look at this property in two stages. There is a fair amount of immediate work that needs carrying out such as the thatching of the roof and also carrying out of the tiling of the roof at the same time and also the French drains around the property subject to the Listed Building consent.

We would like to get a view from the Conservation Officer. The owners, when we spoke to them during our question and answer session about some of the alterations that had taken place, advised that the Listed Building/Conservation Officer when they visited was only interested in the chimney. This is possible but there are other things to this property such as the thatch which we do feel they would have an interest in as well.

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ACTION REQUIRED: Have a 'cup of tea' informal meeting with the Conservation Officer to discuss the thatch replacement and also to discuss works on the property as a whole. To read our article on Thatch in the Appendices as well.

11.0) Condensation

As is often the case with this type of building using an old building in a modern way can create condensation particularly if you do not have suitable extraction. Condensation or any dampness in a timber frame property is not good.



Condensation to windows in kitchen

ACTION REQUIRED: We would recommend large humidity controlled

extract fans are added to the kitchen, the bathroom and any areas that are used for drying clothes internally during winter months (we would assume that clothes will be dried externally during the warmer months). extract fans we mean 150mm.

ANTICIPATED COST: We would anticipate costs between £250 - £500 per extract fan depending upon the wiring required. We always recommend quotes are obtained before work is agreed/commenced.

Please see the Dampness Section of this Report.

12.0) Services

12.1) Dated electrics

The electrics are dated.

ACTION REQUIRED: We recommend an Institution of Engineering and Technology (IET) test and report to be carried out by an NICEIC registered and approved electrical contractor or equivalent.



Electrics dated

ANTICIPATED COST: £250 - £500 plus any work recommended; please obtain quotations.

Please see the Services Section of this Report.



13.0) Fire alarm

There seems to be a lack of fire alarms for a thatched cottage. We have not seen a thatched cottage without a fire alarm system in the thatched area and to the chimney for a long time. We believe this is a requirement of most mortgage companies and insurance companies. During the course of our question and answer session with the owner we believe they said they no longer had a mortgage on the property and this may be the case however it is still a fire risk with thatch.

ACTION REQUIRED: We would recommend you take the opportunity when you upgrade the electrics to install a fully hardwired fire alarm system.

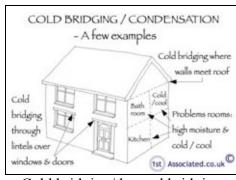
ANTICIPATED COST: £2,000 - £4,000; please obtain quotations.

14.0) Cold bridging

Due to the mixture of materials used we believe there may well be a possibility of cold bridging in the property. Unfortunately, without opening it up it is difficult to confirm. Cold bridging leads to black mould internally unless you control and manage the humidity. In some buildings you do just have to consider this a characteristic of the property.

Cold Bridging Defined

Cold bridging is caused by a colder element in the structure allowing coldness to pass through the structure much quicker when warm moist air is present in the property, often caused by things like having a shower or a bath, cooking or washing, particularly if you are drying washing on the radiators. This is also caused by the general climate which results in condensation on the element.



Cold bridging/thermal bridging



15.0) Tree

There is a tree in close proximity to the house. It does not look to have been maintained for many years, when we spoke to the owner he advised us that he had had advice with regard to the tree but in the end decided to do it himself.

ACTION REQUIRED: Advice from an arboriculturalist (not a tree surgeon) is asked to view the property and give a tenyear plan for maintenance.



A large tree close to the property

ANTICIPATED COST: £250 - £500, plus the cost of the work; please obtain quotations.

The Ugly

SLASSOCI

We normally put here things that we feel will be difficult to resolve and will need serious consideration.

This property is a high risk purchase and you need to think very carefully before you look to buying it. Generally, we would not recommend purchasing this property unless you are willing to take on considerable risk.

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Other Items

Moving on to more general information.

Maintenance

It should be appreciated that defects which would normally be highlighted in a modern property, effectively form part of an older property's overall character and style. Such character defects are normally considered acceptable and may not have been specifically referred to as defects within the context of this Report. The Report is looking at structural issues which we consider may be a problem.

This type of property will require ongoing maintenance and repair and a budget for such work must be allowed to ensure it is maintained in good condition. This will prevent undue and unnecessary deterioration. In this case we believe there has been below average maintenance to the property particularly with regard to the thatch. It does look to have been painted fairly recently and not to a particularly good standard; we do wonder what this is hiding.

Getting to know more about older properties - SPAB course

We would recommend that you go on a Society for Protection of Ancient Buildings (SPAB) weekend course on looking after and maintaining older properties. Even if you do not intend to carry out the work yourself it does give you a far better idea of what work should be carried out. The website for this is www.SPAB.org.

Services

Whilst we have carried out a visual inspection only of the services within the property and we would always recommend you have your own specific testing for each of the services. We also need to advise you of the following:

Electrics

The electrics are dated and there are many old electric points. The Institution of Engineering and Technology (IET) recommend a test and report whenever a property changes occupancy. This should be carried out by an NICEIC registered and approved electrical contractor or equivalent.

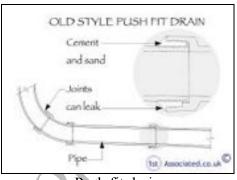
Heating

We are advised there is a relatively new boiler. Having said that, we rarely come across the make of boiler that you have so there may be difficulty obtaining parts.

We believe this may be a colder than average building for its age, type and style. We would recommend that the system be tested and overhauled before exchange of contracts and that a regular maintenance contract be placed with an approved heating engineer.

Drainage

In older properties, such as this, drainage was often push fitted together rather than bonded together which means that they may leak over the years. Whilst we ran the tap for 15 minutes without any build up or blockages the only way to be 100% certain of the condition of the drains is to have a closed circuit TV camera report.



Push fit drain

Water Supply

There is danger in older properties of having a lead water supply; we would recommend that you speak to the water company to ask them if they have carried out such replacement, as you will be re-piping much of the water used in the building it gives an ideal opportunity to also check for any remaining lead pipes.

ACTION REQUIRED – SERVICES: We would reiterate that we recommend with regard to all services that you have an independent check by a specialist contractor.

DIY/Handyman Type Work

There are numerous other items that we would class as DIY or handyman type work such as redecorating to turn the property into your home. We have detailed these and other issues within the main body of the report.

Purchase Price

We have not been asked to comment upon the purchase price in this instance, we have however referred you to sources of general information on the housing market within the Information on the Property Market Section, which can be found in the Appendices at the end of the Report.

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Every Business Transaction has a Risk

Every business transaction has a risk, only you can assess whether that risk is acceptable to you and your circumstances. You should now read the main body of the Report paying particular attention to any "ACTION REQUIRED" points.

Estimates of Building Costs

Where we have offered an estimate of building costs please remember we are not experts in this area. We always recommend you obtain quotations for the large jobs before purchasing the property (preferably three quotes). The cost of building work has many variables such as the cost of labour and estimates can of course vary from area to area when giving a general indication of costs. For unskilled labour we currently use between £75 and £125 per day (the higher costs in the city areas) and for tradesmen we use between £100 and £200 per day for an accredited, qualified, skilled tradesman. Other variations include the quality of materials used and how the work is carried out, for example off ladders or from scaffold.

If you obtain builders estimates that vary widely, we would advise the work is probably difficult or open to various interpretations and we would recommend a specification is prepared. It would usually be best to have work supervised if it is complex, both of which we can do if so required.



SUMMARY UPON REFLECTION



The Summary Upon Reflection is a second summary so to speak, which is carried out when we are writing 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 are several things that we believe make this property high risk:

- 1) The property has had movement in years gone by and the property sits on a sloping site which makes it integrally less stable than a level site particularly where there is a nearby pond. It is difficult to establish if the movement has now been resolved. We would add there is no obvious way for any rainwater to discharge around the property as it is going under the property which is never ideal.
- 2) There have been lots of alterations to the property, we believe some of them could be quite major and realistically the building needs opening up for us to comment further on these.
- 3) You have in the future, and not too distant future, the need to re-thatch the property which could be a problem. Please see our article with regard to thatch and roofing in general.
- 4) Mix of new and old materials. We can also see there has been a mixture of modern and older materials which does lead us to believe whichever builders have carried out the work do not have an understanding of older or listed buildings. We always wonder if we can see these things, what has been hidden?

This property is a high risk purchase and you need to think very carefully before you look to buying it. Generally, we would not recommend purchasing this property unless you are willing to take on considerable risk.

We would refer you to our comments in the Executive Summary, 'Good', 'Bad' and 'Ugly' Section and ask that you re-read these.

As a general comment for any work required we would always recommend that you obtain at least three quotations for any work from a qualified, time served tradesperson or a competent registered building contractor prior to legal completion.

We would ask that you read the Report in full and contact us on any issues that you require further clarification on.



MORE ABOUT THE REPORT FORMAT

Just a few more comments about the Report format before you read the actual main body of the Report.

TENURE - FREEHOLD (OR AS GOOD AS)

We have assumed that the property is to be sold Freehold or Long leasehold, with no unusual or onerous clauses and that vacant possession will be available on completion. Your Legal Advisor should confirm that this is the case.

ESTATE AGENTS - FRIEND OR FOE?

It is important to remember that the estate agents are acting for the seller (usually known as the vendor) and not the purchaser and are therefore eager to sell the property (no sale – no fee!). We are employed as Independent Chartered Surveyors and offer an independent point of view.

SOLICITOR/LEGAL ADVISOR

To carry out your legal work you can use a solicitor or a legal advisor. We have used both terms within the report.

TERMS OF ENGAGEMENT/LIMITATIONS

This report is being carried out under our terms of engagement for Building Surveys, as agreed to and signed by yourselves. If you have not seen or are not happy with the terms of engagement, please phone immediately 0800 298 5424 or email the secretary from which this survey came from.

OUR AIM IS ONE HUNDRED PERCENT SATISFACTION

Our aim is for you to be completely happy with the service we provide, and we will try and help you in whatever way possible with your property purchase - just phone us.



THE DETAILED PART OF THE REPORT FOLLOWS, WORKING FROM THE TOP OF THE PROPERTY DOWNWARDS

From our investigations the property is Grade II Listed and/or falls within a Conservation Area (your Legal Advisor should confirm this and make their own enquiries) and as such it will require various permissions to be obtained before work is carried out, over and above that normally required and possibly the use of appropriate materials for the age, type and style of property.



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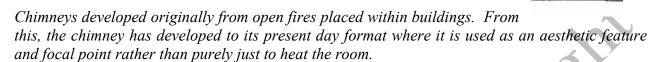
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EXTERNAL

CHIMNEY STACKS AND FLUES

Chimney Stacks



There is one chimney visible to this property located to the right (all directions given as you face the property).

Chimney One – located to the right

This chimney is a predominantly stone built chimney which has been finished in brick and has one chimney pot. There are tiles running down the side of the property in various stages, where it meets the main building there is a lead flashing. The problems were there is dampness getting in between the chimney and the main building into the stonework which forms the gable.



Chimney ~ Aerial View - 360 Photo ~



Close up of chimney ~ Aerial View - 360 Photo ~



Gap between chimney and main building ~ Aerial View - 360 Photo ~



Mastic on lead to right gable ~ Aerial View - 360 Photo ~

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Unfortunately, we were unable to see the top of the chimney properly known as the flaunching, we therefore cannot comment upon them.

ACTION REQUIRED: The whole of the chimney would benefit from appropriate repair work as we can see there has been inappropriate repair work using cement mortar. We can also see that the lead work detailing could be improved to reduce the amount of water getting into the right gable



Flaunching

end. From our experience we don't think this will ever be completely dry but it could be we feel improved. We can also see that the render that adjoins the chimney would benefit from being pre-paired, repaired and redecorated.

Chimney Two – Hidden chimney

When we went partly into the left roof we were able to see what once may have been a chimney or a smoke hood which interestingly in years gone by were made out of timber. It is very difficult to confirm. It seems a logical place for a chimney to be however we have to add that we have had a very limited view.



Hidden chimney

ACTION REQUIRED: Further investigation required. As a general comment in an older property such as this all rooms would have originally been heated with a coal fire.



Hidden chimney/smoke hood



Flashings Defined

Flashings prevent dampness from entering the property, usually at junctions where materials change. Such a junction is the one between the chimney and the roof.

Flaunchings Defined

A low, wide cement mortar fillet surrounding the flue terminal on top of the chimneystack to throw off rainwater.

Flues

Flues offer ventilation to things like boilers and soil and vent pipes and usually come through the roof covering, which can often also be a weak area.

We are not sure whether this is a flue or a vent from the soil and vent pipe. We could see a plastic pipe within the roof which may well relate to this.



Flue ~ Aerial View - 360 Photo ~



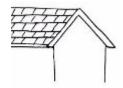
Plastic pipe within roof

Finally, we have made our best assumptions on the overall condition of the chimney stacks and flues/vents from the parts we could see above roof level. The inspection was made from ground level within the boundaries of the property (unless otherwise stated) using a x16 zoom lens on a digital camera and/or aerial photographs. A closer inspection may reveal latent defects.

Please also see Chimney Breasts, Flues and Fireplaces Section of this Report.



ROOF COVERINGS AND UNDERLAYERS



The Roof Coverings and Underlayers section considers the condition of the outer covering of the roof. Such coverings usually endure the extremes of climate and temperatures. susceptible to deterioration, which ultimately leads to water penetration.

Dependent upon the age of your property and the type of construction a protective underlayer may or may not be present, please read on:

We will consider the roofs in two areas:

- 1) Main thatched roof
- 2) Shallow pitched tile roof

Main Thatched Roof

Thatch was the most common form of roofing in Britain until about the 17th Century on domestic structures, particularly in the South East of England. Its use was limited by legislation due to the risk of fire, initially in the City of London, which in turn, was followed by larger cities/towns, and eventually considered good building practice.

For example, in London, it was compulsory by 1212 to give thatch a coat of white wash to protect it from sparks, and new houses were not allowed to be thatched from this date. However, this legislation took some time to be adopted in other areas, but by the early/mid 18th Century, thatch was generally prohibited from use.

There are three main types of thatch common in England; Long straw, Norfolk reed and combed wheat reed all usually laid on a pitch of about 55°. Each have different characteristics, last different lengths of time and also vary in cost.

The roof is pitched and thatched with what we believe to be long straw, although it does need samples taking and analysis. From ground level, this looks in below average condition considering the roofs age type and style. We can also see that the roof structure needs work. The owner did advise during our question and answer session that they had carried out some work about five or ten years ago (he could not recall) and he does have quotations for the thatch but do remember with a listed building it is not just about what you want to do: it is also about what building/conservation officer is happy with.



Thatch ridge disintegrating and dampness within thatch ~ Aerial View - 360 Photo ~



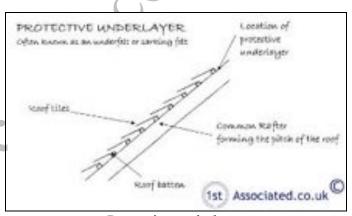
ACTION REQUIRED: Please see our comments in the Executive Summary and the article on thatched roofs in the Appendices and the legal cases that have recently taken place on Grade II Listed buildings between Historic England/English Heritage (representing the government) and local authorities against owners of buildings which have assort to re-thatched their buildings.

Long Straw

Long straw is typified by its "shaggy" soft look. It is typically considered to have a life of between 10 and 20 years from new, depending upon the original quality of workmanship. However, it will require some maintenance throughout this period.

Protective Underlayer (Often known as the sarking felt or underfelt)

From the 1940s onwards felts were used underneath tiles/slates to stop wind damage and water penetration, these in more recent years have been replaced with plastic equivalents. These are commonly known as underfelts but now the name is not really appropriate, as felt is not the only material used.



Protective underlayer

We did not expect to see a protective underlayer under the thatch however we can see some areas where a plastic sheet has been used which we thought was unusual and indicates that part of the thatch has been repaired more recently. We spoke to the owners about this in our question and answers session and they could not recall any specific repairs to the thatch in their time at the property.



This photo shows the common rafters (the ones that form the pitch of the roof) and the dark area between is the underlayer.

ACTION REQUIRED: Your legal advisor to specifically ask what thatch repairs they have carried out and ask them for information regarding it which we would be more than happy to comment on.



Shallow pitched tiled roof

We noted the tiled roofs to the front of the property are relatively shallow and are starting to spall. We would recommend that work is carried out to this area. There is a lead valley to the roof which also needs to be checked when the roof is re-tiled.



Displaced tiles and in need of repair
~ Aerial View - 360 Photo ~



Spalling to tiles ~ Aerial View - 360 Photo ~



Lead valley to bathroom window ~ Aerial View - 360 Photo ~

ACTION REQUIRED: Please see our comments in the Executive Summary.

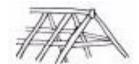
All the roofs were inspected from ground level with the aid of a x16 zoom lens on a digital camera and/or aerial photographs.

Finally, we were only able to see approximately ninety percent of the main roof to our satisfaction from ground level, via our ladder, or via any other vantage point that we managed to gain or via aerial photographs. We have made our best conclusions based upon what we could see; however, a closer inspection may reveal other defects.

For further comments with regard to ventilation please see the Roof Structure and Loft Section.



ROOF STRUCTURE AND LOFT



(ALSO KNOWN AS ROOF SPACE OR ATTIC SPACE)

The roof structure or framework must be built in a manner which is able to give adequate strength to carry its own weight together with that of the roof covering discussed in the previous section and any superimposed loads such as snow, wind, foot traffic etc.

Main Roof

Roof Access

The main roof is accessed via the loft hatch located within the left bedroom to view the left roof and the middle roof (although we had a very limited view of the left roof). There is a hatch located in the right bedroom for the right roof (this was a limited view due to the amount of stored items). Both roofs would benefit from having lights installed within them and being cleared of all the items.

Middle Roof

Roof Structure

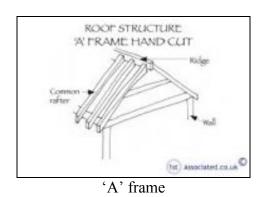
We believe this roof was once likely to be a coupled roof however which has had many alterations and amendments over the years. Coupled refers to how the top of the roof was pegged together. You now have what is called an 'A' Frame roof and from our knowledge of 'A' Frame roofs this is a relatively modern roof with a ridge. We have included a few sketches of different types of older 'A' Frame roofs which might be what is in the left roof. This construction may still be present in the left roof.

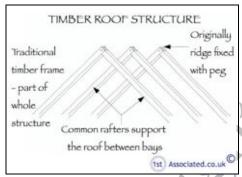


Purlins can be seen protruding out of walls which can lead to rotting

Further investigation is needed as we can see that metal brackets have been used to the left hand side roof and also in the walls structure below.







Coupled roof

Roof Timbers

We have inspected the roof structure for:

- 1. Serious active woodworm
- 2. Structurally significant defects
- 3. Structurally significant dry rot
- 4. Structurally significant wet rot

Our examination was limited by the general configuration of the roof, the insulation and stored items. What we could see was generally found to be in poor condition considering its age with active woodworm and we believe there have been some structurally significant defects that have had bracing on them.

We need to add that you can only truly see if woodworm is active, we believe during the spring months when it is breading.

We are drawing this to your attention as we do believe that the woodworm is at the point of the timbers where it is causing what we term as structurally significant defects. Some of the timbers we can see are historically as well and some of the timbers have bracing on them, this may relate to dampness or woodworm in the timbers or simply a failure of the structure due to it being designed wrongly.

ACTION REQUIRED: The owner needs to have the roof cleared and checked and an access formed into the left roof.



Middle roof



Woodworm/rot in timer in middle roof where it meets left roof



Thin purlins



Most of timbers replaced in main part of roof



Purlin missing replaced with very thin purlin Plastic sheeting

Purlins Defined

Purlins are the horizontal cross members that give support to the common rafters.

Left Roof





Deterioration/twisting to timbers in left roof

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New and old timbers

Brace at base of timber

Stonework or blockwork?

Right roof







Right roof



Woodworm and soft rot

Water Tanks

There are two water tanks in the middle roof.

We would always recommend that water tanks be drained down and cleared of any debris etc. (we have seen dead birds and other unmentionable things in these tanks). As you are often cleaning your teeth with this water it is best that it is as clean as possible!



Water tanks in middle roof

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Ventilation

The roof is self-ventilating apart from the area of plastic sheeting which we were surprised to see.

Insulation

Please see the Thermal Efficiency Section of this Report.

Electrical Cables

We can often identify the age of an electrical installation by the age of wiring found in the roof. In this case we could not see it due to the mass of insulation.

Please see our further comments in the Services Section of this Report.

Finally, we would ask you to note that this is a general inspection of the roof, structure to the rear. We have not examined every single piece of the roof. We have , nd. offered a general overview of the condition and structural integrity of the area.



GUTTERS AND DOWNPIPES



The function of the gutters and downpipes is to carry rainwater from the roof to the ground keeping the main structure as dry as possible. Defective gutters and downpipes are a common cause of dampness that can, in turn, lead to the development of rot in timbers. Regular inspection and adequate maintenance are therefore essential if serious problems are to be avoided.

Gutters and Downpipes

There are no gutters and downpipes to the thatch, they are only present to the tiled area which are plastic gutters and downpipes. Our concern always with gutters and downpipes on older properties is that they may be discharging into the ground nearby and causing dampness as traditionally they discharged on the ground.



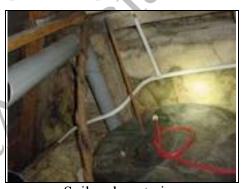
Gutters and downpipes to tiled roof

ACTION REQUIRED: We would recommend you stand outside the property next time it rains heavily and see how well the drains cope with the rainwater particularly looking at the guttering and the joints and where they discharge onto the ground.

We also recommend that the gutters and downpipes are cleaned out, the joints are checked and the alignment checked to ensure that the gutters fall towards the downpipes.

Soil and Vent Pipe

The property has a plastic cast iron soil and vent pipe.



Soil and vent pipe

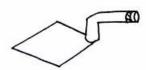


Flue ~ Aerial View - 360 Photo ~

Finally, gutters and downpipes and soil and vent pipes have been inspected from ground level. As it was not raining at the time of the inspection it is not possible to confirm 100 per cent that the rainwater installation is free from blockage, leakage etc. or that it is capable of coping with long periods of heavy rainfall. Our comments have therefore been based on our best assumptions.

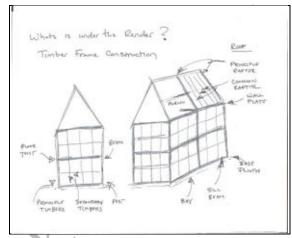


WALLS



External walls need to perform a variety of functions. These include supporting upper floors and the roof structure, resisting dampness, providing adequate thermal and sound insulation, offering resistance to fire and being aesthetically presentable.

The walls are finished in a painted roughcast render; we cannot be 100 percent certain onto what. We would normally expect a timber structure throughout in older properties although in stone areas it is common to build in stone if it is readily available. It is often known as vernacular architecture where you build with local materials.



What is under the render?

From the hollowness when we carried out our tap test to the centre of the property we do believe the majority of this is timber framed however to the left side of the property we are not completely sure of the construction particularly as within the roof we have seen what looks like stonework or blockwork (we could not physically get into this roof as we were not happy that the timbers would take our weight particularly bearing in mind the metal bracing that we could see and there was no direct access into it). However, we will first of all assume that the property is timber framed and discuss this.



Stonework or blockwork?



Stone grain magnified



Timber Structure

Traditional timber frame buildings were the way we built for many centuries, although few survive from before 1500. We continued to build in timber to the 18th century, mainly using Oak and Elm, however as timber supplies reduced other timbers were used and also other materials became more popular, many of them were non local materials and transported by sea canal and rail systems as they developed.

Box timber frame structure

In this particular instance we believe the walls are constructed using a traditional timber frame structure which is likely to be a box timber frame structure with a mixture to the right hand side of timber frame stonework and modern blockwork; we simply do not know what has or has not been rebuilt in this property.

Box timber defined

This is where the structure appears from the outside (when it is not rendered) to be formed in box shapes. The box frame method of construction was very popular and came about as a way of building whilst utilising the dwindling supply of oak.

The structure can fail for many reasons. Common reasons, amongst others, would be dry rot, wet rot, woodworm, the addition of an extension, the removal of supporting members, etc. Partial or total failure of an element of the structure can result in additional stresses and strain being placed upon other members, often resulting in visually the property sitting out of plumb or complete failure (collapse). The difficulty is establishing how close or far a property sitting out of plumb is from failure, together with how acceptable that is to the purchasers.

Main Timber Frame Walls

Traditional timber frame buildings work as whole units forming both the walls and roof and built in bays with infill timbers and panels with wattle and daub, replaced later with other materials.

These buildings are typically listed and require care and regular maintenance. In this particular case we could not see the timber frame structure.

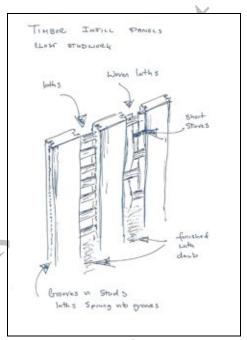


Wall plate

At the very top of the wall is a wall plate which effectively forms the end of the wall construction and is where the ceilings join. In this instance we could not see the wall plate and are therefore unable to comment.

Infill panels

These are the sections between the box timber frame that originally would have been filled with a locally found material (vernacular). In this instance from the thermal imaging we are not sure if there are any infill panels or not, we would normally obtain a type of noughts and crosses pattern on the building. We must add the building was specifically preheated for thermal imaging although there did seem to be a fair difference in temperature on the day which should have given us good patterns.



Render

Sole plate/Base plate/Cill plate

Often the most important part of a timber frame structure is the timber at ground floor level and this will be affected by dampness, causing wet rot and dry rot and general deterioration as this timber effectively forms the base of the timber frame. In most cases it sits on a wall and is very difficult/impossible to see it so we have to make assumptions. In this case we can see the black base of the property which is very regular and regimented and looks like it may have been replaced with a brick or stone or concrete or a mixture of all three.



Base



Render

The external walls are finished in what looks to be a mixture of modern cement painted based render and also lime based render.

We are always wary when we see rendered properties as the render can hide a lot particularly in this case where we believe alterations have taken place.



Render

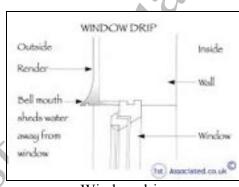
We have carried out a tap test (literally hitting the render with the back of a hammer). We found it to be in average condition with some hollow areas but not what we would term as excessive.

Render Detailing

You can normally tell whether the render is good or not by the drip detail over the window and the bell mouth to the base of the property.

Window Drip Detail

In this case we found a drip detail to the windows which is a traditional timber drip.



Window drip



Drip detail



Bell mouth to base of property

The base has a plinth, please see our earlier comments.



Bell mouth detail



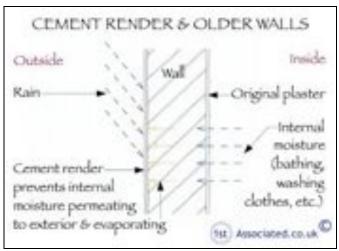
Stone or brick base

Lime Every Time (Cement render used instead of Lime)

Unfortunately, the render is not appropriate for this type of construction. A cement render has been used rather than a lime based render indicating that it has been replaced in recent times. It is very common to replace lime base renders in the post war period up until around the 1970's when we started to understand the damage that it can cause.

Replacement of modern render

The question that we always ask of these is how much damage the cement render is doing to the timber frame. We do believe in this instance that there is movement in the property and a considerable lean on it so it is well worth carrying out investigations.



Cement render



Cracking

We would remind you that any hairline cracks that appear need to be sealed as soon as possible to stop dampness and water getting in.



Hairline cracking to right gable ~ Aerial View - 360 Photo ~



Cracking

ACTION REQUIRED: Please see our comments in the Executive Summary.

Painted render/painted walls

You need to use a breathable or lime based paint or a modern microporous paint appropriate for the building. Again we would recommend that you have consultations from the Conservation Officer.

Do not underestimate the amount of time/cost it will take to repaint the property particularly as there is high level work which is likely to need scaffolding which can be expensive.

Finally, the external walls have been inspected visually from ground level and/or randomly via a ladder. Where the window and door lintels are concealed by the painted render / plasterwork we cannot comment on their construction or condition. In buildings of this age timber lintels, metal lintels or possibly concrete are common, which can be susceptible to deterioration that is unseen, particularly if in contact with dampness.

Our comments have been based upon how the painted render / plasterwork been finished. We have made various assumptions based upon what we could see and how we think the painted render / plasterwork would be if it were opened up for this age, style and type of construction. We are however aware that all is not always at it seems in the building industry and often short cuts are taken. Without opening up the structure we have no way of establishing this.



FOUNDATIONS



The foundations function is, if suitably designed and constructed, to transfer the weight of the property through the soil. As a general comment, many properties prior to the 19th Century have little or no foundations, as we think of them today, and typically a two-storey property would have one metre deep foundations.

Foundations

The property is likely to have been built off the earth originally; it may well have had a stepped brick foundation or a stone foundation, this could be original or could have been added. In some areas the black base looks very consistent which does lead us to believe it could now be concrete.

Clay

Bedfordshire is well known for clay. It is likely the property sits on an element of clay. Clay has two properties; one of which is it retains water and the other is that it moves depending upon its water content. It is therefore more susceptible than most conditions should drains leak or trees be allowed to overgrow, or if it is within a water course, etc. It is not unusual to have some settlement in properties built in clay.

Building Insurance Policy

You should ensure that the Building Insurance Policy contains adequate provision against any possibility of damage arising through subsidence, landslip, heave etc.

It is your responsibility to check out prior to commitment to purchase that insurance is available on the property on the basis of the things we have reported in the survey. Much as we would like to we are unable to keep up with the changing insurance market and give you advice with regard to this.

Cracks

Please see our comments with regards to bracing.

Please remember to talk about any cracks identified within the property. Often insurers will refer to progressive and non-progressive cracking. Unfortunately, this is something we are unable to comment upon from a one-off inspection; the Building Research Establishment recommend a year of monitoring of any cracking.



XXXXX, Ravensden, Bedfordshire, MK44 XXX

We would refer you to our comments with regard to building insurance throughout this report.

> **ACTION REQUIRED**: Please see our comments in the Executive Summary.

Finally, we have not excavated the foundations but we have drawn conclusions from our inspection and our general knowledge of this type, age and style of property.

We would always recommend that you remain with the existing insurance company of the property.

As no excavation has been carried out we cannot be 100 percent certain as to how the foundation has been constructed and we can only offer our best assumptions and an educated guess, which we have duly done.

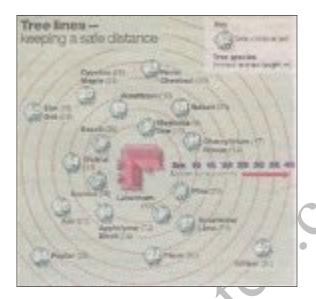


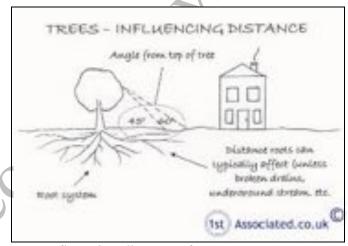
TREES



Trees within influencing distance of a property can affect the foundations by affecting the moisture content of the soil.

There are no trees within what we would term as influencing distance but you do need to speak to your insurance company as they may have a different interpretation for insurance reasons.





Influencing distance of trees to a property

Influencing Distance Defined

This is the distance in which a tree may be able to cause damage to the subject property. It is not quite as simple as our sketch; it depends on the tree, its maturity, the soil type etc., etc.

Finally, insurance requirements with regard to trees have varied over the years and in our opinion have got ever more onerous. We have seen the notifiable distance of a tree away from a property to have been reduced over the years and we reiterate our comments elsewhere within this report that you need to make enquiries with regard to the insurability of your property in relation to trees and other features when you purchase the property.

Please also refer to the External Areas Section.



FASCIAS AND SOFFITS AND WINDOWS AND **DOORS**





This section covers fascias, soffits and bargeboards and windows and doors, and any detailing such as brick corbelling etc.

Fascias and soffits offer protection to the rafter feet and also allow the securing of the guttering. Windows primary functions are to admit light and air, but they also have thermal and sound properties. The doors allow access and egress within the property.

Bargeboards, Fascias and Soffits

The bargeboards, fascias and soffits are timber. They are painted and we would comment they are in average condition for their age, type and style.

The thatched roof with plain bargeboards that we could see looked relatively new and may well have been replaced.



Fascia

Bargeboards Defined

These are to the gable ends of the thatch.

ACTION REQUIRED: Where there are gutters and downpipes these need to be made watertight before carrying out any work on fascias and soffits.



Bargeboard

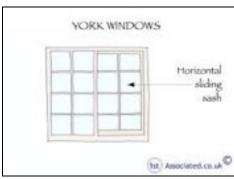


Windows and Doors

The property has timber single glazed windows with secondary glazing, many are horizontal sliding sash otherwise known as York windows. We noted rot to one of the windows.







York window



Secondary glazing throughout upper part of property

Knife Test

We have tested the windows by pushing a knife into a random selection. We generally tend to do the lower windows as access is easier.

> **ACTION REQUIRED**: General repairs and easing and adjusting of the windows and doors.



Knife test in rotten window

ANTICIPATED COST: In the region of £750 - £1,000; quotations required.

Finally, we have carried out a general and random inspection of the external joinery. In the case of the fascias and soffits it is typically a visual inspection from ground level. With the windows and doors, we have usually opened a random selection of these during the course of the survey. In this section we are aiming to give a general overview of the condition of the external joinery. Please also see the Internal Joinery section.



EXTERNAL DECORATIONS



The external decorations act as a protective coat for the building from the elements. Where this protective covering has failed, such as with flaking paintwork, the elements will infiltrate the structure. This is of particular concern as water is one of the major factors in damage to any structure.

The render is the main area for redecoration. All cracks should be sealed as they occur. The property looks to have been quickly redecorated for want of a better term. We were advised when we spoke to the owners that in the past few years they had redecorated the outside of the property; we would suggest that the ideal time to redecorate would be after the thatch has been completed and after you have opened up the structure to confirm its construction.

Finally, ideally external redecoration is recommended every four to five years dependent upon the original age of the paint, its exposure to the elements and the materials properties. Where painting takes place outside this maintenance cycle repairs should be expected. Ideally redecoration should be carried out during the better weather between mid-April and mid-September.

Please see our comments in the External Joinery section.



INTERNAL

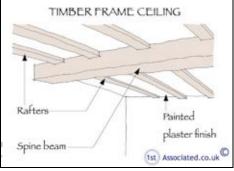
CEILINGS, WALLS, PARTITIONS AND FINISHES

In this section we look at the finish applied to the structural elements such as the plasterwork applied to the ceiling joists, walls or partitions, together with the construction of the internal walls and partitions.

Ceiling Construction

The ceilings have exposed timber beams, the main larger beams are known as the spine beams, with the inter-connecting ceiling / floor rafters.

Often these timbers are re-used timbers, used sideways as it was more practical but this leads to higher levels of deflection than usual in modern properties.



Timber frame ceiling

What is original and what is not? It would require a very close examination.

The infill panels can be made from a mixture of materials such as lime plaster or replaced as in this case we believe with a modern plaster.



Infill panel with metal brace



Exposed timber beams



Internal Walls and Partitions

Both the perimeter walls and the internals walls are in a mixture of timber studwork and infill panels and timber studwork and stone and also the third option is just stone. Possibility where is it hidden completely it being in blockwork. This property has a mixture of different structures.



Wall structure showing the studs and infill panels



Infill panels and stonework



Cement repairs to stonework on side of staircase

Perimeter Walls

Typically, this age of building was built timber bays. These bays have structural elements within the property that form what we would term as primary and secondary timbers.



Stonework

Sole plate

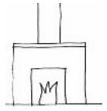
Please see the Walls Section.

Finally, ceilings, walls and partitions have been inspected from floor level and no opening up has been undertaken (unless permission has been obtained by yourselves). In some cases the materials employed cannot be ascertained without samples being taken and damage being caused.

We cannot comment upon the condition of the structure hidden behind plaster, dry lining, other applied finishes, heavy furniture, fittings and kitchen units with fitted back panels.



CHIMNEY BREASTS, FLUES AND FIREPLACES



With the advent of central heating fireplaces tend to be more a feature than an essential function in most properties.

The chimney breasts are located to the right side of the property (all directions given as you face the front of the property).

At the time of the survey the chimney was in use and burning brightly. We spoke to the owners about this and they advised that they had lined the inside of the chimney with brickwork which we would be surprised if the Conservation Officer was keen on this and they may well when reviewing the whole property when they look at the thatched work and comment on this. Generally, it would be argued we feel that a stone chimney should have a stone inner. As with lots of things in this property further investigation needs to take place.

There also looks to be a central chimney built in stonework and one found within the roof. With further investigate it may well be what is known as a smoke hood which is one of the earlier chimneys which would be another historic element in the building.

Any chimneys that you do not propose to use should be capped and ventilated to prevent dampness.



Inglenook fireplace



Old chimney?

Any chimneys you do intend to use should be swept and a check should be carried out that a lining is in place.



Finally, we will comment on the condition of the chimney breast where we can see the chimney breast. If we can see a chimney breast has been removed we will inspect for signs of movement and advise. However, often the chimney breasts are hidden so we cannot comment. Also additional support can be concealed very well when chimney breasts are hidden particularly when plastered over.

Your Legal Advisor needs to specifically check with the Local Authority for removed chimneys and associated chimney breasts and Building Regulations Approvals and advise by e-mail immediately if chimney breasts are found to have been removed. We would recommend opening up the structure to check the condition. If we are not advised we will assume the relevant Building Regulations Approval has been obtained.

It is strongly recommended that flues be cleaned and checked for obstructions prior to use to minimise the risk of hazardous fumes entering the building.

AS, FI Please also see the Chimney Stacks, Flues Section of this report.



FLOORS

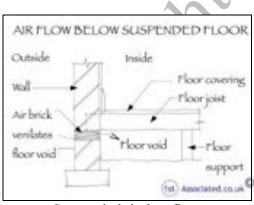


Functionally floors should be capable of withstanding appropriate loading, preventing dampness, have thermal properties and durability. In addition to this upper floors should offer support for ceilings, resistance to fire and resistance to sound transfer.

Ground Floor

The originally floor on a property such as this is likely to have been trampled earth or tiles on earth.

Over the years this has been replaced with various different floors including a suspended timber floor to the lounge area. We were advised the original boards were lifted and re-laid. We think the original boards were unlikely to have been cut that well, lifted, sanded, varnished and re-laid. We also think it is unlikely the original boards would



Suspended timber floor

have been so well cut. Our concern is the lack of ventilation to this timber floor. The solid floors as far as we could see throughout the rest of the property these can draw in cold.



Stone tiles to floor



New floor made out of old flooring in main reception room

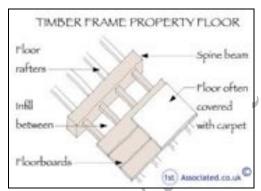
Uneven floors

As with most older properties, the ground floor is not level and true.



First Floor

The first floor construction is exposed timber beams, with the main spine beam and interconnecting floor joists making the structural frame. This then is covered by floor boards. Originally these floor boards were wider than we typically have today.



Traditional timber frame floor



Floor undulating



Floors undulating

Deflection

There can be more deflection to this type of floor than in a modern floor due to the use of timber on the side in the floor construction as it was more practical way to build.

Uneven

Again, as with most older properties the floors are uneven and you may need to pack underneath the furniture. This is caused by general settlement and movement within the property over the years.

Finally, we have not been able to view the actual floors themselves due to them being covered with fitted carpets, floor coverings and tiled flooring etc. The comments we have made are based upon our experience and knowledge of this type of construction. We would emphasise that we have not opened up the floors in any way or lifted any floorboards.





DAMPNESS

In this section we look at any problems that are being caused by dampness. It is therefore essential to diagnose the source of the dampness and to treat the actual cause and not the effect of the dampness.

Rising Damp

Rising damp depends upon various components including the porosity of the structure, the supply of water and the rate of evaporation of the material, amongst other things. Rising damp can come from the ground, drawn by capillary action, to varying degrees of intensity and height into the materials above. Much evidence points towards there being true rising damp in only very rare cases.

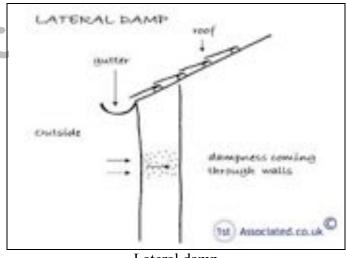
A visual inspection and tests with a moisture meter have been taken to the perimeter walls. In this particular case we have found significant rising damp in the stonework and also lateral damp as well.

ACTION REQUIRED: Please see the Executive Summary.

Lateral or Penetrating Dampness

This is where water ingress occurs through the walls. This can be for various reasons such as poor pointing or wall materials or inadequate gutters and downpipes, such as poorly jointed gutters.

We used a resistance meter on the external walls. We have found significant dampness.



Lateral damp

ACTION REQUIRED: Please see our comments in the Executive Summary.



Dampness coming through plaster in right bedroom

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Condensation

This is where the humidity held within the air meets a cold surface causing condensation.

At the time of the inspection there were obvious signs of condensation to the windows in the kitchen and we generally find you do get condensation throughout a property like this even with the characteristic of the property. You do need to consider this will be something you have to live with if you do take this property on.



Condensation to windows in kitchen

Condensation depends upon how you utilise the building. If you do your washing and then dry it in a room without opening a window you will,

of course, get condensation. Common sense is needed and a balance between heating, cooling and ventilation of properties and opening windows to air the property regularly.

Extract fans in kitchens, bathrooms and drying areas

A way of helping to reduce condensation is to have good large extract fans with humidity controlled thermostats within the kitchens and bathrooms and also in any areas where you intend to dry clothes which are moisture generating areas.

ACTION REQUIRED: We would recommend large humidity controlled extract fans be added to kitchens, bathrooms and any rooms where you intend to dry clothes.

ANTICIPATED COST: We would anticipate costs between £250 - £500 per large humidity controlled extract fan depending upon the wiring required; quotations required.

Finally, effective testing was prevented in areas concealed by heavy furniture, fixtures such as kitchen fittings with backboards, wall tiles and wall panelling. We have not carried out tests to BRE Digest 245, but only carried out a visual inspection.



INTERNAL JOINERY



This section looks at the doors, the stairway, the skirting boards and the kitchen to give a general overview of the internal joinery's condition.

Doors

The property has a variety of doors in the property including boarding ledge and brace doors and painted panel doors.



Ledge and brace door and timber clad door

Staircase

We were unable to examine the underside of the stair timbers due to it being lined, where we could see it, which precluded our inspection, so we cannot comment further upon the stair structure. We can, however, say that the lining gives a resistance to the spread of fire if such circumstances were to occur.

Kitchen

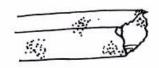
We found the kitchen in average condition, subject to some wear and tear as one would expect. There was a lot of cooking going on at the time of our visit so our inspection of the kitchen was restricted.

We have not tested any of the kitchen appliances.

Finally, it should be noted that not all joinery has been inspected. We have viewed a random sample and visually inspected these to give a general over-view of the condition. Please also see the External Joinery/Detailing section.



TIMBER DEFECTS



This section considers dry rot, wet rot and woodworm. Wet and Dry rot are species of fungi, both need moisture to develop and both can be very expensive to correct. We would also add that in our experience they are also often wrongly diagnosed.

Dry Rot

Dry rot is also sometimes known by its Latin name Serpula lacrymans. Dry rot requires constant dampness together with a warmish atmosphere and can lead to extensive decay in timber.

We have not visually seen any significant dry rot during the course of our inspection. We would advise that we have not opened up the floors and we had a limited view of the roof.

Wet Rot

SLASE

Wet rot, also known by its Latin name Contiophora puteana, is far more common than dry rot. Wet rot darkens and softens the wood and is most commonly seen in window and doorframes, where it can relatively easily be remedied. Where wet rot affects the structural timbers in a property, which are those in the roof and the floor areas, it is more serious.

We have seen any signs of wet rot in the windows during the course of our inspection and it may well be under the floors.

Again, we would advise that we have not opened up the floors and we had a limited view of the roof.



Woodworm



Active woodworm can cause significant damage to timber. There are a variety of woodworm that cause different levels of damage with probably the worst of the most well known being the Death Watch Beetle. Many older properties have woodworm that is no longer active, this can often be considered as part of the overall character of the property.

The roof is the main area that we look for woodworm as well as the actual traditional timber structural frame. Within the roof we found visual signs of significant woodworm activity or indeed signs of significant past woodworm activity that has caused what we would term 'structurally significant' damage. In many properties there is an element of woodworm that is not active. Our inspection is usually restricted by insulation covering some of the timbers and general stored items in the roof, as it is restricted throughout the property by general fixtures and fittings.

ACTION REQUIRED: If you wish to be 100 per cent certain that there is no woodworm the only way would be to check the property when is emptied of fixtures and fittings etc.

Finally, when you move into the property, floor surfaces should be carefully examined for any signs of insect infestation when furniture and floor coverings are removed together with stored goods. Any signs that are found should be treated to prevent it spreading. However, you need to be aware that many damp and woodworm treatment companies have a vested



Woodworm/rot in timer in middle roof where it meets left roof



Woodworm



Woodworm and soft rot

interest in selling their products and therefore have fairly cleverly worded quotations where they do not state if the woodworm they have found is 'active'. You should ask them specifically if the woodworm is active or not.

We would also comment that any work carried out should have an insurance backed guarantee to ensure that if the company does not exist, or for whatever reason, the guarantee is still valid. More importantly it is essential to ensure that any work carried out is carried out correctly.



INTERNAL DECORATIONS



With paints it should be remembered that up to 1992 lead could be used within paint and prior to this most textured paints (commonly known as Artex) contained an element of asbestos up to 1984, so care should be taken if the paintwork looks old and dated.

Internal decorations are in average condition. You may wish to redecorate to your own personal taste. It is very difficult to advise on how frequently redecoration should take place. This very much depends upon the use and abuse the decoration gets, for example, within hallways this tends to be greater than for example within a spare bedroom.

Finally, we would draw your attention to the fact that removal of existing decorative finishes may cause damage to the underlying plasterwork necessitating on alexander. repairs and making good prior to redecoration.

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THERMAL EFFICIENCY



This prop

erty was built a long time before modern methods of insulation were considered. We have only given real thought and consideration to the insulation of properties since the fuel crisis of the 1970's. Since then insulation standards have increased considerably and today we are looking at typically using insulation not only in the roof but also in the walls, floors and windows and more recently considerable work has been carried out on how efficient boilers are within properties.

Care has to be taken, particularly with older properties, that they are not insulated disproportionately to the ventilation as this can cause condensation and you should be aware that you need to ventilate any property that is insulated, particularly of this age, as it can lead to timber deterioration and other problems.

Thermal Imaging

A typical thermal image of this age of property would look like this.

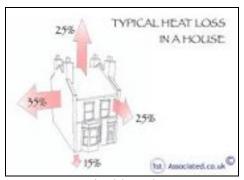
ACTION REQUIRED: Please see our comments in the Executive Summary.



Timber framed Public House Thermal image showing heat loss

Roofs

Although current regulations recommend a lot of insulation in the roofs (currently 300mm) this is not necessarily the best thing for a timber frame building as it can promote condensation and an ideal environment for woodworm. You should ensure that the roofs remain well ventilated; the more insulation the better they need to be ventilated.



Typical heat loss

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Walls

It is difficult to know what the walls are but there is likely to be timber frame walls and possibly some elements of stone walls and possibly more modern materials. We thermal imaged the building and found the majority of the heat was coming out of the floor, windows and the roof at the time of our inspection.

Windows

The windows are single glazed with secondary glazing which is relatively poor and therefore will have poor thermal properties.

Services

We were advised that the boiler was relatively new although it is a make we do not come across very often. Service records should be obtained. It is essential for the services to be regularly maintained to run efficiently. Please note we have not seen the Energy Performance Certificate.

Summary

Assuming the above is correct, this property is below average compared with what we typically see.

Further information can be obtained with regard to energy saving via the Internet on the following pages:

HTTP//www.est.org.uk, which is by the Energy Saving Trust and includes a section on grant aid.

or alternatively www.cat.org.uk (Centre for Alternative Technology)

or Sustainable Energy Without the Hot Air by David J C MacKay HTTP//www.withouthotair.com/Videos.html to download for free or buy a paper copy as we did.

It is worth watching the video How Many Light Bulbs? by David J C *MacKay – can be viewed on YouTube*

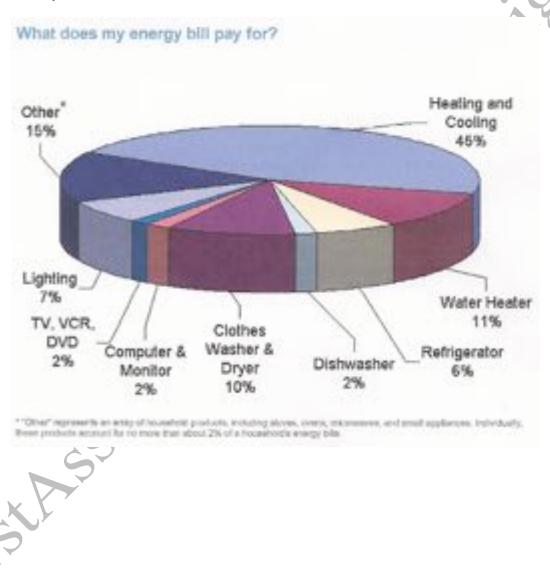
SPAB (Society for Protection of Ancient Buildings are currently researching how best to insulate older properties and it is worth checking their website for the latest information at www.SPAB.org



HIPs

We understand that HIPs were suspended from 20th May 2010. Energy Performance Certificates are required before a sale completes.

Finally, we would comment that energy we feel will become a major consideration in years to come, particularly with the greater focus in modern buildings on energy efficiency.





XXXXX, Ravensden, Bedfordshire, MK44 XXX

OTHER MATTERS



In this section we put any other matters that do not fit under our usual headings.

Security

No security system was noted. It is a personal decision as to whether you feel one is necessary. We are not experts in this field and cannot comment further. We suggest you contact a member of NACOSS (National Approval Council for Security Services), obtainable through directory enquiries, or your local Police Force for advice on a security system.

Fire / Smoke Alarms

With older properties it is particularly important to have a good fire / smoke alarm system, as often they are built from many burnable elements.

Some smoke detectors were noted in the hall and at the bottom of the stairs which we did not think was sufficient on a thatch property and we don't think many insurance companies will be happy with it either. The current Building Regulations require that they be wired into the main power supply. Obviously in a property of this age this is difficult, as it would mean having surface mounted wires or cutting wiring into the plaster.

ACTION REQUIRED: We would recommend, for your own safety, that more smoke detectors be installed. We would always recommend a hard wired fire alarm system and are also aware that some now work from a wireless signal which may be worth investigating. Whilst fire is relatively rare it is in a worst case scenario obviously devastating.

Insurance

We would always recommend staying with the existing insurance company, and then if there are any problems you should not have the difficulty of negotiating with two insurance companies passing the blame between each other.

We would refer you to our comments with regard to building insurance throughout this report.

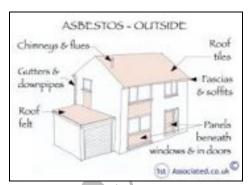


Asbestos

In a property of this age there may well be some asbestos. In this case we have not noted asbestos.

In years gone by asbestos was commonly used as wood and can be found in all sorts of places. Asbestos was used post war until it was banned only in the UK relatively recently. It is rumoured that it was still used after this point in time where products were imported from countries where it is not banned.

Our insurance company requires us to advise we are not asbestos surveyors and advises us to recommend asbestos surveyors are instructed and that you have your own asbestos survey carried out.



Asbestos

an asb **ACTION REQUIRED:** If you wish to confirm you are 100 percent free of asbestos you need to have an asbestos survey carried out.



SERVICES

This survey does not include any specialist reports on the electricity supply and circuits, heating or drainage, as they were not requested. The comments that follow are based upon a visual inspection carried out as part of the overall Building Survey.

Services and specialist installations have been visually inspected. It is impossible to examine every detail of these installations without partially dismantling the structure. Tests have not been applied. Conclusive tests can only be undertaken by suitably qualified contractors. The vendor/seller should be requested to provide copies of any service records, test certificates and, ideally, the names and addresses of the installing contractors.

ELECTRICITY



It is strange to think that electricity only started to be used in domestic properties at the turn of the 19th century with gas lighting still being the norm for a good many years after.

Periodic inspections and testing of electrical installations is important to protect your property from damage and to ensure the safety of the occupants. Guidance published by the Institution of Engineering and Technology (IET) recommends that inspections and testing are undertaken at least every 10 years (we recommend every five years) and on change of occupancy. All electrical installation works undertaken after 1st January 2005 should be identified by an Electrical Installation Certificate.



Fuse Board

The electric fuses and consumer units were located in a cupboard off the entrance hall. The fuse board looked to be a 1980's - 1990's style. In an older property a defective fuse board can be particularly dangerous.



Fuse Board

Earth Test

We carried out an earth test in the kitchen area to the socket point that is normally used for the kettle, this proved satisfactory.

ACTION REQUIRED: As the property is changing occupancy an Institution of Engineering and Technology (IET) test and report and any recommendations should be carried out by a NICEIC registered, or equivalent, approved electrical contractor or similarly approved.



Earth test

In addition to this your Legal Advisor is required to make full enquires with the owners to establish if any electrical installation work has been carried out and to provide suitable certification for any works carried out after 1st January 2005. Any comments made within this report or verbally do not change this requirement.

For basic general information on this matter please see the appendices at the end of this report.

— Marketing by: ——



GAS



There is very little we can check for in a gas installation, we do inspect to make sure there is one and that it has a consumer unit and that the boilers are vented. Ideally you should have a service inspection carried out by an independent Gas Safe registered plumber.

The property has propane gas. There are wood burners as well; we are not sure whether these are multi-burners or not.

All gas appliances, pipework and flues should be the subject of an annual service by a competent engineer, i.e., a member of Gas Safe; works to gas appliances etc., by unqualified personnel is illegal. Unless evidence can be provided to confirm that there has been annual servicing we would



Propane gas

recommend that you commission such a service prior to use to ensure safe and efficient operation.

ACTION REQUIRED: As a matter of course it is recommended that the entire gas installation is inspected and made good, as necessary, by a Gas Safe registered contractor. Thereafter the installation should be serviced annually.

Carbon Monoxide

No carbon monoxide monitors were noted.

ACTION REQUIRED: It is recommended that an audible carbon monoxide detector is fitted (complying with British Standard EN50291) within the property. Carbon monoxide detectors are no substitute for regular servicing of gas installations and their flues.

SOLID FUEL



All appliances, pipework and flues should be subject to an annual service by a competent OFTEC registered engineer. Unless evidence can be provided to confirm that there has been annual servicing, we would recommend that you commission such a service prior to use to ensure safe and efficient operation,

Solid Fuel

There is a wood burner at the property and you will need to get details from the owners as to what you can and cannot burn in it. strated.co.ilk

PLUMBING AND HEATING



In this section we do our best from a visual inspection to look at how the water is supplied to the property, how the supply is distributed around the property, how it is used to heat the property and how it is discharged from the property.

Water Supply

The controlling stopcock is located on the road by the small entrance gate and internally it is in the cupboard in the hallway.

The stopcock and other controlling valves have not been inspected or tested for operational effectiveness.

Water Pressure

When the taps were run to carry out the drainage test we checked the pressure literally by putting a finger over the tap and this seemed average. The Water Board have to guarantee a certain pressure of water to ensure that things like boilers, particularly the instantaneous ones have a constant supply of pressured water (they would blow up if they didn't!).

Cold Water Cistern

Please see our comments in the Roof Section.

Hot Water Cylinder

The hot water cylinder was not located.

Plumbing

We are using this term to refer to supply pipes, wash hand basins, sinks, etc. Where visible it comprises of copper piping. No significant leakage was noted on the surface, although most of the pipework is concealed in floors, walls and ducts.



Heating

The boiler is located in the services room off the hallway and is manufactured by Viemann.

The boiler is a model that we rarely come across so it may be difficult to obtain spare parts.

Our limited inspection of the hot water and central heating system revealed no evidence to suggest any serious defects but we would nevertheless recommend that the system be tested and overhauled before exchange of contracts and that a regular maintenance contract be placed with an approved heating engineer.

Viemann Boiler in services room



Model type - Vitodens 100

Ten Minute Heating Test

The heating was on during the course of the survey and it was pleasantly warm.

Finally, it should be noted that the supply pipe from the Water Company stopcock to the internal stop tap is the responsibility of the property owner.

We cannot comment on the condition of the water service pipe to the building. It should be appreciated that leaks can occur for some time before signs are apparent on the surface.



BATHROOM



In this section we consider the overall condition of the sanitary fittings such as the bathroom, the kitchen, the utility room and the cloakroom.

Bathroom

The property has a three piece bathroom suite, consisting of a bath, wash hand basin and WC, which looks in average condition, subject to some day-to-day wear and tear, as one would expect.



WC very close to door in bathroom

En-Suite Wash room

There is a small en-suite wash room which was not quite en-suite as it was next door to the room comprising a wash hand basin and W.C. which looks in average condition and across the way was a walk in cupboard.

Cloakroom

The cloakroom comprises a vanity unit wash hand basin and W.C. which looks in average condition.

Finally, although we may have already mentioned it above we would reiterate that it is important to ensure that seals are properly made and maintained at the junctions between wall surfaces and baths and showers etc. We normally recommend that it is one of the first jobs that you carry out as part of your DIY on the property, as water getting behind sanitary fittings can lead to unseen deterioration that can be costly, inconvenient and difficult to repair.



DRAINS



The sanitary system, as we know it now, came into being some 100 years ago during the Victorian era and works so successfully today it is often taken for granted. It is only in recent years that reinvestment has taken place to upgrade the original drainage systems.

The cold taps have been run for approximately quarter of an hour in the bathroom and no build up or back up was noted.

Inspection Chambers / Manholes

For your information, inspection chambers / manholes are required to be provided in the current Building Regulations at each change of direction.

We have identified one inspection chamber / manhole.

Manholes Defined

Access areas which usually fit a man (or woman) into them and are put in where the drains change direction

Inspection Chamber / Manhole One adjacent to the garage

We duly lifted the cover and found it to be free flowing at the time of our inspection. From what we could see it is concrete built.



Manhole adjacent to garage



Manhole

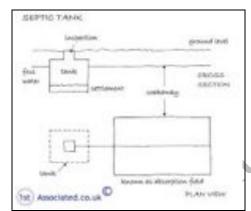
We have only undertaken a visual inspection of the property's foul drains by lifting covers and running water from the taps within the house.



Septic Tank

The property is on a septic tank.

Septic tanks can be of brick, concrete or modern GRP construction but should all operate on the principle of solids being broken down by bacteria, the partly treated foul water then being disposed of by discharge into adjacent ground by a system of soak aways, land drains or perforated pipes.



Septic tank

We have been unable to determine the adequacy of treatment or the effectiveness of the disposal arrangements. The surface water discharges onto the ground.



Top of septic tank



Septic tank area

Finally, it must be emphasised that the condition of the property's foul drains can only be ascertained by the carrying out of a test; such a test has not been undertaken. Should there be leaks in the vicinity of the building then problems could occur, particularly with respect to the stability of the building's foundations. Drainage repairs are inevitably costly and may result in damage being caused to those areas of the property beneath, or adjacent to, which the drains have been run.

— Marketing by: ———



Rainwater/Surface Water Drainage

Whilst very innocent looking rainwater downpipes can cause lots of problems. If they discharge directly onto the ground they can affect the foundations and even if they are taken away to soakaways they can attract nearby tree roots or again affect foundations.

Some rainwater drains are taken into the main drainage system, which is now illegal (as we simply do not have the capacity to cope with it), and can cause blockages to the main drains! Here we have done our best from a visual inspection to advise of any particular problems.

In this instance the rainwater pipes discharge on to the ground close to the property. The rainwater pipes need to be moved away from the property to stop dampness.

ACTION REQUIRED: A way to do this is to literally take the downpipes half a meter or so away from the building and also utilise water butts to get the water away from the building. Ideally is to build a soakaway at least 3 meters away from the property or whatever the latest building regulations and requirements are.

Finally, rain/surface water drains have not been tested and their condition or effectiveness is not known. Similarly, the adequacy of soak-aways has not been established although you are advised that they tend to silt up and become less effective with time.

Please also see our comments within the Gutters and Downpipes section. .165



OUTSIDE AREAS

The main focus of this report has been on the main building. We have taken a cursory inspection of the outbuilding and would be happy to return and carry out a survey if so required.

PARKING



Access Road

There is a second access road to the property.



Second access road

Parking

SVASSO

Off road parking is available to the front of the garage.

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OUTBUILDINGS – GARAGE AND ANNEX

It was noted that the windows to the garage would benefit from re-staining.



Double garage and annexe ~ Aerial View - 360 Photo ~





Right view

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SUMMARY OF CONSTRUCTION – GARAGE AND ANNEX

External

Main Roof: Pitched, clad with modern tiles

Main Roof Structure: Cut timber roof system

Gutters and Downpipes: Plastic

Soil and Vent Pipe: Internal

Wall Structure: Modern timber frame

Wall Finish: Timber cladding

Foundation: Concrete pad

Fascias and Soffits: Stained timber

Windows and Doors: Stained timber casement windows

Internal

Floors: Ground Floor: Concrete (assumed)

First Floor: Joist and floorboards (assumed)



Services

Heating: There is electric heating

The electrics are located in the garage Electrics:

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

Owner has advised he has full details which have been forwarded onto your solicitor including planning permission and building regulations

ACTION REQUIRED: Your Legal Advisor needs to check and confirm the above and advise us of anything they require further clarification on before legal commitment to purchase the property.



INTERNAL PHOTOGRAPHS

GARAGE



Garage



Garage



Dampness coming into garage



Electrics in garage

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ANNEX - GROUND FLOOR



Entrance area



Electric heating



Shower room



Kitchenette units

ANNEX – FIRST FLOOR



Steep steps



Bedroom area



Bedroom



Windows need re-stain

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OFFICE



Front view ~ Aerial View - 360 Photo ~



Rear view





Right view

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SUMMARY OF CONSTRUCTION - OFFICE

External

Main Roof: Pitched, clad with slates

Main Roof Structure: Cut timber roof

Gutters and Downpipes: Plastic

Soil and Vent Pipe: Not noted

Wall Structure: Modern timber frame

Wall Finish: Timber cladding

Foundation: Concrete pad

Fascias and Soffits: Stained timber

Windows and Doors: Stained timber casement windows

– Marketing by: ———

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Internal

Ground Floor: Floors: Concrete with a finish (assumed)

Services

The electrics are located to the right side of the Electrics:

property.

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

We were instructed not to carry out a survey in these areas.

Owner has advised he has full details which have been forwarded onto your solicitor including planning permission and building regulations

ACTION REQUIRED: Your Legal Advisor needs to check and confirm the above and advise us of anything they require further clarification on before legal commitment to purchase the property.

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OFFICE - INTERNAL



Office area



Office area



Office area



W.C.



Kitchenette



Fuse board

Barns

During our question and answer session with the owners we were advised about the barns that fell down which have now been replaced with the garage and annex and the office area. In our experience it takes a lot for these type of barns to fall down.



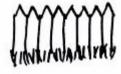
Barns that no longer exist

We would recommend you speak to the Listed Building Officer with regard to this property to see if they have a photographic record of its condition as many local authorities do have. It will then be

worth comparing this against the condition and way the building presently is, as we do feel a lot of alterations and amendments have been carried out.

You should be aware that any amendments that have been carried out without approval become your liability and your risk. This can be insured against by the owners but you do need to establish this before you purchase the property.

EXTERNAL



Garden

The property surrounds the building and there is a pond. It is on a quiet steep sloping site although it doesn't feel as if it is and is very well landscaped. There are a number of trees; please see our comments in the tree section.



Garden on sloping site ~ Aerial View - 360 Photo ~



Garden

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Boundaries

The left hand boundary (all directions given as you face the property) is usually the responsibility of the subject property.

Often with older properties the boundaries are subject to negotiation and local practice. You do need to make sure that your solicitor is aware of the complications that can occur with older property boundaries.

We have not walked the boundaries.

Finally, whilst we note the boundaries, these may not be the legal boundaries. Your Legal Advisor should make further enquiries on this point and advise you of your potential liability with regard to any shared structures, boundary walls and fences.

Neighbours

In this case the neighbours were quite a distance away so we have not actually checked on them, however it is well worth visiting them to see if there are any



POINTS FOR YOUR LEGAL ADVISOR

If you wish to proceed with your purchase of the property a copy of this report should be forwarded to your Legal Advisor and the following points should be checked by him/her:

- Responsibility for boundaries. a)
- b) Rights for you to enter onto the adjacent property to maintain any structure situated near or on the boundary and any similar rights your neighbour may have to enter onto your property.
- Obtain any certificates, guarantees or approvals in relation to: c)
 - Removal of any chimneys in part or whole. i)
 - Certificates confirming chimneys have been swept ii)
 - iii) Roof and similar renewals.
 - iv) Removal of any walls in part or whole.
 - Drainage repairs v)
 - vi) Timber treatments, wet or dry rot infestations.
 - vii) Rising damp treatments.
 - viii) Asbestos
 - ix) Central heating installation and maintenance.
 - Planning and Building Regulation Approvals.
 - xi) Have there been any structural problems referred to insurance companies, any insurance claims, monitoring or underpinning, etc.
 - xii) Any other matters pertinent to the property.
- Confirm that there are no defects in the legal Title in respect of the property d) and all rights associated therewith, e.g., access.
- Rights of Way e.g., access, easements and wayleaves. e)
- Liabilities in connection with shared services. f)
- Adjoining roads and services. g)
- Road Schemes/Road Widening. h)
- i) General development proposals in the locality.
- Conservation Area, Listed Building, Tree Preservation Orders or any other j) Designated Planning Area.



- Confirm from enquiries that no underground tunnels, wells, sewers, gases, mining, minerals, site reclamation/contamination etc., exist, have existed or are likely to exist beneath the curtilage of the site upon which the property stands and which could affect the quiet enjoyment, safety or stability of the property, outbuildings or surrounding areas.
- Our Report assumes that the site has not been put to contaminative use and 1) no investigations have been made in this respect.
- Any outstanding Party Wall Notice or the knowledge that any are about to m) be served.
- Most Legal advisors will recommend an Envirosearch or a similar product is n) used by you to establish whether the area falls within a flood plain, old landfill site, radon area etc. If your Legal Advisor is not aware of Envirosearch or similar, please ensure that they contact us and we will advise them of it. Any general findings should be brought to their logical conclusion by using appropriate specialist advisers,
 - However, with regard to Envirosearch or similar general reports please see our article link on the www.1stAssociated.co.uk Home Page.
- Any other matters brought to your attention within this report. 0)

LOCAL AUTHORITY ENQUIRIES

Your Legal Advisor should carry out Local Authority searches to ascertain whether the property is a Listed Building and whether it is situated in a Conservation Area. They should also find out any information available with regard to Planning Applications and Building Control. We have not made any formal or informal Local Authority enquiries.

Finally, your Legal Advisor should carry out any additional enquiries they feel necessary and if they find anything unusual or onerous then we ask that they contact us immediately for our further comments.



XXXXX, Ravensden, Bedfordshire, MK44 XXX

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!

Please do not hesitate to contact us on **0800 298 5424**.

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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

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LIMITATIONS

Our limitations are as the agreed Terms and Conditions of Engagement.

CONDITIONS OF ENGAGEMENT

The report has been prepared in accordance with our Conditions of Engagement dated XXXX and should be regarded as a comment on the overall condition of the property and the quality of its structure and not as an inventory of every single defect. It relates to those parts of the property that were reasonably and safely accessible at the time of the inspection, but you should be aware that defects can subsequently develop particularly if you do not follow the recommendations.

ENGLISH LAW

We would remind you that this report should not be published or reproduced in any way without the surveyor's expressed permission and is governed by English Law and any dispute arising there from shall be adjudicated upon only by the English Courts.

SOLE USE

This report is for the sole use of the named Client and is confidential to the Client and his professional advisors. Any other persons rely on the Report at their own risk.

APPROVALS/GUARANTEES

Where work has been carried out to the property in the past, the surveyor cannot guarantee that this work has been carried out in accordance with manufacturers' recommendations, British/European Standards and Codes of Practice, Agreement Certificates and statutory regulations.

ONLY HUMAN!

Although we are pointing out the obvious, our Surveyors obviously can't see through walls, floors, heavy furniture, fixed kitchen units etc. they have therefore made their best assumptions in these areas.

As this is a one off inspection, we cannot guarantee that there are no other defects than those mentioned in the report and also that defects can subsequently develop.



LAYOUT PLAN

We have used the estate agents floor plan as a guide to the layout of the building. We have not checked it for scale and accuracy.

WEATHER

It was a dry winter's day at the time of the inspection. The weather did not hamper the survey.

In recent times our weather seems to be moving towards the extremities from its usual relatively mid range. Extremes of weather can affect the property.

NOT LOCAL

It should be noted the surveyors may not be local to this area and are carrying out the work without the benefits of local knowledge on such things as soil conditions, aeroplane flight paths, and common defects in materials used in the area etc.

OCCUPIED PROPERTY

The property was occupied at the time of our survey, which meant that there were various difficulties when carrying out the survey such as stored items within cupboards, the loft space and obviously day-to-day household goods throughout the property. We have, however, done our best to work around these.

JAPANESE KNOTWEED

We have not inspected for Japanese Knotweed. We would advise that we are finding that some mortgage valuation surveyors are setting valuations at zero on any property with Japanese Knotweed and are reluctant to lend where it is present.

> **ACTION REQUIRED:** You need to carry out your own investigations on this matter before you commit to purchase the property and be aware that it could be in neighbouring properties which you do not have direct control over.



INSPECTION LIMITED

Unfortunately, in this instance our inspection has been limited as:

- We did not have a full view of the roof due to the insulation covering and no 1) access to the left side.
- We did not open up the walls as we could not see a way of doing this without 2) causing damage.
- We did not open up the ground floor or the first floor as we could not see a 3) way to do it without causing damage.
- We didn't have the benefit of meeting you at the property to talk about your 4) specific requirements.

BUILDING INSURANCE

We do not advise with regard to building insurance. You need to make your own enquiries. Some areas may have a premium, some buildings may have a premium and some insurers may be unwilling to insure at all in certain areas. You need to make your own enquires prior to committing to purchase the property. Please be aware the fact a building is currently insured does not mean it can be re insured.

We would comment that non-insurability of a building we feel will affect value. It is therefore essential to make your own enquiries with regard to insurance before committing to purchase the property and incurring fees.

ACTION REQUIRED: You need to contact an insurance company today to make enquiries with regard to insurance on this property.

TERMS AND CONDITIONS

Our computer system sends two copies of our Terms and Conditions to the email address given to us when booking the survey; one has the terms attached and the other has links to the Terms and Conditions on our website (for a limited time). If you have not received these please phone your contact immediately.



APPENDICES

- The electrical regulations Part P of the Building Regulations 1.
- Information on the Property Market 2.
- French Drain Article 3.
- Condensation and Cold Bridging Article 4.
- Re-thatching Your Roof on a Listed Building Article 5.

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THE ELECTRICAL REGULATIONS – PART P OF THE **BUILDING REGULATIONS**

Here is our quick guide to the Regulations, but please take further advice from a qualified and experienced electrician.

From 1st January 2005, people carrying out electrical work in homes and gardens in England and Wales must follow new rules in the building regulations. All significant electrical work carried out in the home will have to be undertaken by a registered installer or be approved and certified by the local authority's building control department. Failure to do so will be a legal offence and could result in a fine. Non-certified work could also put your household insurance policy at risk.

If you can't provide evidence that any electrical installation work complies with the new regulations, you could have problems when it comes to selling the property.

There will be two ways in which to prove compliance

- 1. A certificate showing the work has been done by a Government-approved electrical installer - NICEIC Electrical Contractor or equivalent trades body.
- 2. A certificate from the local authority saying that the installation has approval under the building regulations.

Homeowners will still be able to do some minor electrical jobs themselves. To help you, we've put together this brief list of dos and don'ts.

Work You Cannot do Yourself

- Complete new or rewiring jobs.
- Fuse box changes.
- Adding lighting points to an existing circuit in a 'special location' like the kitchen, bathroom or garden.
- Installing electrical earth connections to pipework and metalwork.
- Adding a new circuit.



INFORMATION ON THE PROPERTY MARKET

We used to include within our reports articles on the property market that we thought would be of interest and informative to you, however we were concerned that in some cases these did not offer the latest information. We have therefore decided to recommend various websites to you, however it is important to realise the vested interest the parties may have and the limits to the information.

www.landreg.org.uk

This records the ownership of interests in registered land in England and Wales and issues a residential property price report quarterly, which is free of charge. The Land Registry is a Government body and records all transactions as far as we are aware, although critics of it would argue that the information is often many months out of date.

www.rics.org.uk

The Royal Institution of Chartered Surveyors offer quarterly reports via their members. Although this has been criticised as being subjective and also limited, historically their predictions have been found to be reasonably accurate.

www.halifax.co.uk and www.nationwide.co.uk

Surveys have been carried out by these two companies, one now a bank and the other a building society for many years. Information from these surveys is often carried in the national press. It should be remembered that the surveys only relate to mortgaged properties, of which it is generally considered represents only 75% of the market. It should also be remembered that the national coverage of the two companies differs and that they may be offering various incentives on different mortgages, which may taint the quality of information offered. That said they do try to adjust for this, the success or otherwise of this is hard to establish.

www.hometrack.co.uk

This gives information with regard to house sale and purchase prices.



www.motleyfool.co.uk

We also like the Motley Fool website which is a general financial site and although it is selling financial services and other services they do tend to give a very readable view of the housing market.

www.rightmove.co.uk

This is probably the largest Internet search engine for estate agency sales and also has useful information with regard to prices of property (but it is not the same as having a chartered surveyor value it).

www.zoopla.co.uk

This is a good website for seeing the prices of properties for sale in a certain postcode area.

www.britishlistedbuildings.co.uk

This is a good website for establishing if the property is Listed and general information on British Listed buildings. SLASSOCIALE



French Drain

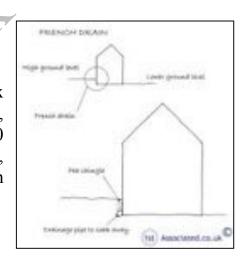
Using a French drain to resolve a dampness problem

We are finding where we are asked to look at damp walls and damp floors or damp problems in general that commonly it is because the external ground level is higher than the internal ground level, or airbricks have been blocked, or simply paving slabs, decking or briquettes have been used to form a patio area. This then discharges any rainwater against the building. Quite often the solution is to add a French drain.

Whilst French drains are quite simple and are basically nothing more than trenches filled with gravel, a although there is a bit more to them, as we will explain, they are almost a D.I.Y. job for most people and they are relatively easy to install and are low cost, However, you do need some care and attention, otherwise you can install what we have heard referred to, as the French pond.

What use is a French drain?

A French drain is a trench, the width of approximately six inches or 300 millimetres wide, or the width of your spade, and is approximately twice the depth, i.e. 12 inches or 300 millimetres. In most cases this will suffice, however, where there is a great deal of ground water you may wish to make the trench wider and deeper.



The French drain acts as an area where water soaks away quickly. We often recommend them close to building, but not next to the building, as this helps reduce the ground level and/or take any water that is directed at that area away. For example, where a patio has been put in place which aims any rainwater at part of the wall. As mentioned, whilst a French drain is a D.I.Y. job, it does need some understanding of how it works.



French drains must be on a slope

The piping that goes at the base of a French drain should be perforated or, as we did years ago for land drains, there should be gaps between each pipe. It should be set onto a bed of firm ground and the pipes should on a fall to the drain. Whilst you should be able to ensure there is enough fall by sight, we also like the idea of rolling a marble from one end to the other.

You will then need to put the pipes down, fill the trench with half an inch, to an inch, of good sized gravel. You can leave it at that, or in addition you can cover with stand and then turf over. This is how a basic French drain is carried out.

The French drain system that we would recommend

This would be as described, although we would add to the base an inch or two of gravel on to which the perforated drainage pipe will rest. It will then wrap around that drainage pipe filter fabric. This is to stop the holes in the perforated pipe from blocking up. By the way, the drainage pipe should be four to six inches/100 millimetres to 250 millimetres. We would then fill with gravel. In addition to this, we would add a silt trap and this is added in the run of the pipe and is very similar to a road gully (not that's of much use if you don't understand how a road gully works). The silt trap is a rectangular box with a pipe opening at each end. The drained water passes onto this and any particles sink to the bottom of the box and then the water travels on to the other side of the box, enabling you to feed into a drain.

These are usually made of glass reinforced polyester and have been available in this form since the mid-1980's. They are normally reinforced with a steel frame for additional strength and re-bedded in concrete.

The French pond!

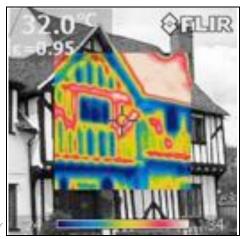
French drains will, over time, clog up, which is why we recommend using a filter fabric. However, even with this they will eventually clog up. Unfortunately, there is no dyno-rod equivalent, as it is normally fine sand, organic matter or clay that has clogged up the French drain. So, it is a case of digging it up and cleaning the pipework (or it may be quicker to just replace it), adding a filter fabric and re-filling the gravel.



Condensation and other issues are much more likely and are hard to resolve

What is cold bridging and how does it work?

Cold bridging is a term and a problem we believe will become more common in years to come. We are finding more and more examples of Cold Bridging. This happens in certain types of property and to some extent it could be argued that it is a characteristic of that type of property and quite a complex issue to resolve. Unfortunately, it means condensation is more likely.



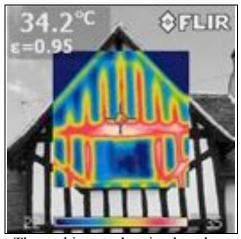
Timber framed Public House Thermal image showing heat loss

Cold Bridging

Cold bridging is caused by a colder element in the structure or fabric of the building allowing coldness to pass through. When warm moist air is present in the property and it passes through the colder elements of the structure we have what is known as Cold Bridging. This is often caused by a combination of issues. It can occur from things such as having a shower or a bath, cooking or clothes washing, particularly if you are drying washing on the radiators.

Commercial properties and cold bridging

We appreciate it is unlikely that you will find many commercial properties that are constructed in the Tudor era. It could, in commercial properties, be a large gathering of people breathing (this can cause a lot of humidity) in a building that has stood cold and empty for some time such as a church, village hall, sports centre or a crèche. These human atmospheres create a climate, which can result in condensation on the cold elements of the structure and fabric if the room is not ventilated properly.



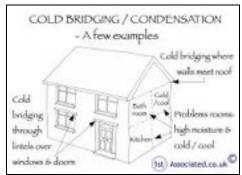
Thermal image showing heat loss around window of timber frame pub



Condensation and Cold Bridging the problems explained

The adjacent sketch is a sketch we have drawn to try to summarise the issues of cold bridging to help identify some of the problems relating to cold bridging and condensation.

This is a good indication of the typical things that cause Cold Bridging in a house and how extraction from humidity generating areas such as the kitchen and the bathroom can reduce problems. You do need to look at how you live in the house.

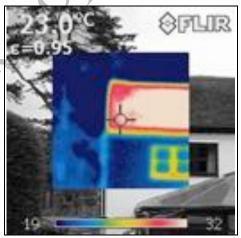


Cold bridging/condensation

Cold Bridging isn't just about condensation on mirrors

Cold Bridging isn't just about condensation on mirrors. Not only can it be an original characteristic of the building it can be encouraged by all types of extension and alterations.

Cold bridging is far worse than condensation as it is caused by an element in the structure, which you can do very little to change without great expense.



Cottage thermal image showing no roof insulation

When is Cold Bridging Likely?

In our experience we have seen cold bridging occurring in:

- 1) Eras of properties where there are warm elements and colder elements to the building.
- 2) Where you have a mixture of warm rooms and cold rooms.

For example: Lounges and main bedrooms tend to be warmer than guest or spare bedrooms most of the time. Also sometimes rooms can warm up due to large areas of glass and thermal heat gain, which is very true in some conservatories also.

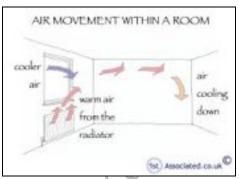
3) Humidity internally is high



4) Where it is colder but by no means very cold outside

Can Cold Bridging be solved?

In some ways it is very simple and in some ways it is very difficult to resolve cold bridging. Normally, where condensation is involved, if you get the balance of warm and coolness of the air, ventilation and movement you can reduce considerably the chances of condensation.



Air movement within a room

Airing rooms just like in the good olde days

Airing the room by opening the windows, which seems to have gone out of fashion, can help considerably.



Old style diamond panel lead light in cast iron window opened to air room

Is your lifestyle a factor in Cold Bridging?

This is often a contentious and difficult question, particularly where the occupier is a tenant and there is a disagreement between the landlord and the occupier as to why there is mould in the property. In our experience the major factor is the size of the family living in a property. This is especially the case with large families with young children and where in turn there is a lot of washing of clothes being done.

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Airing clothes in winter months

This is particularly the case in the winter months, with the wet washed clothes being dried on radiators. Also general hygiene washing and not to mention cooking to feed everyone all lead toward a more humid atmosphere.

This is generally known as the lifestyle of occupants and can be a major factor particularly where there are legal cases as to the problems within a property.



Drying washing on radiators can cause condensation

Is Cold Bridging and Condensation a design problem or a lifestyle problem?

This really is a difficult question to answer. We have been involved in a number of cases as expert witnesses or advocates and the answer can vary. We would comment that there are factors that can be changed and factors that can't be changed. For example, the occupiers' lifestyle can in most cases be amended. This may involve the occupier having an understanding of the problems they are causing. For example, drying lots of washing on a radiator inside may be causing excessive moisture in the atmosphere. Equally not opening the windows and closing or sealing up vents can be a problem.

Design of the Building

Sometimes it really is down to the design of the property. Where there are cold elements in it, such as a concrete structural frame or concrete lintels, when these are in contact with moist air condensation occurs. Sometimes this is impossible to stop but often it is possible to reduce it by having a better circulation of air with a better heat and coolness balance and the removal of any moist air.



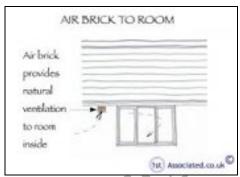
Tudor timber frame property



Things to remember about an air brick

If you are thinking about adding an air brick then you need to be aware that airbricks don't actually allow that much air through. Although externally a nine by three air brick has a lot of gaps, as these gaps taper, it is generally considered that only about one inch square of air regularly passes through the grills.

Apologies our sketches are depicting a modern property rather than a Tudor timber frame property.



Air brick may not ventilate room enough

In the winter we have condensation problems but in the summer we don't

The different seasons mean that the building reacts differently. Anyone who has lived in an old property will know that windows and doors particularly sliding sash windows will swell during the winter months.

The photograph to the right shows a Tudor pub in snowy weather conditions, the property has been extended and altered over the years, which means that there is different heat loss in different areas of the property.



Tudor pub

Seasonal changes

There can be similar issues with a property where, regardless of your lifestyle, during some of the different seasons, for example the winter or a wet spring, taking a shower can relate in condensation even with extract fans running (although this is far less likely).

It also depends on what the humidity level is outside as this can be greater than inside. The moisture/humidity will then seek out colder rooms such as spare bedrooms and the corners of cupboards. When you open these at a later date you will be surprised to find black mould.



Re-thatching your roof on a listed building is not as simple as it may first seem and there are many considerations with consequences if you get it wrong

Appeal cases won by Historic England **English Heritage and a local council**

Appeal cases have been won by Historic England / English Heritage and the local authority on several Grade II listed buildings which have many implications not only in specific relation to thatching and the thatch world, which is what the appeal is related, to but also to other proposals on listed buildings, particularly as the appeals were won on Grade II listed buildings which are generally considered the most basic listing with higher listings being Grade II*, Grade I and Scheduled Monuments.

Listed buildings, the basics

We have written many other property/surveying articles with regard to listed buildings that if you are new to this area you may wish to read first before coming back to this. Below are some articles specifically relating to types of problems you have on listed buildings and also the different listings:

Not So Common Pitched Roofs

The Pros and Cons of buying a Grade II Listed traditional timber frame house

There is more to thatch than thatch

Whilst these legal cases relate to thatch the ethos process and concepts behind them we feel will have far reaching effects.

A vernacular property when viewed from afar can be dominated by the thatch. At the very least it will generally be about fifty percent of the elevation and is an important part of the look of a building and as such it is considered important by Historic England/English Heritage and the local authority and to have public interest and history which is worth preserving, which is some of the reason why the building is listed.



Front view of a thatched property



XXXXX, Ravensden, Bedfordshire, MK44 XXX

With specific regard to thatch in these particular cases is why there needs to be consideration given to the repair, renewal and replacement of the thatch.

The choice of thatch is so important and it is just as important to explain clearly what you are doing to Historic England/English Heritage and the local authority via their conservation officers

When thatching a property, you traditionally have three choices of materials:

- 1) Long straw
- 2) Water reed originally called Norfolk reed, although not necessary from Norfolk
- 3) Combed wheat reed sometimes known as Devon reed, not necessarily from Devon

Each of which has a different look and each of which have a different life expectancy and each of which has a different cost. It is probably this last thing that is an important factor in what owners do to a property but they do now have to consider that the building is listed. Briefly:

Long straw

A soft unkempt look, a relatively short life of ten to twenty years and it does need fairly regular maintenance

Water reed

Also known as Norfolk reed, although not necessarily coming from Norfolk has a neat clean cut look almost solid in its nature and has a life of fifty to seventy years but again needing maintenance

Combed wheat reed

Also known as Devon reed but not necessarily from Devon has what we would term as a bristly or brush like finish with a life of twenty to forty years. What tends to have happened over the years is where reed has been used when it comes up for renewal cheaper alternatives may have been considered and was even put on the roof in years gone by without any real thought.

We have taken the life cycle lengths of the different materials from life expectancy of building components carried out by the Building Surveying Division of the Royal Institution of Chartered Surveyors many years ago but we have not found any documents to better this.



Two legal cases that have changed things

The two legal cases that have been won at appeal relate to thatched roofs. The appeal was carried out by Historic England/English Heritage and the local authority but the principles we feel are likely to relate to more buildings.

We have taken the details of the case from articles which we have recently read and information that we have gathered and thoughts that we have had but have not read the actual cases and as with most case history they can be very specific to their case so only take this information as general guidance and general principles and do remember that in the conservation world and the legal world things do change.

Re-thatching Case One Mulberry Cottage, 25 Spring Lane, Great Horwood, Buckingham

The application was made to re-thatch a thatched property and as part of the application's design and access statement it used the term that is was going to be re-thatched in long straw 'style'. The concern was over the word 'style' as this was unspecific rather than just using the term long straw. The application did provide a design and access statement which gave precious little other information. It did not have any information from the Thatcher's that were looking to specifically re-roof this property but did have general information from the National Society of Master Thatcher's www.nsmtltd.co.uk.

Also, the term flail was highlighted as the method to be used for cutting the straw. Generally, in modern thatching you have several options, one is a drum thresher or a reed comber or a head stripper. The term flailing is rarely come across, it is only upon further investigation to be a family members term used by Dobson Brothers Thatcher's (Wikipedia says it is a hybrid of wheat and rye) and is what they say their father used to describe combed wheat reed. Nevertheless, it has left it ambiguous as to what exactly was happening.

Flailing defined A hybrid of wheat and rye.

On further investigation it was established that the straw style proposed was combed and triticale rather than long straw thatch although it has been laid in a manner where it would have looked like long straw thatch. Historic England for example, identified that long straw should be drum threshed wheat straw, uncombed during the threshing process and prepared for thatching by shaking into a bed, wetting and drawing out in yealms which has a mixture of ears and butts at each end so you can see the detail that Historic England like.



XXXXX, Ravensden, Bedfordshire, MK44 XXX

In summary, this successful appeal by Historic England/English Heritage identified that without a detailed specification, and we mean detailed and no ambiguous terms, it may have an appeal on your hands when you look for listed building consent.

Looking like long straw is not good enough

Also, in the case of Mulberry Cottage it identified that just looking like long straw was not good enough and certainly could not just be in the 'style' of long straw.

Re-thatching Case Two Park Cottage, Milton East, Knowle, Salisbury

This application for listed building consent went through two appeals made by Historic England/English Heritage and the local council and overturned a previously passed decision. Here there was a combed wheat reed thatched property. The thatch was considered to be a major feature of the property. Interestingly even though there was evidence from the early 20th Century that it had had a long straw roof and in Wiltshire where this cottage was located it was more common to use long straw, the listed buildings thoughts by the Conservation Officer was that the change in material was a reflection of the development of local material.

Heritage assets

Again, parties accepted that a skilled thatcher could make water reed resemble combed wheat reed, it was not historically correct and changes that had already taken place with long straw to combed wheat reed was not an argument in itself that further changes could be made and the argument was that wheat reed for the top coat/spa coat diminished the historic character of the listed building and had a harmful impact on its value as a heritage asset.

This brings us back to the discussion should materials exactly match the original historic fabric rather than just be materials that look like the historic fabric.

Case Three

Thatch Cottage, Chapel Lane, East Boldre, Brockenhurst

In this case the Inspector's thoughts were on what we would term as a more general level that the nature of a listed building is that it should be repaired using the existing material in which it was built. If they are no longer available or that practice would result in the construction of more historic fabric. The example that we have seen given which we think is contentious is that it is better to repair a timber beam with wet rot for example strengthening it using a metal bracket rather than by cutting out the deteriorating timber and replacing it with newer timber. We would comment that there is both an observation



discussion point here and also a technical discussion point as to which is best for the building as a whole.

National Planning Policy Framework, also known as NPPF

Appeals can be based on listed building decisions on the National Planning Authority Framework section which says that the harm can be outweighed by public benefit and needs to be considered in an appeal decision. One of the aims of this documentation is to have a more whole view of work being carried out to listed buildings and not just look at the private owner's benefit of lower cost and longer life but to look at the more general benefits.

In both cases it was considered that there was insufficient public benefit for these projects as re-thatching either in the existing material or the recommended materials would have the same level of environmental impact and that the appeals being won by Historic England/English Heritage and the local authority would have little financial impact on the individual.

Independent advisors, double checking advisors Thatch - what is right and what is wrong?

As with many materials experts vary on their opinion, this relates to everything from how to originally thatch to the length of life left in a thatch. We like to use, and we referred to it earlier, 'The life expectancy of building components' which was the survey carried out by the Building Surveyor's Division of the Royal Institution of Chartered Surveyors.

Generally, you rarely see thatched buildings in varies states of decay. We would tend to avoid taking information from people that have the best of interest such as Thatcher's. There are many factors in assessing the life of a thatch from the original workmanship to the pitch of the roof, to the materials used and there are as many different opinions on this as there are different ways of carrying out the work. One of the newer areas where concern is being raised is the use of triticale by Thatcher's.

Triticale defined A hybrid of the qualities of wheat and rye.

Arguments for changing materials

Some of the arguments that are used for changing the materials in a thatched roof such as the material being in short supply or the alternative having a longer life or being cheaper have effectively now been superseded by the Listed building requirements for the material to be genuine. By genuine it could be the original material that was used or it could be the material that then became used in the area as thatching techniques developed and progressed. It is not good enough just for the thatch to look like the old thatch, it has to be the same material and thatched in the same way if these appeals are considered the way forward.

