

# RESIDENTIAL BUILDING SURVEY

London Borough of Enfield



FOR

Mr L

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# **INTRODUCTION**

Firstly, may we thank you for your instructions of XXXX; we have now undertaken a 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.

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# REPORT FORMAT

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

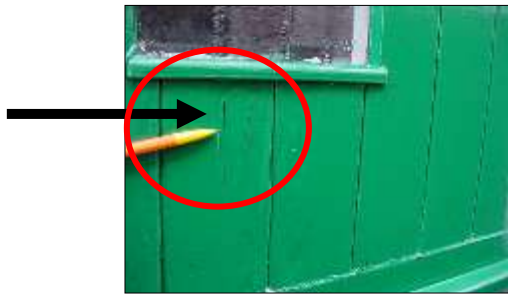
## **GENERAL/HISTORICAL INFORMATION**

*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. In some 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.

## **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.

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.

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# **SYNOPSIS**

## **SITUATION AND DESCRIPTION**

This is a two storey semi detached property which has been altered and extended over the years built in a predominantly residential area. We believe the property was originally Local Authority/Institutionally built housing. There is car parking to the front of the property and a garden on a sloping site to the rear with a swimming pool.

The house is of a non traditional metal framed construction commonly known as a BISF house which stands for British Iron and Steel Federation. There were various different types of these houses; this looks to be a type A1 built between 1944 and 1950 of which there were approximately 35,000 built. They were designed by Frederick Gibberd. The house would have looked quite different when it was built with a shallow pitched profile asbestos cement sheet roof with external walls rendered to first floor level and vertical profile steel sheets above this.

You should be aware that many mortgage lenders are not happy to lend on this type of property.

We are advised that the property was built just after the War Years. If the exact age of the property interests you your Legal Advisor may be able to find out more information from the Deeds.

### **Putting Life into Perspective!**

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

1939-1945	World War II (6 June 1944 D-Day)
1946	Winston Churchill gave his 'Iron Curtain' Speech
1948	Olympic Games held in London
1951	Truman signs Peace Treaty with Japan which ended WWII
1952	Princess Elizabeth became Queen at age 25
1953	DNA discovered
1958	The first time ultrasound was available to examine unborn babies
1959	UK postcodes introduced

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## EXTERNAL PHOTOGRAPHS



Front Elevation



Rear view



Left hand view



Street view



Front garden



Rear garden

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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 hallway with staircase
- 2) Lounge front right
- 3) Kitchen/breakfast room area rear
- 4) Utility room rear left
- 5) Conservatory rear right
- 6) Integral garage front left

## **First Floor**

The first floor accommodation consists of:

- 1) Single bedroom front left
- 2) Double bedroom front right
- 3) Double bedroom rear right
- 4) Bathroom

## **Outside Areas**

There is car parking to the front of the property and a garden on a sloping site to the rear.

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

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# **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). We have not necessarily taken photographs of each and every room.

## **Ground Floor**



Entrance hallway



Lounge front right



Kitchen/breakfast room rear



Sitting area in kitchen/breakfast room rear



Utility room rear left



Conservatory rear right



Integral garage front left

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## **First Floor**



Single bedroom front left



Double bedroom front right



Double bedroom rear right



Bathroom

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# **SUMMARY OF CONSTRUCTION**

## **External**

Chimneys:	Metal chimney
Main Roof:	Shallow pitched proprietary prefinished metal profile sheet
Main Roof Structure:	Metal truss and purlin roof with timber rafters
Gutters and Downpipes:	Plastic
Soil and Vent Pipe:	Plastic
Walls:	Upper: Vertical tiling Lower: Painted render
Fascias and Soffits:	Plastic overclad
Windows and Doors:	Plastic double glazed windows without trickle vents

## **Internal**

Ceilings:	Plasterboard or proprietary material
Walls:	Studwork and dry lining
Floors:	Ground Floor: Concrete
	First Floor: Metal and timber joists with floorboard sheets (assumed)

## **Services**

We are advised that the property has a mains water supply, mains drainage, electricity and gas (all assumed). The electrics are located under the stairs. The boiler is a wall mounted Baxi boiler located in the garage.

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

Finally, 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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# **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 300 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!*

- 1.0) The property is well presented but it needs to be appreciated this is superficial.
- 2.0) Off road parking to the front of the property.
- 3.0) The property has a rear conservatory extension.
- 4.0) We are advised that the plastic lined swimming pool will be remaining.

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

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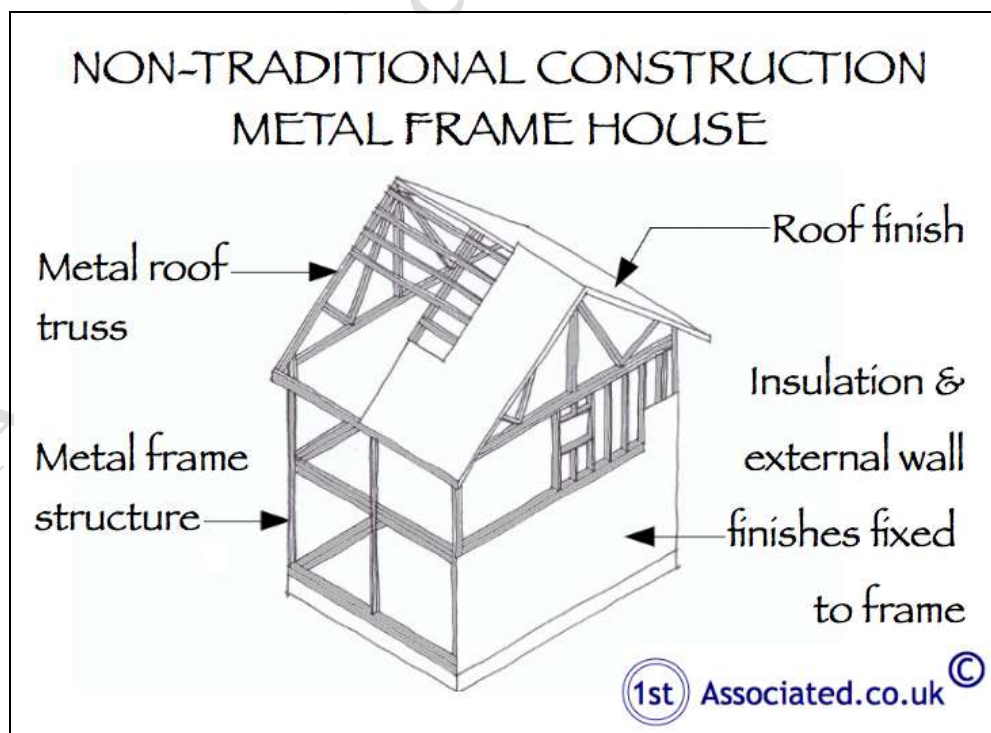
## The Bad

*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) Non traditional building – the overview

This house is of a non traditional construction of which there were many built after the Second World War to meet the needs and demands of the population at the time. This immediate need for a large number of houses meant that the Government had to look at how they constructed houses and moved towards more factory type processes. Indeed some of the factories that carried out the work, it is said, had been making aeroplanes and bombs for the War one week and then changed to building/manufacturing houses the next week; we don't know how true this is.

There are many different types of non traditional buildings. One of the interesting facts is that many mortgage companies won't lend on them. We would add further that their lending criteria changes from time to time which does mean they will lend on them some of the time and then not lend on them.



Non traditional construction

This is a BISF house which is short for British Iron and Steel Federation.

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Please see further information on BISF Houses within the Appendices and also on Non-Traditional Houses.

### **1.1) Construction of this type of non traditional house – BISF House**

The original construction of this type of property consists of a structural metal frame and a roof truss construction of tubular metal with a shallow pitched asbestos roof, and profile metal sheets at high level with brick or render at low level.

The Building Research Establishment often known as the BRE are generally considered to have carried out the best research on this type of construction and have identified the following problems:

1. Minor to severe corrosion of the rolled steel angle (RSA) and rolled steel channel (RSC) stanchions, particularly at the bases and the corners.
2. Minor to severe corrosion of the sheeting rails
3. Cracking of ground floor slabs, particularly at the corners
4. Corrosion of metal lathing and failure of render
5. Corrosion of profile steel sheets and steel flashings
6. Corrosion of cast iron flue pipes and metal cowlings
7. Deterioration of profiled asbestos cement sheet roof covering

It needs to be understood that there are limitations to a visual inspection and you can only see much of the above by physically opening up the structure.

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## 1.2) Is the structural frame sound?

The risk with buying any steel framed property is if the structural frame is sound or not. The only way to see this is by opening up the structure which we would be happy to do but you do need to get permission from the existing owners and also ensure that you have a builder who can put back the openings to a satisfactory standard.



Metal frame, purlin and metal truss

In our experience key areas are generally at ground level, first floor level and roof level where the steel frame is joined together which should be checked for rusting. This could be caused by water discharging onto the base of the property to condensation in the higher level steel frame.

## 1.3) Our comments on the steel frame where we could see it

We examined the steel frame that we can see within the roof and found it to be in average to above average condition. This is, from our question and answer session with the owner, because the roof has been replaced and also the steel frame has been treated when re-roofing work was carried out in 2000 (the owner wasn't exactly sure of the date but as mentioned this would originally have had a shallow pitched roof with an asbestos cladding which is no longer visible).

**ACTION REQUIRED:** The only way to be 100% certain as to the condition of this structural frame is to open up the structure. As mentioned you will need to obtain permission from the owners to carry out this work but we are more than happy to return and inspect once the structure has been opened up and you need to have a builder close it up satisfactorily.

**ANTICIPATED COST:** This varies depending upon the amount of work. In the region of £250 - £500 for opening up works and replacing; please obtain quotations.

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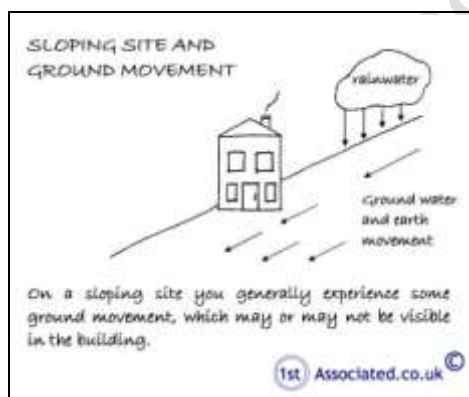
#### 1.4) Non-traditional houses, can they be made into mortgageable houses?

As the property is a non traditional construction this does limit companies who will give mortgages on them and as the vast majority of people buy properties with mortgages it limits the market you can sell into.

Some companies do specialise in carrying out work to non-traditional houses to make them mortgageable. We have however found that where the neighbouring property (as you are semi detached) does not join in with this work there will still be an adverse affect on the property and the property value.

#### 2.0) Sloping site

We note the property is sitting on a sloping site. Our concern is that without an adequate way to divert the rainwater and groundwater around the property any rain is discharged against the rear of the property and can affect the steel frame.



Sloping site



Garden on sloping site

#### 2.1) Floor level

We noted the floor levels between the outside of the property and the inside are practically the same which does mean when it rains water is trying to get from the top of the site down and will tend to sit against the property.

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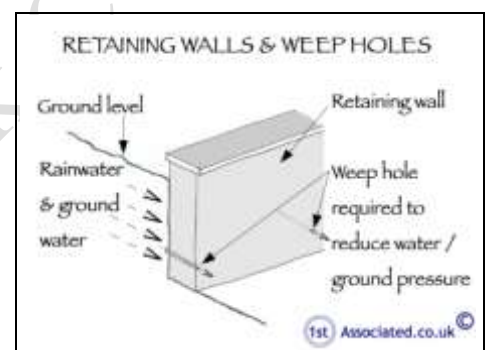
High ground level



Inside and outside floor levels almost the same

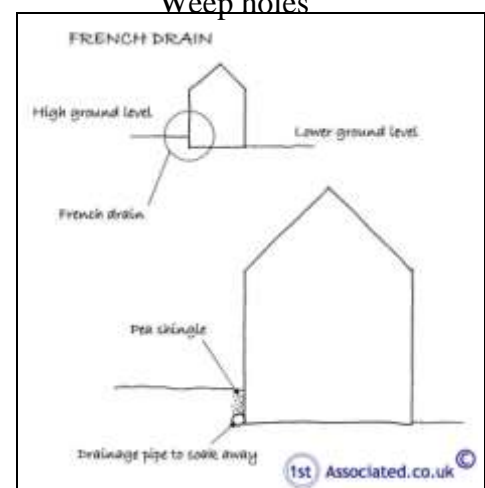
## **2.2) Other unresolved factors with regards to sloping site - no weep holes in rear boundary wall**

We noted that the retaining wall does not have weep holes which means there will be a build up of water weight behind this wall which may push it over.



Weep holes

**ACTION REQUIRED:** Ideally stand outside the property next time it rains to see how much of a problem this is and if it is a problem we would then recommend a French drain is put around the property to direct the rainwater around the property. We would also recommend the adding of weep holes into the retaining wall. Close examination needs to be carried out to the rear structural frame.



French drain

**ANTICIPATED COST:** For a French drain fitted properly in the region of £2,000 - £5,000 as it should go into the main drains; please obtain quotations. Our biggest concern is that the water and dampness will have affected the base of the structural frame of the property with no way of being able to confirm this without opening it up.

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Please see the French Drain article in the Appendices of this Report.

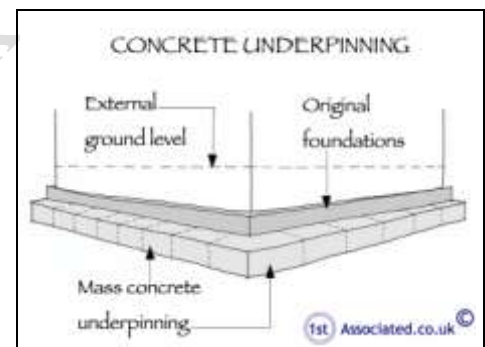
### **3.0) Subsidence and clay area and value of property**

The owner advised there had been subsidence in the front corner of the property which has been underpinned. Subsidence of any sort does affect the value of a property considerably, for example:



Very bottom of render on left hand corner where underpinning has taken place

Two properties on the market at £250,000, one without previous structural problems and one with structural problems that have been repaired – which one would you prefer? Most purchasers would buy the property that hasn't had structural problems. The question is how far do you have to discount the property that has had structural problems albeit that they have been repaired before people would buy it? Is it 10, 20 or 30%? It depends upon the market and the number of people that want a property in that area.



Concrete underpinning

### **3.1) Clay sub soil**

We have dealt with other properties close by that have been affected by subsidence and are still affected in 2013. We have been involved in negotiations with their insurance company but haven't been able to resolve the problem as yet.

Please see the Subsidence article in the Appendices of this Report.

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#### 4.0) Asbestos

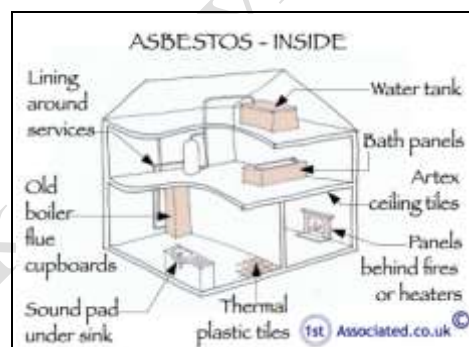
When this property was built asbestos was a common popular material which was used almost as commonly as wood. As mentioned it formed the roof material and it also generally formed such things as the fascias and soffits, the gutters and downpipes, as shown in the sketches below.



Asbestos - outside

The generic sketches show typical areas where asbestos can be found in these properties

Our insurance company requires us to advise we are not asbestos surveyors.



Asbestos - inside

**ACTION REQUIRED:** The only way to be certain all asbestos has been removed is to have an asbestos report carried out. We didn't physically see any asbestos during the course of our survey.

Please see the Other Matters Section of this Report.

#### 5.0) Porch/front extension - structurally independent?

Although we haven't physically been able to see any signs of it, we are advised by the owners that the front porch and lounge extension has been built on its own structural frame. From our experience with other properties in the road this wouldn't be unusual and has been carried out due to the poor sub soil which has a clay content. We have dealt with other



Porch/front extension

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properties in the road where the piling that goes down to a firm base was more than 10m deep which is deeper than the height of a typical house.

## 6.0) Conservatory

We noted the conservatory has quite a shallow roof which does tend to mean that water sits on it and you do get moss although it looked quite clean on the day of our inspection. We could also see that three of the panels on the right hand side (all directions given as you face the front of the property) have been replaced. We spoke to the owner about this during our question and answer session who advised that when the lights in the soffit board were being replaced damage was caused to the roof panels which he got the contractor to replace. We also noted that one of the windows had misted over.



Conservatory



Conservatory roof. We are advised wood plan on roof is used for walking on



Panels that have been replaced



Seal has gone on conservatory window

### Soffit board defined

This is the board at the edge of the roof.

**ACTION REQUIRED:** View the roof from time to time to check that build up of moss isn't occurring and clean as required. We would also check the flashing between the main building and the roof as this can be an area where leaks occur.



Lights in soffit board to front and rear of property are difficult to access to replace

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## **7.0) Flat roof over garage/kitchen utility room**

The flat roof over the garage is in a poor condition.



Flat roof viewed from the rear



Flat roof in poor condition



Deterioration to flat roof repaired with flashband

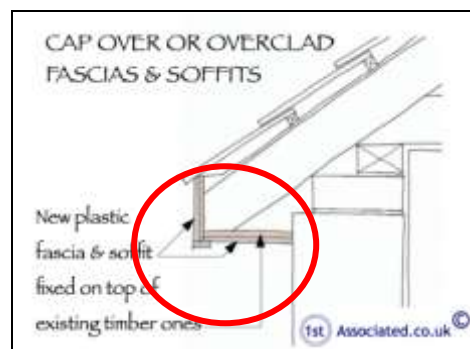
**ACTION REQUIRED:** We would recommend patch repair in the summer of 2013 and obtain quotes for replacement with a high performance mineral felt roof and possibly add insulation as well although it may not be possible without stripping back the roof. Replacement recommended in the summer of 2014, possibly 2015 depending upon how deterioration occurs.

**ANTICIPATED COST:** £2,000 - £5,000 depending upon the quality of felt used and the insulation added; please obtain quotations.

Please see the Roof Coverings Section of this Report.

## **8.0) Overcladding of fascias and soffits**

The plastic fascias and soffits around the property haven't got a vent and look to be overcladding on the original timber or asbestos fascias and soffits. We are not particularly keen on overcladding as it is normally put over timber already in poor condition which can then cause accelerated deterioration.



Overclad fascias and soffits

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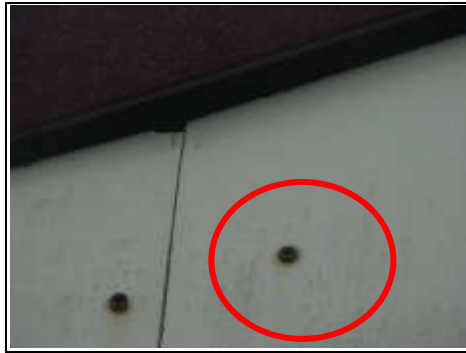
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Fascias and soffits overclad



Rusting screws to fascia board



Lights in soffits which is slightly unusual

**ACTION REQUIRED:** Your legal advisor to specifically ask the existing owner if this is overcladding or whether the original fascias and soffits have been removed remembering they could be asbestos.

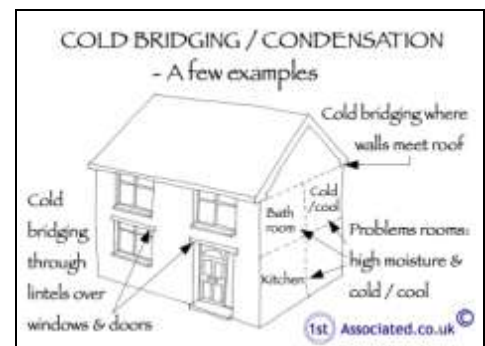
**ANTICIPATED COST:** If this is overcladding we would recommend complete replacement and removal of any asbestos if there is any. We would expect costs to be in the region of £2,000 - £4,000; please obtain quotations.

Please see the External Joinery Section of this Report.

### 9.0) Thermal/cold bridging

This property is far more likely to have thermal/cold bridging problems than a traditional property.

**ACTION REQUIRED:** There are things you can do to help such as add large humidity controlled extract fans in the bathroom and the kitchen and any rooms that you use for drying.



Cold bridging

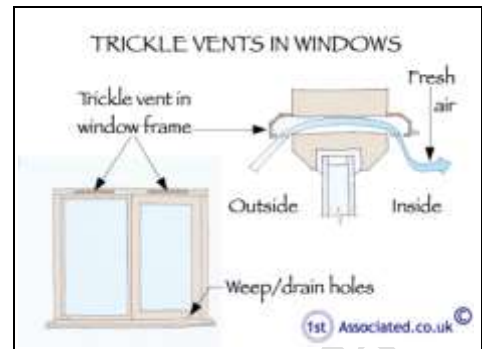
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**ANTICIPATED COST:** £200 - £300 per extract fan depending upon your electric wiring and configuration. Adding extracts is the very minimum we would recommend on this property, ideally we would recommend that ventilation is added to the soffits to vent the roof and also ventilation in the form of trickle vents are added to the windows.



Trickle vents

Please see the Dampness Section of this Report.

## **Services**

### **10.0) Electrics**

The electrics are dated and there are a lack of electric points, we noted many cable extensions being used.



Dated electrics



Cable extensions being used



Overloading of electric points

**ACTION REQUIRED:** The Institute of Electrical Engineers standards (IEE) 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.

**ANTICIPATED COST:** In the region of £2,500 - £5,000 depending upon the quality of the system; please obtain quotations.

Please see the Electricity Section of this Report.

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## **The Ugly**

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

We consider this property to be a high risk purchase as it may be difficult to mortgage depending upon how the mortgage market is looking at property at the time. If you do proceed you need to be happy with the characteristics and associated costs of the property issues. In some cases there is very little you can do to change the basic framework of this property.

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## **Other Items**

Moving on to more general information.

### **Maintenance**

This type of property is relatively modern (i.e., less than one hundred years old) but nevertheless still requires ongoing maintenance and repair; the main issue is the flat roof from a maintenance point of view.

A budget for such work must be allowed to ensure it is maintained in a good condition. This will prevent undue and unnecessary deterioration.

### **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.

### **Electrics**

From what we can see the socket points are pretty much the original 1960's level when we used a lot less electricity. As mentioned we found some dated elements of the electric system and therefore the Institute of Electrical Engineers standards (IEE) 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 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**

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.

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## **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 in your own style 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.

## **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

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£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.

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## **SUMMARY UPON REFLECTION**



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

When we spoke to you, you were fairly happy with our comments with regards to it being a non traditional house sitting on a clay site, etc. These issues typically put buyers off in our experience. You commented that you couldn't get anything of this size in this type of location for this price. This is due to the non traditional build factor and the other factors in the house in our opinion and we know it seems strange to be talking about selling the house before you have even bought it, but you do need to remember that when you come to sell the house it may have limited appeal.

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.

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# **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.

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



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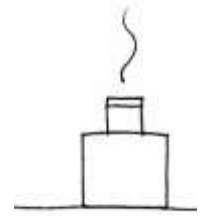
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## **EXTERNAL**

### **CHIMNEY STACKS**



#### **Chimney Stacks**

*Chimneys developed originally from open fires placed within buildings. From this, the chimney has developed to its present day format where it is used as an aesthetic feature and focal point rather than purely just to heat the room.*

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

#### **Chimney one – located to the front middle**

This chimney is metal finished and is probably best described as a mock or fake chimney with a main circular flue surrounded by a metal box. This can of course rust, from ground level it looked to be in average condition.



Metal chimney



Central chimney which can rust

#### **Flashing**

There isn't so much as a flashing in the traditional sense but a metal trim at the base of the box chimney.

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### 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.

### **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.*

Effectively this chimney is a flue in the way that it normally relates to a metal or plastic tube.

### **Party Walls**

The party wall relates to shared items, such as the dividing wall between the two houses. If you do any work on these you will need to deal with the Party Wall Act. Here is a brief explanation of it.

#### Party Structures Defined - Party Wall Act Etc. 1996

A structure that both parties enjoy the use of or benefit from. An example of this would be where both parties gain support from a wall or utilise a chimney or chimneys.

*Any work to party structures, such as party walls or party chimney stacks, require agreement under the Party Wall Act. We would be more than happy to offer you help and advice in this matter.*

Finally, we have made our best assumptions on the overall condition of the chimney stack 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. A closer inspection may reveal latent defects.

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

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# 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. They are susceptible to deterioration, which ultimately leads to water penetration.*

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

We will consider the roofs in four areas, the main roof, the porch roof, the garage/kitchen/utility roof and the conservatory roof.

## Main Roof

The main roof is shallow pitched proprietary prefinished metal profile sheet. From ground level, this looks in average condition considering the roof's age, type and style.

We do find that this type of roof weathers and you can almost get areas where the metal shines through.

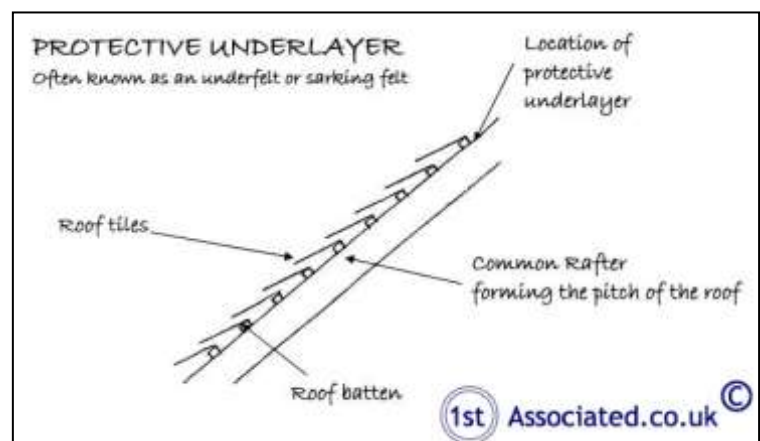


Main roof

**ACTION REQUIRED:** Carry out periodic inspections and maintenance of this type of roof such as clearing the lichens and moss as required.

## 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

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We were advised the property was re-roofed in approximately 2000 at which time they would have replaced the protective underlayer as well which is often known as sarking felt or underlayer.



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

### Front single storey extension roof

The front porch is clad in a concrete tile which has minor moss and lichens on it.



Concrete tiles to front extension



Side of porch roof

**ACTION REQUIRED:** We would add a protective layer to the side of the roof using the vertical felt tiling to marry in with the rest of the building.

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### Conservatory roof

Our concern is that the conservatory has a relatively shallow pitch although it has to be said that we do see a lot that have less pitch than this. We were pleased to see a flashing where the conservatory meets the main building.



Conservatory roof links into vertical felt tiles

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

### Flat Roofs

*Whilst these roofs are called "flat", present building regulations and good building practice presently requires a minimum fall of 12 degrees.*

*Flat roofs are formed in a variety of materials. Difficulties can arise when the water is not discharged from the roof but sits upon it, as this can soon lead to deterioration which flat roofs are renowned for.*

### Flat roof over garage and kitchen utility room

The flat roof over the garage is in a poor condition as are the parapet walls.



Flat roof



Deterioration to flat roof repaired with flashband



Felt has deteriorated to parapet wall

**ACTION REQUIRED:** Please see our comments in the Executive Summary. Work would also need to be carried out to the parapet walls. The best thing for flat roofs is to ensure they have a fall on them.

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## **Further information on flat roofs**

### **Ventilation**

Building Regulations require flat roofs to be ventilated. Building Regulations are not retrospective but the reason for the requirement is to make sure that any moisture that enters the roof construction is dispelled by way of ventilation. We would suggest that if the opportunity arises ventilation should be provided.

### **Insulation**

Also it could not be established if there is insulation within the roof or a vapour barrier, without the vapour barrier and combined with inadequate ventilation there will be an increase in the risk of wet or dry rot.

All the roofs were inspected from ground level with the aid of a x16 zoom lens on a digital camera. Flat roofs have been inspected from ground level and/or upper floor windows.

Finally, we were only able to see approximately eighty percent of the main roof from ground level via our ladder or via any other vantage point that we managed to gain although it was slightly difficult due to it being shallow pitched and the angle. 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.

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# **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**

There is a loft ladder, electric light and secured floorboards although we would be careful with the secured floorboards as we are not certain all of them are supported at the edges.

The perimeter of the roof has been viewed by torch light, which has limited our viewing slightly.

#### **Roof Structure**

This type of roof structure on a non traditional house has a metal truss and purlin system using tubular metal for strength. In this case it has timber common rafters.

##### Common rafters

The rafters that create the pitch of the roof.

#### **Roof Truss and Timbers**

We have inspected the roof truss and timbers for:

1. Structurally significant defects to the metal truss and the timber
2. Rusting of the metal elements
3. Structurally significant distortion



Metal roof system

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4. Serious active woodworm and structurally significant dry rot or wet rot



Top of metal truss and roof timbers

Our examination was limited by the general configuration of the roof, the floor boards and stored items. What we could see was generally found to be in average to above average condition for its age, type and style. We would normally expect to see rusting to the roof frame but in this case it looks as if the entire roof truss was treated when the property was re-roofed.

**ACTION REQUIRED:** Ask the existing owner for a copy of any information relation to the re-roofing. The only way to be 100 per cent certain is to have the roof cleared and checked.

### Fire Walls

The property has one blockwork firewall which is located to the right hand side (all directions given as you face the property). The firewall is also a Party Wall.

#### Fire Walls Defined

Fire walls help prevent the spread of fire through roofs and are a relatively recent Building Regulation requirement.



Firewall

### Water Tanks

We didn't see a water tank although it could have been hidden amongst the mass of stored items in the roof.

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## **Ventilation**

There is no ventilation to the roof. We would recommend this is added if the fascias and soffits are replaced.

## **Insulation**

Please see the Thermal Efficiency Section of this Report.



Insulation with building paper underneath and a birds nest

## **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 did see old wiring, please see our photo and comment within the Executive Summary.

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, i.e. we have not examined every single piece of timber. We have offered a general overview of the condition and structural integrity of the area.

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# 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

The gutters and downpipes are plastic generally in average condition.

There may be some minor leaks but most people would be happy to live with these providing repairs are carried out within the next six to twelve months.

## Problems with front guttering

We would comment that there is a gulley to the front of the property which looks to be unused and directly above it there is pipework going into the gutter. It looks like the original downpipe has been diverted; we can only imagine this will overflow when it rains.



Pipework above, gulley below



Pipework on flat roof



Why is there a gulley at front of the property?

**ACTION REQUIRED:** Ask existing owner why the gulley and downpipe have been amended. We would always 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.

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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 soil and vent pipe to the rear which should be slightly higher above the fascia board, approximately 1m.



Soil and vent pipe

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.

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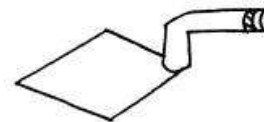
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## WALLS



*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 property is constructed in a metal frame clad with vertical tiling to the first floor level and painted render to the ground floor.

Whilst this looks like a traditional house it acts far differently as it has a structural frame from which elements are clad onto. In theory these could be removed (and some people do remove them) and replaced with other materials. Originally this property would have had profile metal sheeting to the first floor level as in this photo which in turn can be overclad with plastic cladding like next door to your left.



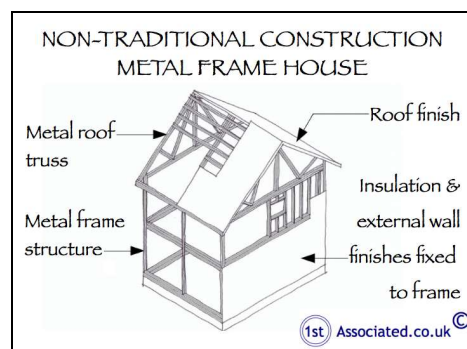
Originally the property would have had profile metal cladding



Overclad house to left hand side of your property

### Non traditional building

Sorry to repeat ourselves but this really is so important; this house is of a non traditional construction commonly known as a BISF house which stands for British Iron and Steel Federation who manufactured this type of house system. It was one of the more popular types. This type of system build house effectively means the building is built on a



Non traditional construction

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foundation with a structural frame and then cladding added to the roof and to the walls.

**ACTION REQUIRED:** Please see our comments in the Executive Summary and our articles in the Appendices.

### **Structural frame**

Please see our Executive Summary which refers you to the limitations we have of viewing the structural frame. In this particular case it was just within the roof.

### **Upper Walls -Vertical tiling**

As mentioned above originally this building would have had profile metal sheeting to the upper parts. In this case we believe it has then been clad over and a vertical felt tile added.



Vertical felt tile



How vertical tiles sit around the windows

### **Lower walls - Painted render**

The lower walls are finished in a roughcast painted render. This is part of the original design. These are effectively cladding panels where they are on the original building. Where they are on the newer extensions and alterations the render is likely to be onto a blockwork depending of course on how it has been built.



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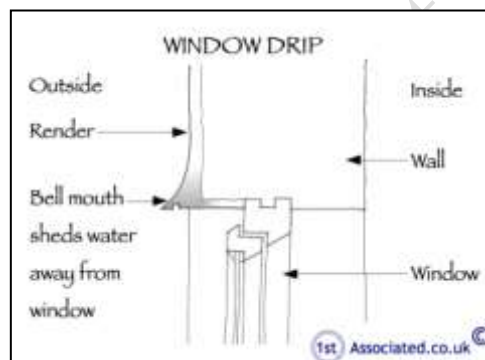
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## Render Detailing

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 the windows meet the cladding therefore do not have a traditional drip detail.



Window drip

### Bell mouth to base of property

To the base of the render there was a bell mouth detail.



Bell mouth detail



Bell mouth

## Painted render

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 although it is currently in reasonable condition.

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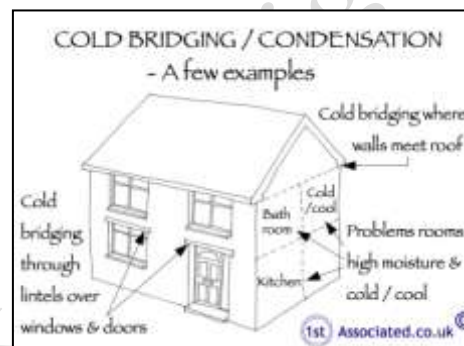


## Cold Bridging

As this property has a metal structural frame and various other metal elements it may suffer from cold bridging. Please see our general article on Cold Bridging within the Appendices but this property has very specific problems due to the metal frame and condensation occurring on it.

### 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

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 vertical tiling / render / plasterwork we cannot comment on their construction or condition. In buildings of this age metal lintels 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 vertical tiling / render / plasterwork has been finished. We have made various assumptions based upon what we could see and how we think the vertical tiling / 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 as it seems in the building industry and often short cuts are taken. Without opening up the structure we have no way of establishing this.

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# **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**

Given the age of the property you may find different depths of foundations. We would expect to find a concrete or raft foundation.

## **London Clay**

As with most properties in the London area, this property stands on London Clay. It is therefore more susceptible than most should drains leak or trees be allowed to overgrow etc. It is not unusual to have some settlement in London properties.

## **Underpinning**

We are advised that underpinning has been carried out to the front left hand corner.

**ACTION REQUIRED:** Your legal Advisor needs to specifically request information on this. Remember most insurance companies have information in relation to underpinning and you need to advise them of this. They may well know more about the insurance claim than your solicitor can find out so it is well worth talking to insurance companies before you purchase this house and asking them for a view on it.

## **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.

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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.

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

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.

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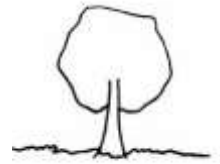
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# TREES

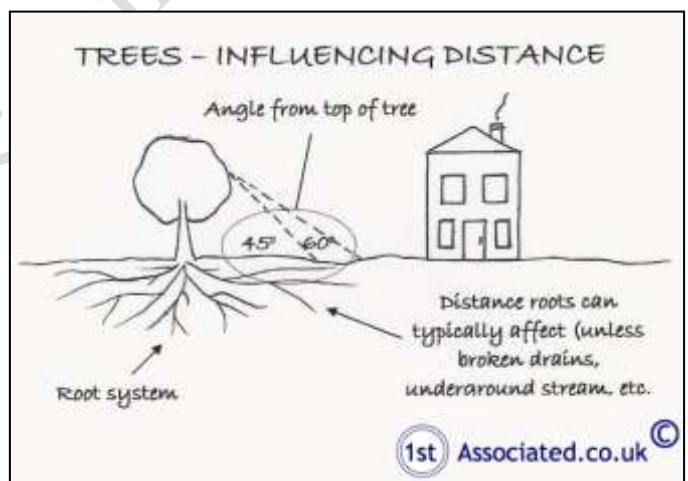
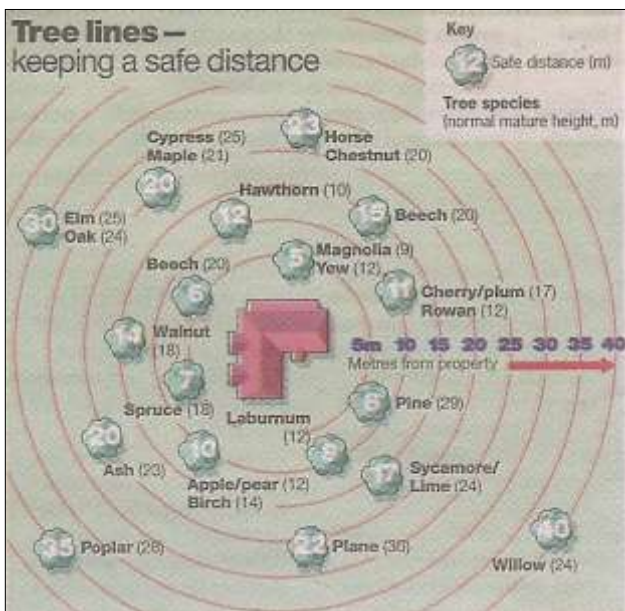


*Trees within influencing distance of a property can affect the foundations by affecting the moisture content of the soil.*

There are some mature trees relatively close to the property. The reason why we are mentioning these is because of the clay soil which can be affected considerably by trees and their root system.



**ACTION REQUIRED:** Trees located across the road  
Speak to your insurance company with regard to the trees; we believe this adds to the risk with the clay.



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.

Please also refer to the External Areas Section.

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## **DAMP PROOF COURSE**

*The Building Act of 1878 required a damp proof course to be added to all newly built properties within the London area. It also required various other basic standards. These requirements were gradually taken up (or should that be grudgingly taken up) throughout London and then the country as a whole, although this took many years for it to become standard practice.*

All modern properties should incorporate a damp proof course (DPC) and good building practice dictates that a differential of 150mm (6 inches) should be maintained between the damp proof course and ground levels. In this case cannot see a DPC because of the render.

Your attention is drawn to the section of the report specifically dealing with dampness.

Finally, sometimes it is difficult for us to identify if there is a damp proof course in a property. We have made our best assumptions based upon our general knowledge of the age, type and style of this property.

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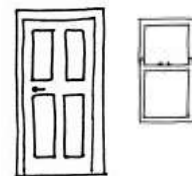
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# **FASCIAS AND SOFFITS AND WINDOWS AND DOORS**



*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.*

## **Fascias and Soffits**

The fascias and soffits are plastic overclad.



Overclad fascias and soffits



Fascias and soffits overclad



Rusting screws to fascia board



Lights in soffits which is slightly unusual

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

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## Windows and Doors

The property has plastic double glazed windows without trickle vents which generally look to be of an average quality. We would draw your attention to the fact that sealed double glazed units can fail, particularly as a result of poor workmanship during installation. Failure of the seal leads to condensation between the two panes of glass and simply replacing the affected units may not provide a satisfactory long-term solution. In this case we noted some of the seals on the conservatory have failed.



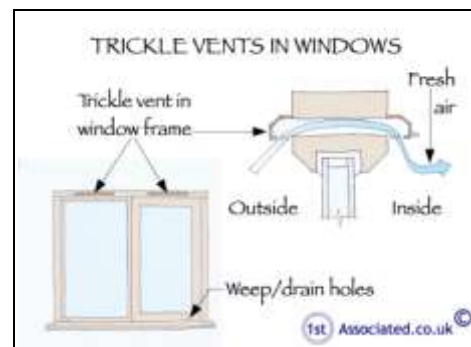
Plastic double glazed windows without trickle vents



Seal has gone on conservatory window

### Trickle Vents Defined

Trickle vents allow a trickle of air through, therefore stopping/reducing the likelihood of condensation occurring within the property.



Trickle vent

## Transferable Guarantees

Enquiries should be made as to the existence of any transferable guarantees. Generally it is considered that double glazed units have a life of about ten years. We are advised the windows were replaced in approximately 2000.

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

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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.

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## 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.*

Generally there are plastic fascias and soffits and plastic windows with the exception of the rear of the garage where there is some paint flaking on the window and door areas which will need redecoration in the summer of 2013.



Paint flaking to rear of garage/utility room

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.

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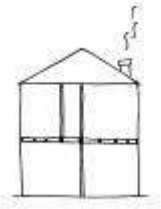
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## INTERNAL



## 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.*

### Ceilings

From our visual inspection of the ceilings and our general knowledge of this age and type of construction we believe that the ceilings are likely to be plasterboard or there may be some proprietary boarding as this was fairly common in this era of property.



Lounge extended with lean-to front



Linen ceiling in conservatory to limit heat loss and solar gain



Unusual double concave ceiling in bathroom

### Plasterboard Defined

The usual name for Gypsum plasterboard which is building board with a core of aerated gypsum, usually enclosed between two sheets of heavy paper, used as a dry lining.

### Internal Walls and Partitions

These are, we believe studwork and dry lining. It is of course impossible to determine the construction without opening up the walls and we have therefore taken an educated guess as this is typical in this type of BISF construction. We do believe that in some cases asbestos has been used for the walls.

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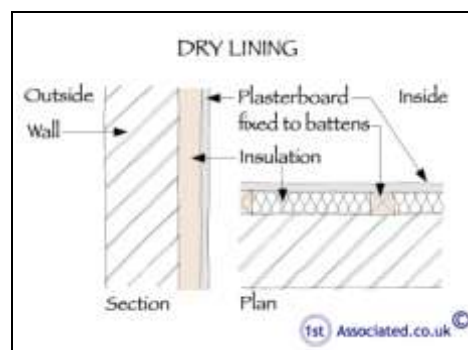
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## Perimeter Walls

These are, we believe a structural frame with dry lining also known as a false wall, possibly with insulation, although when we have opened up this type of property there hasn't been any insulation. Again, we cannot be 100% certain of the wall construction without opening them up which goes beyond the scope of this report.



Dry lining

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.

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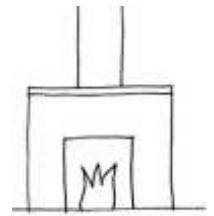
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# CHIMNEY BREASTS, FLUES AND FIREPLACES



*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 within the front lounge centrally on the house. This is more of a flue than a traditional chimney. From what we understand it is a metal tube all the way up into the roof where we can see it.



Fireplace



Metal tube

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.

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

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# **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 floors felt solid under foot so we have assumed that they are constructed in concrete.

## **First Floor**

We have assumed that the first floor construction is metal and timber joists with floorboard sheets, as this is typical in this type of property.

Finally, we have not been able to view the actual floors themselves due to them being covered with fitted carpets, floor coverings, tiles and laminated 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.

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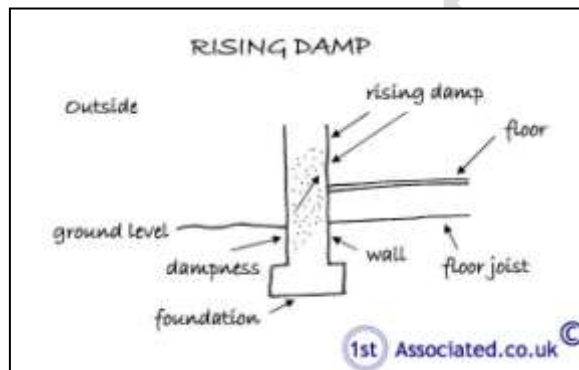


# DAMPNESS

*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.*



Rising damp

We were unable to take readings due to the dry lining.

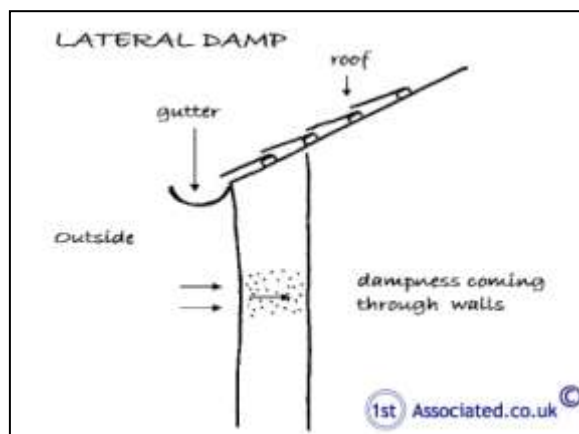


Unable to test for dampness

## 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.*

Again, we were unable to take readings due to the dry lining.



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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 no signs of condensation other than the misted window. The more traditional condensation would be found in bathrooms and kitchens. We believe there is a possibility of this due to there being no extract fans in these areas and this being a metal framed structure.

However, it 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, cooking 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 humidity controlled extract fans be added to kitchens, bathrooms and drying areas.

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.

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# 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

There were some glazed doors; there were no obvious signs that it was safety glass.

**ACTION REQUIRED:** For the young, infirm or indeed anyone who could damage themselves on falling against a door such as this we would recommend that you change the glass to safety glass.



Glazed double door

## Staircase

We were unable to examine the underside of the stair timbers due to it being lined, 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.



Lined staircase

## Kitchen

We found the kitchen in average condition. 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.



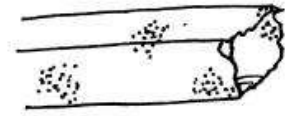
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## **TIMBER DEFECTS**



*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.*

As this is a steel framed building it doesn't rely on timber in the usual way and as such the likelihood of dry rot and wet rot that causes structurally significant damage is considerably reduced, some would argue almost eliminated altogether. However we still do check for dry rot and wet rot.

### **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 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**

*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.*

Most of the timber elements have been removed with the metal frame structure or been replaced with plastic. However we would draw your attention to our earlier comments with regards to plastic overcladding to the fascias and soffits within the Executive Summary.

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## 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 although the main timber is the common rafters as the roof truss itself is metal. Within the roof we found no obvious visual signs of woodworm activity or indeed signs of 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 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.

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## 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.

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

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# THERMAL EFFICIENCY



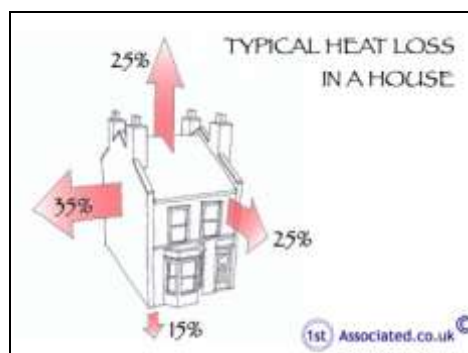
*Up until the mid 1940s we did not really consider insulation in properties, for example it was only in the 1960s that we started putting insulation in the roof and then it was about 50mm, in the 1970s this was upgraded to 100mm. Then we started to think about double glazing and cavity wall insulation. 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 that properties 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.*

## HIPs

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

## Roofs

Some roof insulation was present although not to current Building Regulations requirements of 300mm. In this case there is approximately 200mm and it is boarded over in most areas. In this type of property you have to be very careful if you insulate not to create a condensation situation as this is when we feel you get most accelerated rusting and deterioration to the roof frame and the structural frame.



Typical heat loss

## Walls

The walls to this property are pre-fabricated and from our understanding did not originally have insulation, unless this has been added at a later date.

**ACTION REQUIRED:** Your Legal Adviser to specifically request any information in relation to insulation.

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## Windows

The windows are double glazed and therefore will have reasonable thermal properties. Note there aren't any trickle vents.

## Services

Service records should be obtained. It is essential for the services to be regularly maintained to run efficiently.

## Summary

Assuming the above is correct, this property is 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*

*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  
HTTP//www.youtube.com/watch?v=UR8wRSp2IXs*

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.

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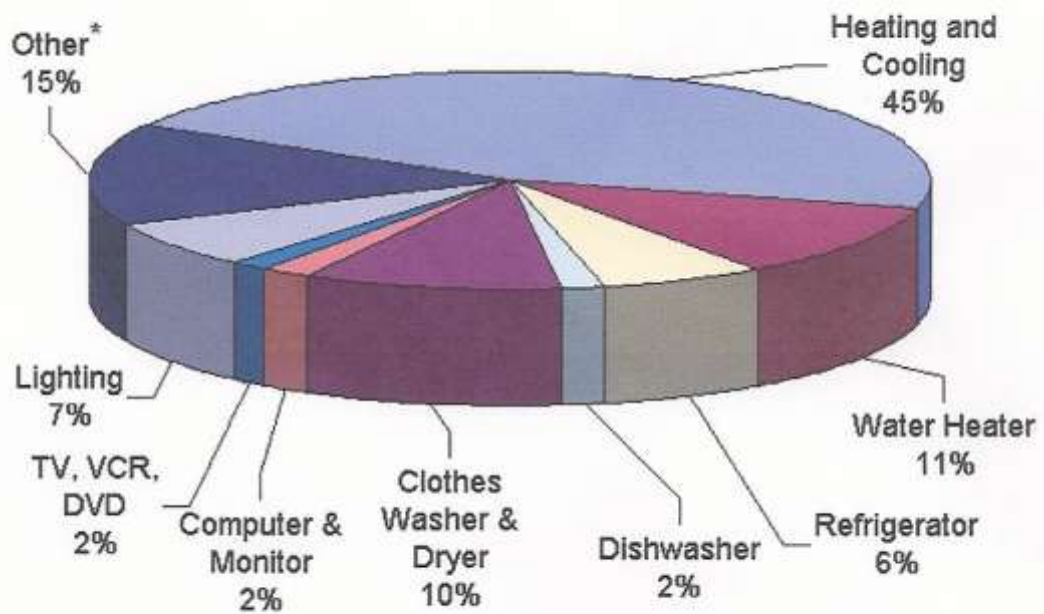
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## What does my energy bill pay for?



\*"Other" represents an array of household products, including stoves, ovens, microwaves, and small appliances. Individually, these products account for no more than about 2% of a household's energy bills.

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## OTHER MATTERS



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

### Security

A security system has been installed. A good alarm system should not only help reduce break-ins but also your insurance. We are not experts in this field and therefore cannot comment further.



Alarm box to front of property



Alarm

**ACTION REQUIRED:** Further information should be obtained from the vendor and the installer.

### Fire / Smoke Alarms

Some smoke detectors were noted. 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 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.

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## **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 type there was asbestos particularly to the roofs. There may also be other asbestos elements such as fascias and soffits, cladding, internal walls and ceilings and ductwork around services.

Asbestos was commonly used post war until it was banned only in the UK in the last ten years or so. 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 that we are not asbestos surveyors.

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

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## **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.

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# ELECTRICITY



*It is strange to think that electricity only started to be used in domestic properties at the turn of the 19<sup>th</sup> 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 Institute of Electrical Engineers (IEE) 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 under the stairs. The fuse board looked 1970's possibly 1980's and better are now available.

**ACTION REQUIRED:** We would recommend the fuse board is changed.

**ANTICIPATED COST:** In the region of £200-£400 ; quotations required.



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.



Earth Test

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**ACTION REQUIRED:** As the property is changing occupancy an Institute of Electrical Engineers (IEE) test and report should be carried out by a NICEIC registered and approved electrical contractor or equivalent.

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 1<sup>st</sup> 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.

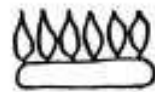
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*There is very little we can check for in a gas installation, we do inspect to make sure there is one and that it has a consumer unit and that the boilers are vented. Ideally you should have a service inspection carried out by an independent Gas Safe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

We are advised that the property has mains gas. The owner believed the consumer unit to be located in the garage but we haven't see it as the garage was full of stored items.

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 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.

# **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**

We were advised by owner that he believed the controlling stopcock is located under the kitchen sink although we have not seen it.

## **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**

There is a possibility there is a water tank in the roof as these buildings we believe were built originally with a water tank although due to the amount of stored items in the roof we didn't physically see it.

## **Plumbing**

The plumbing, where visible, comprises 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 was located in the garage it is manufactured by Baxi and is wall mounted.



Wall mounted Baxi boiler

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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.

### **Radiators**

We noted that there are a fair number of single panel radiators. These may not warm the property to the heat that you desire. In most modern installations double panel radiators are used and often double panel convection radiators, which are more efficient, are utilised.



Single panel radiators



Designer radiator

### **Ten Minute Heating Test**

The owner turned at our request turned on the heating for approximately ten minutes. We checked some of the radiators and these were 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.

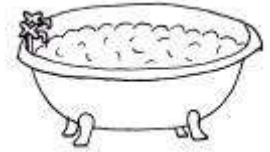
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# **BATHROOM**



*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 fairly new condition.



Unusual double concaved ceiling in bathroom



Bathroom

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.

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# MAIN 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 re-investment has taken place to upgrade the original drainage systems.*

It is assumed that the foul drains from the property discharge into a public sewer; this should be confirmed by your Legal Advisor prior to exchange of contracts, who should also provide information in respect of any common or shared drains including liability for the maintenance and upkeep of the same.

The cold taps have been run for approximately quarter of an hour in the bathroom. 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 or where drainage runs join the main run.*

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 located to the rear outside the kitchen window

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 brick built.



Manhole one

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.

Drains are normally shared in a property of this age as this was common practice in this era of property.

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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.

### **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 soak-aways 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.*

We have been unable to determine the ultimate means of rain/surface water disposal.

In this era of property they are likely to be combined drains which is where the foul water and the surface water combines. These can be a problem during heavy rainfall and peak periods, such as the 9 o'clock rush to work.

Please note our comments with regards to the gutters and downpipes and the possible overflow of the gutter to the front of the property.

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.

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## **OUTSIDE AREAS**

The main focus of this report has been on the main building. If you wish us to do a specific report on the other buildings then you need to instruct us for this separately. We are offering here a brief overview.

### **GARAGES/PARKING**



The property has a single garage and off road parking to the front of the property with a drop kerb.

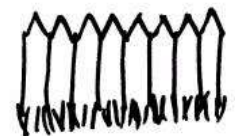


Garage/parking

#### Drop Kerb Defined

A drop kerb is where a kerb is lowered between the road and the pathway/entrance to the property which means there is official access and official parking approved by the Local Authority / Council. The reasons the Local Authority/Council would not approve a dropped kerb is where it is close to a junction or traffic is considered to be fast moving or it is not appropriate to access the road.

## **EXTERNAL AREAS**



### **Front Garden**

The front garden is mainly given over to parking.

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Front garden



Wooden trellis to front is not secure and is balanced in place by a brick and is only held by luck and gravity as far as we can see



Wooden trellis balanced on bricks

## **Rear Garden**

The rear garden is grassed with a patio area, all on a sloping site.



Rear garden



Patio area



Swimming pool



Sheds

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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.

We noted the left hand fence which is normally yours is not in a good condition.



Left hand fence in poor condition

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**

### **Left Hand Neighbours**

We knocked at the time of the inspection but there was no response although they were in and did look to be carrying out some building work.

### **Right Hand Neighbours**

The right hand neighbour did answer the door and advised that he had no issues with the neighbour.

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## **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:

- a) Responsibility for boundaries.
- 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.
- c) Obtain any certificates, guarantees or approvals in relation to:
  - i) Wall insulation.
  - ii) Information with regards to overcladding and vertical tiling to first floor.
  - iii) Asbestos test.
  - iv) Double glazing or replacement windows.
  - v) Roof and similar renewals.
  - vi) Central heating installation.
  - vii) Planning and Building Regulation Approvals.
  - viii) Removal of any walls in part or whole.
  - ix) Removal of any chimneys in part or whole.
  - x) Any other matters pertinent to the property.
- d) Confirm that there are no defects in the legal Title in respect of the property and all rights associated therewith, e.g., access.
- e) Rights of Way e.g., access, easements and wayleaves.
- f) Liabilities in connection with shared services.
- g) Adjoining roads and services.
- h) Road Schemes/Road Widening.
- i) General development proposals in the locality.

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- j) Conservation Area, Listed Building, Tree Preservation Orders or any other Designated Planning Area.
- k) 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.
- l) Our Report assumes that the site has not been put to contaminative use and no investigations have been made in this respect.
- m) Any outstanding Party Wall Notice or the knowledge that any are about to be served.
- n) Most Legal advisors will recommend an Envirosearch or a similar product is 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](http://www.1stAssociated.co.uk) Home Page.

- o) Any other matters brought to your attention within this report.

## **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.

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

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

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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.

## **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.

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## **WEATHER**

It was dry and sunny 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.

## **INSPECTION LIMITED**

Unfortunately in this instance our inspection has been limited as:

We had a limited view of the roof and garage due to the amount of stored items.

We were not able to open up the ground floor or the first floor and we are aware that the first floor has an unusual construction in this type of property.

We didn't have the benefit of meeting you at the property to talk about your specific requirements.

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## **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 enquiries 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.

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# APPENDICES

1. The electrical regulations – Part P of the Building Regulations
2. Information on the Property Market
3. Examples of non traditional houses
4. Non Traditional Housing
5. BISF House Information Sheet
6. Settlement, subsidence and heave
7. French Drain Article
8. Condensation and Cold Bridging Article

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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.

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## 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](http://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](http://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](http://www.halifax.co.uk) and [www.nationwide.co.uk](http://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](http://www.hometrack.co.uk)

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

[www.motleyfool.co.uk](http://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](http://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](http://www.zoopla.co.uk)

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

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**Examples of this type of non traditional house (not your house)**



Originally the property would have had profile metal cladding



Rusting to profile metal cladding



Metal frame house with profile metal sheeting at top and render at bottom. Roof has been changed.



How vertical tiling and new windows can considerably change the look of a property but underneath it is still a metal framed building



Pebbledash render in parts as well as plastic cladding and extensions but again the main part of the building is still a metal frame



Plastic cladding has been put on top of property



Example of plastic overcladding

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Asbestos house that we looked at



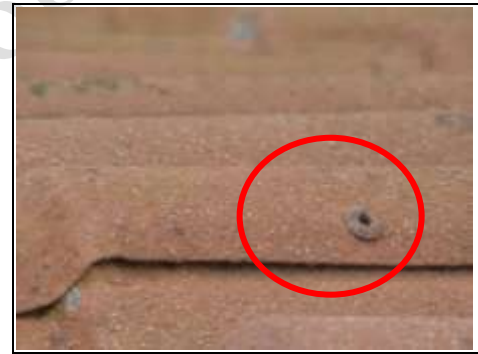
Asbestos house



Close up of edge of profile metal roofing that looks like a tile



Weathering effect to roof



Rivet where you can see roof is riveted together



Example of rusting that we have seen in the roof of a metal framed building



Example of tubular metal frame within the roof of a metal framed property



Example of over insulation of a metal framed property which causes condensation

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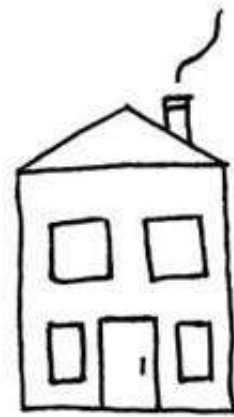


# Non-Traditional Housing

If you need help and advice with regard to independent valuations, property surveys, building surveys, structural reports, engineers reports, defects surveys and structural surveys matters please free phone 0800 298 5424 for a friendly chat with one of our chartered surveyors.

## Non-traditional housing, what is it?

We have recently had a phone call asking what non-traditional housing is, as it had been referred to in a valuation that they had had carried out on their property and the lender had decided not to lend on the property because of this. Yet, from what they could see the property was in good order and they knew the person who had lived in it for the past thirty years, with no problems whatsoever. They went and had a look at the property again and it still looked to them like a traditional house and to be in good order. What was more they liked it and it had a big garden too and they were mystified why they couldn't get a mortgage on it.



## What do Valuers, chartered surveyors and chartered building surveyors mean when they say non-traditional construction?

It would probably be a better term if the term non-typical construction was used. If you think of a house or a flat and think how they are traditionally built, from the Victorian era it is of brick and tile, or brick and slate, or stone and slate, or possibly render and tile, or render and slate depending upon which part of the country you are from this will be the traditional construction in the area of England, Wales, Scotland or Ireland that you live in. Often traditional construction is as local as the county or Town you live in. Nevertheless it is known as traditional construction.



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What is traditional construction? Because equally we could argue that timber frame construction is the traditional type of construction in most areas of the country, but we will leave that argument up for another day.

## **Where did the term non-traditional construction and traditional construction come from?**

We believe it came originally from the mortgage companies as a chartered building surveyor would certainly be more specific with regard to what the construction type is. We believe it was generated by the mortgage companies because they wanted to establish how the vast majority of properties were built and so appeared the terms traditional construction and non-traditional construction.

### **Non-Traditional construction**

Non-traditional construction can really be classed as construction techniques that utilise systems of building, focused on speed and economy of construction. It is the sort of construction that is used where a great deal of housing is required quickly, so it is often used by local authorities to mass build (although today it is also used by commercial construction companies and developers). We have carried out surveys on many different types of non-traditional construction.

This resulted in some one-off designs but the majority of them fall into the category of:

1. Metal frame
2. Concrete frame
3. Timber frame
4. Concrete panel construction
5. Structural insulation panels
6. In situ concrete
7. One-offs

We know we are cheating really with the last category but it is the best way we can think of explaining it.

The absolute bible for this, although it is getting slightly dated is:

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# Non Traditional Houses – Identifying Non-Traditional Houses in the UK 1918 to 1975 BR469

Compiled and Edited by

Harry Harrison, Stephen Mullin, Barry Reeves and Alan Stevens.

Published by BRE Press (Building Research Establishment).

Many years ago the Building Research Establishment (known as BRE) were part of a Government organisation with the Property Services Agency (PSA) which we would say were the undisputed experts on construction and building problems along with a few Universities such as Reading and Salford Universities who looked on the more academic side. However we would also say that things have changed with commercialism.

We cannot recommend this book highly enough although it will set you back several hundreds of pounds, possibly worth using a search engine to see if you can pick up a second hand copy somewhere.

## After the Great Wars we needed houses and homes

In the UK after World War I and World War II our housing stock had been bombed and made safe by being demolished so there were fewer houses. There had also been a lack of maintenance over the war years, as the workforce had been at war, and then the armed forces men were returning and they needed houses quickly. Various methods of non-traditional construction were proposed and built in the 1940's, 1950's and 1960's.

Also, this type of construction has been used during boom years, such as the early 1970's and the late 1980's, where it was hard to build quickly enough for supply and demand. Our comments relate to the UK, there are even variations in the UK.

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## Non-traditional construction by another name

After the war years we had to build fast and we used many new forms of construction techniques. We will name a few here; these names may have been given to you when you looked at buying a house. We will carry out a brief description of them or you could telephone us on 0800 298 5424:

### Airey Houses

These have a concrete plank externally supported on a pre-cast concrete frame with steel tube reinforcements.



Airey houses were made up of concrete planks and are now generally being knocked down and rebuilt as they are not habitable



Street view.

They were named Airey houses after the Member of Parliament that was involved with them rather than the fact that the wind blew through them and they suffered badly from condensation.

### British Iron and Steel Federation House known as a BISF

These are relatively common although they are now very well disguised with brickwork being built around them. They are a lightweight structural steel frame.



British Iron and Steel Federation House (BISF)



Asbestos roof on BISF house

It may look traditional

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## construction even though it is non-traditional

With the purchasing of these houses over the years and the need to get a mortgage there have been many ingenious ways of making these houses mortgageable as per the following photographs of houses where we have carried out surveys; these are the ones that have been spotted by mortgage company valuers:



Modified non-traditional house



Brick clad modified non traditional house



Brick cladding and other alterations make a non traditional house mortgageable

## A mortgage company surveyor may miss a non-traditional house construction

We have now been called in several times to do a Building Surveyor where the owners have not known that the type of construction is non-traditional construction even though they have had a mortgage company valuation. Unfortunately this is due to a lack of knowledge and experience with mortgage Valuers. After all, valuation experts are not building construction experts. We have come across the issue, if it looks traditional construction even though it is constructed in a non-traditional way it may be counted as traditional construction! This tends to be the case where a Valuer has failed to notice the construction type and when we come to carry out a building survey we then identify it. Unfortunately this then means that whoever is purchasing has a very limited mortgage market available to them.

## Who lends on a non-traditional construction building?

The answer is the companies interested in lending in this market vary depending on many factors. What is also true is that lenders do vary their lending policies and they may be lending on it one minute and then not lending on it the next.

## Modern timber frame houses – are they non-traditional construction?

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It could be argued that the houses being built, in what is known as modern timber frame, are as far away from traditional construction as houses that have been classed as non-traditional construction! They have, for example, been built out of concrete.

## **And this is where non-traditional construction gets really confusing**

However, this is where non-traditional construction really is confusing as some non-traditional construction techniques look very similar to traditional construction techniques and can only be identified by the trained experienced eye (we are more than happy to chat about this, please free phone us on 0800 298 5424). As mentioned, even more confusing is there are some non-traditional constructions that are accepted by the banks, building societies and mortgage lenders and others that are not, assuming that the bank valuation surveyor spots them. It is so important to know whether banks, building societies and mortgage lenders will lend on this type of construction if you are considering purchasing.

## **Is it the way the structure works that makes a building traditional or non-traditional construction**

To expand on this, a traditional old style timber frame property is built of oak to a one-off design. It certainly could be classed as the original traditional construction, as most houses were built in this form. However, in more recent times traditional construction has been thought of as brick and tile, or brick and slate, or stone and tile, stone and slate, etc, as we mentioned earlier.



When the original non-traditional housing was built there wasn't too much thought given to making it look externally like a traditional building. Therefore, some complained that they seem to have concrete finishes, be it painted concrete, which looks similar to render, or concrete planks, as in the Airey buildings. We would argue as these were easily identifiable and stood out they were more a target for mortgage lenders not lending on non-traditional construction that looks like traditional construction.

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## Modern timber frame construction that is non-traditional but will be lent on

Let us first of all explain what modern timber frame construction is. They are very much an engineered timber frame that is an absolute minimum of timber and maximum strength characteristics. The majority are factory made and factory assembled and are built in mass, rather than being a one-off design and they have an external cladding for protection, often brickwork, although in more recent years we have noticed in our surveys that render has been used, or cladding panels of timber and also plastic lookalike timber. Modern timber frame properties are also finished with a membrane to stop any dampness from the external walls getting through (we have seen in our surveys where it does happen it can distort or rot), as it can be in a traditional timber frame property.

The whole idea behind a modern timber frame construction is completely different; we would term a water construction. This is completely different to the traditional timber frame property that was built to breathe. However, the modern timber frame property is then clad with brickwork or stone or cladding, such as vertical tiling, and looks very much like a traditional property.



The whole construction is based around the economics of cheap construction and fast construction, and this type of construction is very much assembled, rather than built by tradesmen, the de-skilling being another element in the economics of the construction. However when all is said and done the mortgage companies, such as the banks and building societies do lend against it.

We have seen during our surveys other more recent innovations within the modern timber frame market, such as using composite wood products for floor joists and also for the flooring, together with an increased use of external cladding, as it is more economical and faster to put up than brickwork.



**Not lending against non-traditional construction**

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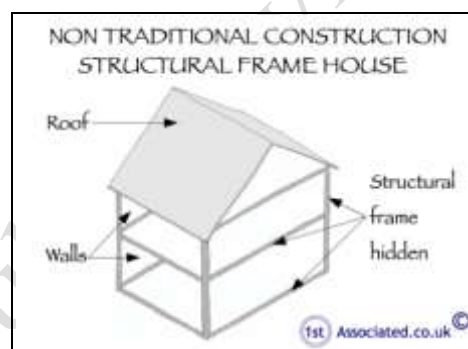
Interestingly, the techniques utilised for non-traditional construction after the war years tended to use more robust materials and more innovation. They fall into three categories:-

- Structural frame
- Large panel construction
- Innovative construction

## Structural frame

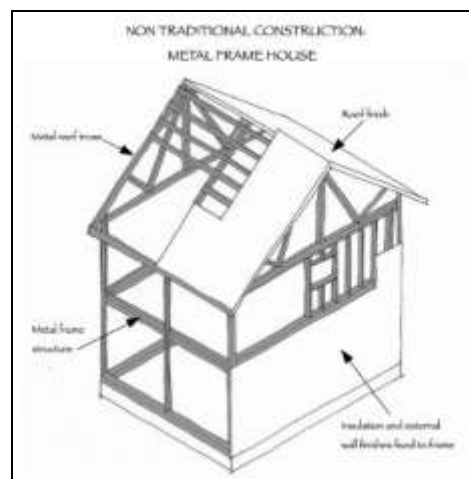
This was very much where a structural frame was erected. The walls were then hung off it. The structural frames can be metal, concrete or wood. The danger factor for a mortgage company lending on this is if there is deterioration within the structural frame that is hidden, we would pick this up during a survey therefore it is critical that a Building Survey is carried out prior to purchasing a non-traditional property.

A lot of Local Authority housing was built in this manner, and other National companies requiring housing, such as the Coal Board, and utilising mass production techniques lowered the cost of the housing. These types of houses also tended to use techniques that we hadn't used before in the housing market, although often we would use them in the commercial market.



## Metal Frame Structure

Below are photographs of a metal frame house that we have recently surveyed.



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Painted cladding to non-traditional property



Close up of old metal windows in a non-traditional house

## Features to look out for in non-traditional houses

We thought we would give you some tips on the sort of things to look out for:

### Chimneys

Asbestos was a very popular material (yes really) when non-traditional houses were being built.



Asbestos original chimney non traditional house



New chimney on a non-traditional house

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## Soil and vent pipe



Original asbestos soil and vent pipe  
on a non-traditional house



New plastic soil and vent pipe on a  
non-traditional house

## Roof Construction

It is important to get in the roof and have a close look or for you to employ a chartered building surveyor that will get in the roof and have a close look (Valuers no longer need to view roofs when carrying out valuations – did you know that?). The below photos are what our surveyor saw on a recent survey:



Rusting to a lightweight metal  
frame or damage or deterioration to  
the metal frame of a non-traditional  
house



Some fixings replacements/repairs  
to a non-traditional house

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## The adding of modern things can affect the building

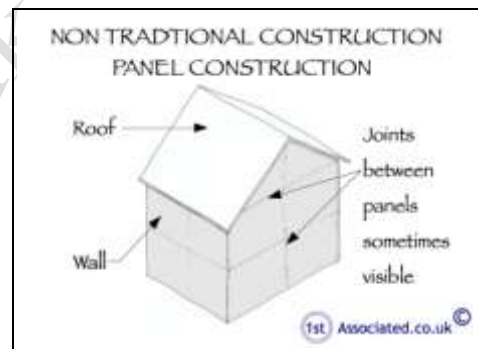
It is very common these days to have a shower/bathroom with an extract system. Does that extract system discharge into the roof or does it discharge out of the building? If it discharges into the roof then there can be problems with rusting and corroding of metal and dampness to timber.



Extract vent to outside often discharges into roof which is essential that they do not in this type of roof

## Large panel construction

This, as the name suggests, is where rather than building small brick after small brick we used large panels, usually of concrete, which in themselves were a storey height and similar width, about two and a half metres square, and they literally interlocked. There have been problems with the reinforcement used in these and the connections of them, but we haven't come across these problems in the many years that we have been surveying.



Large panel concrete non-traditional house



Jointing to a non-traditional house



General view of a development of non-traditional houses

## **Innovatory construction**

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We couldn't think of a better title for this section, but we basically mean constructions that used innovation to look at building houses in a completely new way. An example is the Wimpey no fines concrete system, which is popular and, as far as we know, mortgage companies will lend upon it. It utilises almost a moulding system using form work. There is also pod construction, which is drilling pre-fabricated units, craned and positioned into place and then an outer protective shell put around them. Lots of this type of construction was originally carried out by local authorities, as they had the pressure on them to build a large number of houses, and more recently by commercial companies, which had the pressure on them to make profits or returns for their investors.

## **Non-traditional houses becoming traditional houses?**

We have seen during our surveys over the years there has been a need to convert non-traditional housing into traditional housing. It could be argued that the right to buy Council Housing stock made this an important factor, as it is those people who required a mortgage that required the amendments, as in many cases there was nothing physically wrong with the properties.

Also, large companies holding a large amount of housing stock, such as Council Housing and Housing Associations requiring the housing to be brought up to more modern standards for thermal efficiency, etc, have utilised innovative ways of upgrading (although we are not sure whether that's the right term). Their housing techniques normally involve a cladding system to improve thermal efficiency, along with the check on the structural elements. We have surveyed some of them where they practically re-build the original buildings, which ironically can be very difficult. Whilst we don't know the exact figures we imagine it would be almost as costly as building the property from scratch.

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## Whistle-stop tour of the non-traditional housing market

There are whole books dedicated to this area, so an article such as this can hardly present the subject of non-traditional housing in detail, but we hope this has given you a flavour and an interest for the subject.

If you truly do want an independent expert opinion from a chartered surveyor, or a chartered building surveyor and are particularly interested in carrying out work on modern timber frame properties and if you are buying such a property please look at our survey examples. We feel our surveys are quite unique, as they are written to your level of knowledge. The surveys include photos and sketches and definitions. The survey will also include an action required section and an estimate of costs in the executive summary. We are more than happy to meet you at the property whilst carrying out the survey to discuss any specific issues you may have or have a general chat about what we have found at the end of the survey. Please contact 0800 298 5424 for a chartered surveyor to give you a call back.

For examples of the quality of our surveys please use the following links:

<http://www.1stassociated.co.uk/building-survey/rbs-marlow2.pdf>

<http://www.1stassociated.co.uk/building-survey/rbs-kingston1.pdf>

We hope you found the article on Non-Traditional Housing of use and if you have any experiences that you feel should be added to this article that would benefit others, or you feel that some of the information that we have put is wrong then please do not hesitate to contact us (we are only human).

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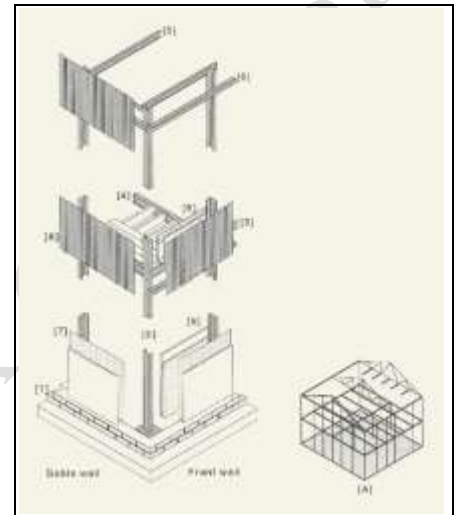
# BISF House Information Sheet

## British Iron and Steel Federation

This article has been written by a Chartered Surveyor based upon our findings and experience over the years of surveying these types of properties. If you would like to discuss BISF properties further with us please free phone 0800 298 5424 for a friendly chat.

### Introduction to BISF Houses

BISF stands for British Iron and Steel Federation. The BISF house is a pre-fabricated steel structure originally built with a shallow pitched asbestos roof, panelling to higher level and render to lower level. Between the metal frames are timber struts and insulation with an inner plasterboard or hardboard which originally had a design life of between ten and twenty years.



BISF house structural detailing sketch

### Non Traditional Constructions Overview

There are considered to be around one million properties built from non-traditional construction. The Building Research Establishment (BRE) have over 500 systems listed between 1900 and 1976 excluding RAT Trad and post 1976 timber framed construction. There were approximately 35,000 BISF houses built over a period of 6 years. It was only exceeded by non-traditional buildings of aluminium bungalows which were 55,000, Easy Form which was a concrete system which had 90,000 built and Wimpey No-fines which had 300,000 built. BISF buildings do tend to stand out. They are predominantly built by Local Authorities.



BISF house many years later



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BISF property with metal profile sheet roof  
(has asbestos roof been removed or has it  
been overclad?) and the 1st floor sheet at  
first floor level and render at ground floor  
level and modern styled double glazed  
windows.



BISF house with a profile metal roof, (again  
has asbestos roof been removed?), plastic  
cladding at first floor level (is there insulation  
between the profile metal sheets and the  
plastic cladding that is causing condensation)  
with pebbledash render at ground floor level  
and modern double glazed windows

## **BISF Houses were built with a purpose and a set timescale in mind**

It should be remembered when looking at these buildings that they were after the War to fulfill the requirements of a lack of housing. Equally they also fulfilled the need for work and allowed the factories that had been producing things for the war effort to then change and use these buildings.

### **Is a BISF house unmortgageable?** **It depends on when you ask the question!**

It is probably more true to say that they are difficult to mortgage. With the Right to Buy Scheme in 1979 five million council house tenants were given the right to buy their homes under the Conservative Government proposal. Those who had lived in their house for three years got a discount of 33% and then it increased in stages, people who had been tenants for 20 years got a 50% discount. Michael Heseltine, the Secretary of State for the Environment said that the Bill laid the foundations of social revolution allowing people to own their own homes. Roy Hattersley of the Labour Party fought it. Most importantly the Government said they would offer tenants 100% mortgage from the Local Authorities. It was considered a vote winner for Margaret Thatcher in 1979 and 1983 and Labour dropped their official opposition to it in 1985 and by 2003 1.5 million council houses had been sold.



The reason why the properties are unmortgageable outside of Council mortgages are:

1. Corrosion and deterioration of the frame that is hidden by the structure
2. Properties are poorly thermally insulated for today's standards
3. Noise transfer between buildings

Improvements to bring up to current standards could involve a thorough check of the steel frame, replacement of the asbestos roof and increase in insulation without promoting condensation and a reduction in the noise transfer between the properties with the addition of new double glazed windows. We have had costs quoted at

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between £20,000 - £50,000 depending upon the alterations already taken place and mortgage company requirements.

Knowsley Housing Trust advise costs in 2004 (however bear in mind that they do not need to get a mortgage) as:

Structural render	£8k
Roof insulation	£4.3k
Windows	£2.1k
PVC doors	£1k
Fascias and soffits	
and rainwater goods	£0.5k
Bathrooms	£0.9k
Central heating	£2.3k

As the vast majority of houses sold in the UK are mortgaged it is essential that these properties are mortgageable to sell to the majority of the market.

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## **Specific Problems on BISF Houses**

### **BISF house asbestos roof problems**

When deteriorating asbestos can be a health hazard, complete replacement recommended. The roof material has to be appropriate for the strength of the roof structure and in our experience they need replacing with a profile metal sheet and insulated. However this also needs to be ventilated to prevent corrosion from occurring.



### **BISF house steel structure problems**

Risk of deterioration to the base of the steel structure and around the window areas and high humidity areas such as bathrooms and kitchens.

### **BISF house walling problems**

Profile metal sheeting to the upper areas and a render on an expanded metal lath to the ground floor areas with a timber frame and a fibreglass insulation and plasterboard. The frame is formed with rolled steel angles and channels. The roof is formed from tubular steel trusses which we believe are mock truss centrally (this needs to be checked and confirmed).

### **BISF house insulation problems**

Improvements in the insulation can result in condensation. External structural insulation panelling is recommended which is difficult to do (unless both yourself and the neighbouring property are carried out otherwise there will be a step in the external wall).

Strutherm is often quoted as the only suitable insulation rendered panel system as this is accepted by ninety per cent of the mortgage companies (obviously subject to variations in the market) and is available with a long term guarantee.

### **BISF windows and doors problems**

Originally steel frame timber glazed. Now the majority have been replaced with double glazed windows.

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## BISF party wall problems

The dividing wall between properties. We have seen quoted as 30mm thick or as a studwork.

## Voice of Experience

We recently spoke to a contractor who has spent several decades renovating the steel framed properties for a range of clients from Local Authorities, property developers and individuals. It is refreshing to hear first hand the issues that they have come across over the years. We thought we would relay some of these in this article.

The first myth or urban rumour is that the BISF buildings were temporary buildings for only ten years, they are meant to have a design life of far longer. He concurred with our findings that originally they had asbestos roofs with metal cladding to the upper sections and render to the lower. Over the years they have done almost anything and everything to these properties. He had also been involved in some cases where he had looked at them for loss assessors where they had burnt down and they had renewed the structures inside out. It has been the main focus of their business over the past three plus decades. Interestingly he advised that he had come across asbestos which had been covered over in the roof but the majority of times it has been removed. He has come across the phenomena of insulating the underside of the roof, i.e. the pitched section which is what we have found. This is quite common although he is uncertain as to how effective it is and indeed thought that with the wind blowing through the rest of the structure it was better to put the insulation actually in the ceiling void of the upper floor as we traditionally do. He made interesting comments that he had seen a variety of lightweight roof structures over the years. They do need to be lightweight due to the way the roof is constructed. The majority of them have metal sheeting as protective coating.

With regard to the wall cladding he advised that he had seen many different ways of looking at wall cladding over the years but the most cost effective was to use the existing cladding as a backing for insulation and then add a cladding onto that. He has seen everything from brick to stone to timber finishes. He commented that cladding was popular although he wouldn't recommend it due to it always seeming to discolour if it was plastic and/or need regular maintenance if it was timber. He also advised that the lower sections were often best in a different material although he wouldn't recommend render which was what they were originally carried out in. This was because of the differential movement between the steel frame and the render structure left cracks. It was often best to have some form of cladding or different materials to the upper parts and brick to the lower parts. He also

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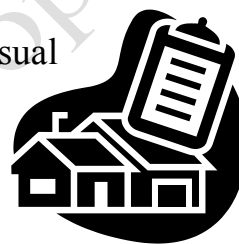


commented that if they were working on a lot of houses for a landlord such as a Local Authority or Housing Association then they would tend to mix and match them as each house would have an individual look and overall made the general look more appealing. Interestingly he said whilst the steel frame structure is strong enough to resist fires (and remember he has actually seen these buildings after a fire) he commented that you do need to be careful with the amount of weight that you hang from them.

Of course he commented that he would be more than happy to come and view any BISF property to comment further. Most importantly we think is that he would actually be able to give a firm price on the amount of work due to their experience.

### **Inspection**

Surveyor's inspections can take the form of a non intrusive visual inspection or in the form of an intrusive/destructive inspection where the walls are opened up exposing the framework. Some reports say the use of borescopes however in our experience borescopes do not give a suitable view of the area so we would recommend opening up of the structure.



view

### **BISF Information and Action Required**

You need to establish the exact mortgage requirements on the property at the time that you wish to purchase as these will change from time to time.

### **Independent Chartered Surveyors**

If you truly want an independent expert opinion from a chartered surveyor on system buildings then we have experience with the BISF system building and other system buildings. We can help you get a mortgage on these and give impartial advice as to whether you should be getting a mortgage on them, as well as carrying out a property survey, an engineer's report or whatever else your mortgage company has requested. Please contact us on free phone 0800 298 5424 for a chartered surveyor to give you a call back.

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## **Surveying articles**

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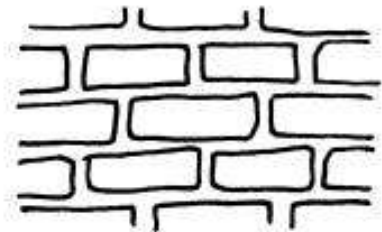
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# Settlement, subsidence and heave and the part clay soils play in this

If you would like further advice on any then please phone 0800 298 5424 for a friendly chat. If you need help and advice with regard to a structural survey (or building survey, as it is now commonly known; structural survey being the old term for it) or a structural problem or an engineers report, or you need a report specifically tailoring to your requirements please do not hesitate to call us for a friendly chat on 0800 298 5424.

## The magical properties of clay

Clay has several unique properties. It can both cause problems when it is a clay soil that your house is built upon and be useful when it is used for the bricks that your house is made of.

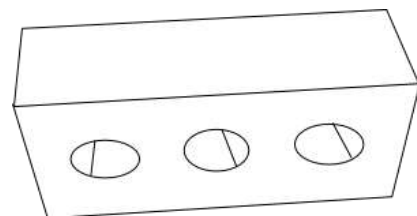


Clay expands and contracts, depending upon its moisture content. It is at its bulkiest at 40% to 60%, however, it changes form if it gets wetter or dryer. It is this change of its bulk that causes problems. When the clay soil gets too wet the clays bulk becomes larger and almost pushes the property out of the ground. This is known as heave. When the clay dries out it becomes dust like, then we get settlement of foundations and subsidence of the building, as its bulkiness has reduced considerably.

Its ability to change size wouldn't be such a problem if it weren't that most London properties are built on clay, and there are many areas of clay throughout the country, such as Bedfordshire and Peterborough, which, interestingly enough, are also known for brick making.

## Finding out if your property is built on clay soil

There are several ways of finding out if your property is built on clay soil.



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## Cracks

If the property has historic cracks it may be that it is built upon clay. It is best to check before you panic. You can do this by looking at maps geological maps or ringing up your friendly insurance broker, as they have a postcode index as to what areas are considered high risk with clay and which aren't. However, we must add that these maps are quite general and that when we were on a course many years ago we asked how these maps were originally made. We were advised that students were employed during their summer holidays, so the reliability of them, it could be argued, is limited for the purposes of identifying if clay is under your building, as they were originally produced to help farmers.

## Clay test

This is what a good surveyor would do if they had come to investigate problems with your foundations and the owner of the property was happy for them to dig up the garden! We take a lump of soil from the garden; this should be approximately the depth of the foundations. If it is Victorian or Edwardian property it may be a lot less, in a modern property it is likely to be 1 metre to 1.2 metres, to even 1.4 metres deep.

On a summer's day you can leave the lump of soil in the garden for it to dry out in the sun. When it dries out if it becomes powdery and much lower in volume then it is clay. Equally, if it rains and it becomes a larger volume then it is clay. Also, if it not warm you can leave it inside on the radiator. We believe (although we would need to check it) that a growth or reduction of approximately 30% (for some reason 28% is ringing bells). This type of clay is known as shrinkable clay.

## Not all clay expands and contracts

We would add that not all clay expands and contracts. The deeper clay tends to be the more stable and harder clay and therefore doesn't expand to the same extent.

## Clay that is used for brick making

We thought we would just add something about clay that is made for the use of brick making.

### Old soft red bricks

The older bricks, were possibly even sun baked rather than fired, used a softer red clay. They have their own oil so they can affectively cook themselves.

You will also notice that it is the softer red clay bricks, even up the post-war era, that tend to be affected first by spalling.

### Blue clay

Blue clay is fairly well known. This type of clay tends to be the harder clay and produces harder bricks and you may find bricks made out of this clay. A classic brick, and generally considered the hardest brick, is the Accrington brick and you would have to dig deep for this clay, i.e. normal clay would be dug at about 30 feet, or the metric equivalent!

### Yellow or white clay

A yellow or white clay, that is used in a London stock brick, is harder than the soft red bricks but not as hard as the blue clay bricks.

### Fletton brick

The one thing that used to confuse us for many years is what is the difference between a Fletton brick, a stock brick and a common brick. A Fletton brick, we believe, has its origins in Fletton near Peterborough, where bricks are produced in such quantities that it became the common name. Stock bricks tend also to be a common brick, but it specifically relates to bricks that don't have their own oils to fire, they would typically have to have methane today and years gone by coal dust to fire them, where as the soft red bricks tend to have their own oil that they can fire in. Therefore, you tend to find many of the older properties have a red brick as they were fired in the "sun. The term common brick is a generic name.

### Silicone brick

This isn't a brick at all, but, we believe, is made from concrete.

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# **French Drain**

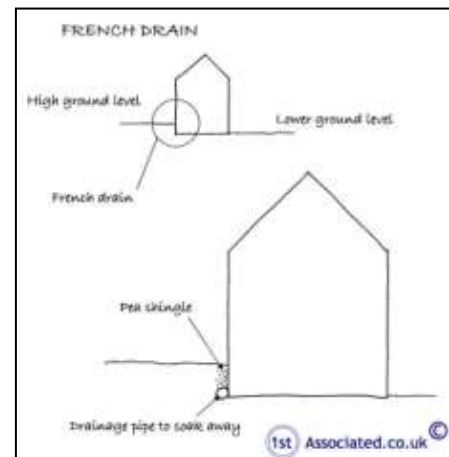
## **Using a French drain to resolve a dampness problem**

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, 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.

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### **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 sand 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.

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# Condensation and Cold Bridging

## What is Cold Bridging?

### What is cold bridging and how does it work?

Cold bridging is a term and a problem we feel will become much 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.



Post war / 1950's property that cold bridging can be a problem in.

### 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. 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.

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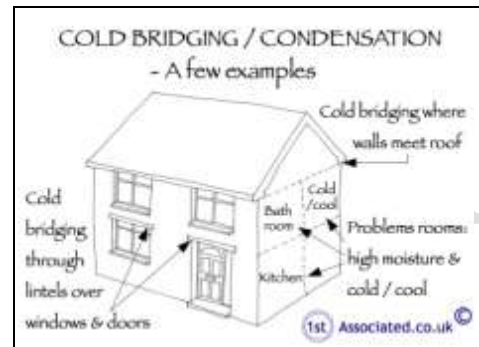
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## Certain types of buildings are more susceptible to Condensation and Cold Bridging

### Here is our sketch on Cold Bridging

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 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. If you buy a 1960's property for example, with concrete lintels that cause cold bridging, this is a characteristic of the property and it is very difficult to change. However not only could it be a characteristic of the building it could also be caused by alterations that you make to the building.



1960's properties built with concrete lintels that can cause Cold Bridging

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## To give you some examples of Cold Bridging

As mentioned above typically Cold Bridging can be caused by lintels and also by beams (which effectively are big lintels). These were very commonly used in 1960's and 1970's buildings and can lead to condensation over doors and windows. We mentioned a 1960's building but here are some examples of concrete lintels that were commonly used in the 1970's and which today have caused cold bridging over the door and which in turn has led to condensation and deterioration of the paintwork.



A rear door to a 1970's building.  
Can you tell where the cold bridging would be in this photo?

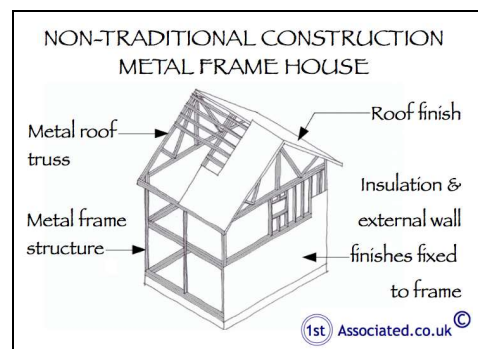


A close up view showing there is a concrete lintel over the door and window. This is where the cold bridging occurs causing condensation inside.

Cold Bridging can also occur on metal lintels. We note that some modern metal lintels now have insulation in them which we assume is to reduce cold bridging.

## Non-traditional buildings and cold bridging

There is one specific category that has more than its fair share of problems and this is buildings that were built from a steel frame and these are known as non-traditional buildings. Unfortunately today we have increased insulation and increased heat in houses and the way we use them. From what we can see there is more likely to be condensation problems.



Non-traditional construction

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You do need to check if you are buying a non-traditional construction house that the surveyor understands the problems and will definitely look in the roof as this is normally the place where you can best see what is happening to the structural frame with rusting, etc. Ideally, and we would recommend, the walls need to be opened up to check the structural frame at key points such as the floor, the first floor and the roof level.



Example of rusting that we have seen in the roof of a metal framed building

## Commercial properties suffer from Cold Bridging too

Commercial buildings are often built using structural frames. These frames are usually constructed of concrete or metal or sometimes both. The structural frame forms the skeleton of the building as you can see in the adjoining photo. Sometimes the structural frames, particularly, the concrete ones can suffer from Cold Bridging which causes blackening of the concrete frame.



Cold Bridging in a commercial property with a concrete frame.

This can look like the roof has leaked and can lead to wrongly diagnosing a problem as being a roof leak. This can result in great time and expense being wasted repairing a roof that was not leaking and indeed in some cases has led to a new roof being fitted which has costs tens of thousands of pounds. This happened because it wasn't understood what the problem was.

## When is Cold Bridging Likely?

In our experience we have seen cold bridging occurring in

1. Georgian and Regency properties
2. Victorian and Edwardian properties
3. Pre-war properties
4. War years construction properties



Georgian style properties can suffer from cold bridging and condensation. However in our experience it is more likely to be the new extensions or alterations that are added to them

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5. Post war construction properties up to the 1980's.
6. Commercial properties that use structural frames particularly concrete frames.

We find that cold bridging and condensation occur most commonly where a property has a relatively high heating level, a good level of insulation and where it has many occupants.



Post war 1960's properties with plastic double glazing without trickle vents that have been added can cause condensation.

### **Problems with 1970/1980 era properties relating to Cold Bridging**

Let us take a look at the 1970's/1980's era of property to give an example of the problems we have come across with this era.

The 1970's is an era where we had just begun to think about insulating due to the oil crisis and where we added insulation into our structures  
For example with;

1. cavity wall insulation or
2. double glazed windows.

This meant they were warmer which has meant the significance of a lintel, over a door or window, being colder and allowing the transfer of coldness becomes much more important. This results in condensation that we commonly see above windows in this age and era of property.



1970's property with cold bridging to the roof beams and the lintels



1980's property, cold bridging was found in the lintels

### **How to solve Cold Bridging**

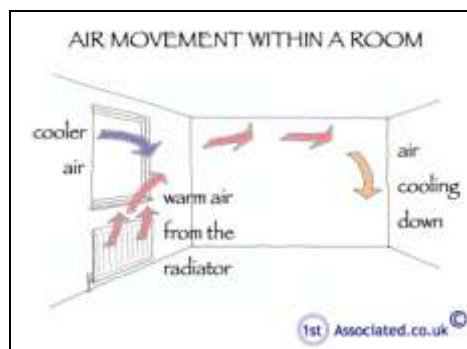
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The difficulty is resolving cold bridging. Normally, where condensation is involved, if you get the balance of warm and coolness of the air, ventilation and movement you can reduce considerably the chances of condensation. Airing the room by opening the windows, which seems to have gone out of fashion, can help considerably.



## Where do we most commonly find Cold Bridging?

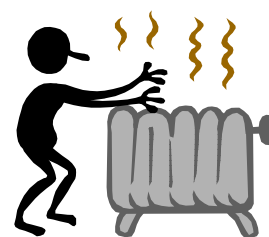
Our thoughts on this have very much changed as we used to say that cold bridging was typically found in properties from the 1960's/1970's. However we are increasingly finding it in a broader range of properties, particularly Victorian properties, where people are trying to live to modern standards of heating and insulation without understanding that the properties need to breathe as well. We have also found cold bridging in properties where extensions have been carried out and where the extension has been built to a different standard to the original property.



Victorian properties that have been extended and altered over the years with new thermal properties that can cause Cold Bridging because of the mix of old and new standards

## Is your life style 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. 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.

## Expert witness case, what is an expert witness?

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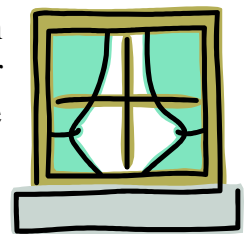
This is where you employ someone who is a specialist within a field, such as us as Chartered Building Surveyors, who comment on problems of condensation within the property. We have been involved in several court cases as expert witnesses where landlords are being taken to court over the condensation that is occurring in their property. The expert witness case looks at how this condensation is occurring and if it relates, for example, to the occupiers' lifestyle or whether it relates to the way the building was constructed and where there are, for example, cold bridging elements. When discussions of this nature take place in court they can be very expensive.



Older style London converted flats with property problems such as Condensation and Cold Bridging

### 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.



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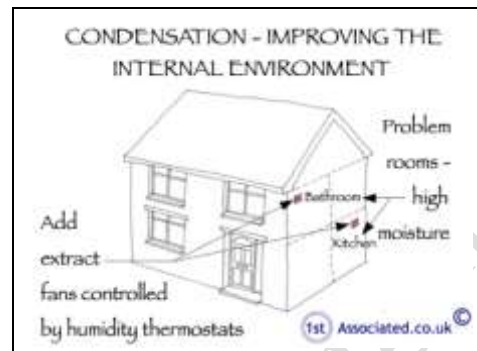
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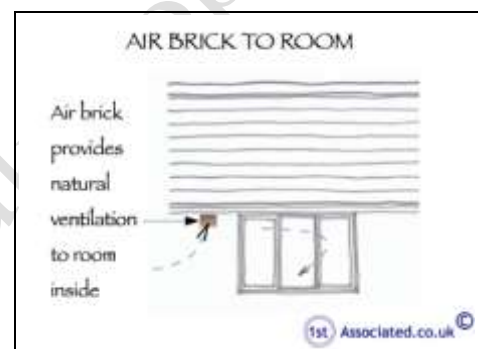
## Design of the Building

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.



## 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.



Air brick may not ventilate room enough

## What's happening in brand new housing?

It could be argued that we still do not know what is happening in brand new houses that are highly insulated. We have been involved in one legal case where a modern heat exchange system was being used where it was simply not possible to have a shower in the property without causing condensation, even with the windows open and taking other measures. Our concern is what is happening to this condensation? It was not visible on the surface so is it visible as interstitial condensation? We still think there will be problems to be found in modern properties.



As Chartered Surveyors we like to see things that have been in use for some time before we would recommend them.

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

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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.

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).

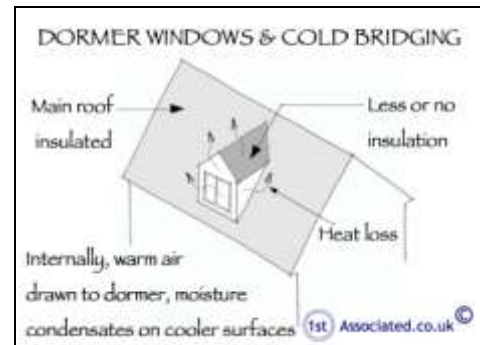


Sliding sash windows can swell in the winter months

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.

## Extensions and Cold Bridging

Increasingly we are coming across problems where properties have been extended and it has not been planned or thought through properly. We have come across dormer roofs that simply have no insulation so any heat in the property is going straight out of the dormer roof. We have also come across property problems where an extension has resulted in colder areas within the property and which although not problem areas, as such, our clients have found them not nice areas to be in. It is not a great outcome if you have just spent tens of thousands of pounds on a new extension that you are not happy with.



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