JOB REFERENCE: ES42968/RBSNT2/MH/MB2

RESIDENTIAL BUILDING SURVEY

Dyke Pre Cast Concrete Construction House
Shropshire

FOR

Ms X

Prepared by:

INDEPENDENT CHARTERED SURVEYORS

CONTENTS

INTRODUCTION

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

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

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

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

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

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

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

REPORT FORMAT

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

GENERAL/HISTORICAL INFORMATION

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

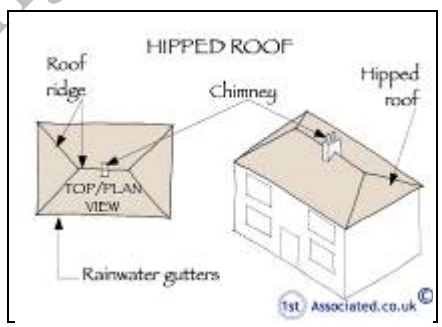
TECHNICAL TERMS DEFINED

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

A PICTURE IS WORTH A THOUSAND WORDS

We utilise photographs and sketches to illustrate issues or features. In some photographs a pencil, pen, circle or arrow has been used to highlight a specific area. We also use sketches to give guidance and clarity on various issues in the property and we use them to help you understand the issues, scenarios and situations better.

Hipped roof



Example sketch

ORIENTATION

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

ACTION REQUIRED AND RECOMMENDATIONS

We have used the term **ACTION REQUIRED** where we believe that there are items that you should carry out action upon or negotiate upon prior to purchasing the property. Where a problem is identified, we will do our best to offer a solution. However, with most building issues, there are usually many ways to resolve them dependent upon cost, time available and the length of time you wish the repair/replacement to last.

SYNOPSIS

SITUATION AND DESCRIPTION

(We do appreciate you live in the property however we feel it is best to record the situation and description on the day of our survey for completeness of the report)

This is a two storey semi-detached property (left side) with a garden and a driveway to the front. There is a good sized garden to the rear that has a patio area adjacent to the house which then drops away as the garden slopes away from the building.

Non-traditional building

There are many different types of non-traditional buildings. These are generally split into categories of:

1. Metal frame – a metal frame supporting the structure.
2. Pre-cast concrete - cast in a factory and then brought to the site.
3. In-situ concrete - cast at the site.
4. Timber frame – a timber frame supporting the structure.

Each of these main categories then has many, many different types.

Type of non-traditional building

This is a pre-cast concrete building. You advised that this is a Dyke non-traditional construction building. There were only 450 of these houses built according to Building Research Establishment (BRE) information. We could see the pre-cast frame within the roof but other than that there is very little indication of the construction type as it has been covered with external wall insulation (EWI).

This type of non-traditional construction tended to be built by Local Authorities/Councils/Social Housing and statutory bodies such as the National Health Service/ Police/Mining.

It should be noted that this type of non-traditional construction has been unmortgageable for some time meaning it is a cash purchase only and as such the market will be limited when you go to sell. We have included within the Appendices a designated defective housing list which includes the Dyke CCC construction. This is taken from the Building Research Establishment list that was produced many years ago. You will see there are approximately forty houses that have been designated as having inherent defects and therefore are unmortgaeable.

You advised you have lived in the house since 2000 and believe the house was built in the mid 1950s. If the exact age of the property interests you your Legal Advisor may be able to find out more information from the Deeds.

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

Putting Life into Perspective!

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

1950's	Average price of a new house was £1,891 (around £65,000 in today's money) and average salary was £10 per week (approximately £339 today). *[Source: Sunlife.co.uk]*
1952	Princess Elizabeth becomes Queen at the age of twenty five.
1953	The Double Helix in DNA is discovered by Watson and Crick.
1954	Roger Bannister breaks the four minute mile barrier.
1955	The Queen opens first permanent terminal at London Airport
1956	The TV remote control is invented by Robert Adler
1957	Celebrations in Ghana as it becomes independent from the UK
1958	Ian Donald invents ultrasound to examine babies in the womb.
1959	UK postcodes introduced after a trial run in Norwich
1960's	The average house price was £2,530 whilst the average income was £960 per year *[Source: Sunlife.co.uk]*

LOCATION PLANS

EXTERNAL PHOTOGRAPHS

Front view


Rear view


Left view


Street view


Front garden/parking area
~ Aerial View - 360 Photo ~


Rear garden
~ Aerial View - 360 Photo ~

ACCOMMODATION AND FACILITIES

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

Ground Floor

The ground floor accommodation consists of:

1) Hallway and stairs
2) Lounge
3) Kitchen
4) Dining room rear right
5) WC
6) Outbuildings

First Floor

The first floor accommodation consists of:

7) Landing
8) Front left bedroom
9) Front right bedroom
10) Bathroom rear left
11) Rear right bedroom

Outside Areas

There is a garden and a driveway to the front. To the rear is a good sized garden with a patio area adjacent to the house.

INTERNAL PHOTOGRAPHS

We appreciate you live in the property but this is to offer a record on the day of our survey.

Ground Floor

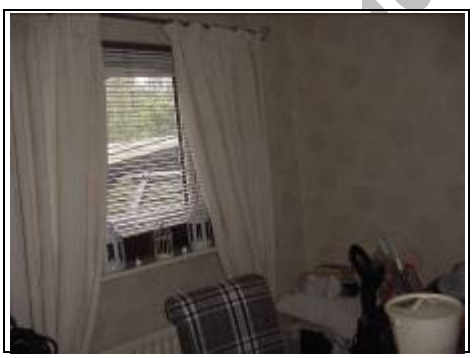

Hallway


Stairs

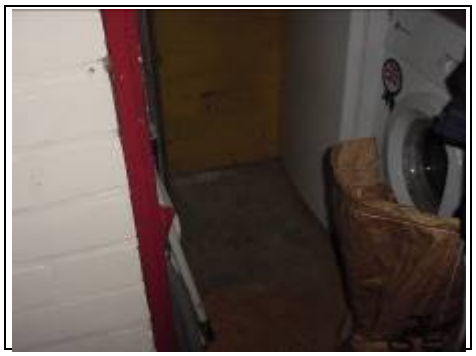

Lounge


Kitchen


Original larder complete with cold shelf


Dining room rear right


WC


Outbuilding with washing machine

First Floor

Landing

Front left bedroom

Front right bedroom

Bathroom rear left

Rear right bedroom

SUMMARY OF CONSTRUCTION

External

Chimneys:	One brick chimney
Main Roof:	Pitched, clad with nibbed concrete tiles
Main Roof Structure:	Cut timber roof
Outbuildings Roof:	Felt flat roof with chippings Corrugated plastic shallow pitched roof Link roof between
Gutters and Downpipes:	Modern metal
Soil and Vent Pipe:	Originally cast iron, now replaced in plastic (there may be some original cast iron remaining)
Walls:	Finished in thin render (pebbledash style) onto an insulation board onto PRC panels (pre-cast reinforcement concrete panels) Not seen, information taken from Building Research Establishment information (all assumed)
Wall Structure:	Reinforced concrete structural frame (assumed – only visible within the roof)
Fascias and Soffits:	Plastic
Windows and Doors:	Plastic double glazed windows

Internal

Ceilings:		Plasterboard or proprietary material BRE database sheet states plasterboard
Perimeter Walls:		Plaster finish
Internal Walls:		Solid and hollow (assumed)
Floors:	Ground Floor:	Solid underfoot, assumed concrete
	First Floor:	Inverted 'T' shaped PRC secondary beams/RSA (recycled secondary aggregates) Not opened up – information from BRE database sheet

Services

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

Heating:	There is a Vaillant boiler located in the cupboard off the landing (vented through roof space).
Electrics:	The electric fuse board is 1980s/1990s and is located in the hallway above the entrance door to the kitchen.
Gas:	Advised consumer unit was located externally
Drainage:	Manhole located to the rear.

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

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 200 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), particularly as this is designated as defective and not mortgageable although we do appreciate that you have lived in the property for twenty years.

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.

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) You have lived in the property for many years and therefore know what the properties are like to live in.

2.0) This is a non-traditional pre-cast concrete building. Generally, non-traditional buildings can be purchased at a lower price than traditionally built houses in similar areas, albeit that they are more difficult to sell and is unmortgagable as we understand it therefore it needs to be a cash purchase which limits the market considerably.

3.0) Off-road parking and a large garden.

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

The Bad

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

1.0) Non-traditional building – the overview

You need to be fully aware that you are purchasing a non-traditional house that is designated as defective; this is our overview of non-traditional housing:

1.1) Mass Building after the War Years

This house is of a non-traditional construction (as opposed to traditional brick, stone walls and tile and slate roof buildings).

After the Second World War there was a great need for housing and this led to many different and innovative techniques being used and moving more towards a manufacturing process for the house. As mentioned earlier in this report, there were four main types of non-traditional buildings. This is a pre-cast concrete building cast in a factory and then brought onto site and assembled.

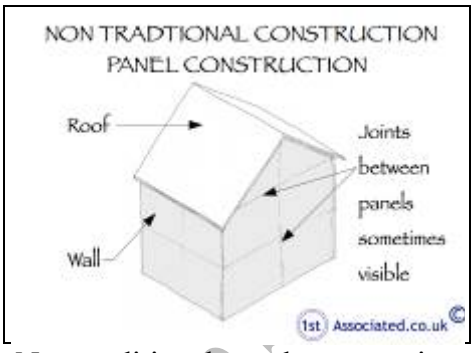
Since being built many of these houses have then had problems come to light, for example the use of asbestos and also the use of materials that degrade with time as in the case of this house. There is general concern as to how these houses will perform over the long term as there is no history of them as there is with a traditional house.

ACTION REQUIRED: You need to be absolutely certain that you understand the risks of buying a non-traditional construction house.

Please see the information sheets within the Appendices by the Building Research Establishment that give a better understanding of these buildings however you should be aware that this information is dated and not regularly updated.

1.2) Pre-cast concrete houses

This house has been built using a pre-cast concrete method. We would term this as large panel construction (LPC), using large panels of pre-cast concrete (concrete made in a factory and then brought to the location to be built), lifted into place forming the right and left hand walls and the floors.



Non-traditional panel construction

1.3) Is the structural frame sound?

The risk with buying any structural framed property is if the structural frame is sound or not. The only way to be one hundred percent certain is to open up the structure which we would be happy to do. We recommend that the property is opened up in three places. We like these to be at least 1m sq so we can have a good view of the structure.

1.4) Key areas on non-traditional buildings

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

1.5) Dangers with Dyke CCC Non-Traditional Construction

Most non-traditional buildings of the major categories that have been identified by the Building Research Establishment have known weak areas however we (the whole of the construction profession) are still in the investigation stage/finding out stage with non-traditional buildings.

Designated Defective by BRE

This means that houses of this type have inherent defects under the Housing Defects Legislation:

1. Cracking and spalling of PRC (Pre-cast Reinforced Concrete) external wall components
2. Cast-in chlorideS not present in panels, columns and main beam but present in post and secondary beams
3. Cracking of PRC posts
4. Some posts have HAC (High alumina cement)
5. Corrosion of RSA fixed to foundation plinth
6. Outward displacement of base of ground floor wall

We cannot see any of these areas as it is clad in insulation.

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

With this type of construction we believe it is very difficult, particularly now that it has had an external wall insulation added to it.

1.7) How does a structural frame property work?

What is known as a traditional construction utilises the walls to give strength to support the roof and the floors, whereas a non-traditional building tends to use a structural frame, which in this instance is concrete and tends to have a primary and secondary frame from which concrete panels are then hung.

1.8) Whatever else you find will very much depend upon what the housing company have done after the original construction

In this instance we believe it has been owned by the local council/housing association and rented to yourselves for many years. You will be aware of the upgrades but typically these are things like:

1) Checking and removing of asbestos
2) The replacement of windows to plastic windows
3) The replacement of gutters and soil and vent pipes with plastic components.
4) The upgrading of central heating systems
5) The upgrading of electrics.

You need to obtain full information of all works that have been carried out by the local authority. Local Authorities are normally very good at keeping records so this should not be that difficult.

ACTION REQUIRED: Your legal advisor to request all information in relation to your property particularly the work that has been carried out with any certificates such as asbestos work, electric work and gas heating work.

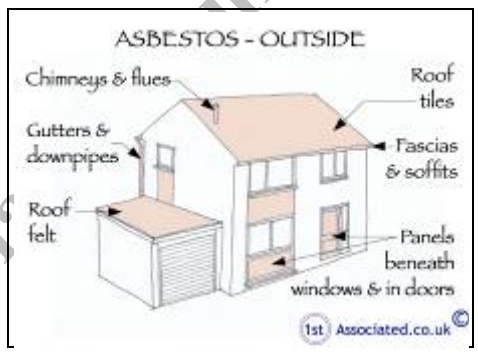
2.0) Asbestos


Textured paint

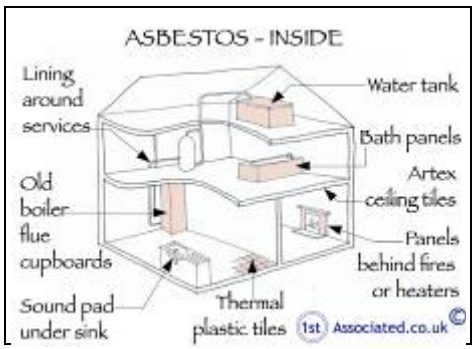
When this property was built asbestos was a common popular material which was used almost as commonly as wood. As mentioned it formed the roof material and it also generally formed such things as the fascias and soffits, the gutters and downpipes.

Whilst we cannot see any asbestos, it is noted as one of the problems for surveyors on the Building Research Establishment digest. We did see some textured paint and we are aware that some forms of soft textured paint can incorporate asbestos. Generally local authorities carry out an asbestos report.

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



Asbestos - outside



Asbestos - inside

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

ACTION REQUIRED: The Council need to confirm in writing that they have had an asbestos test carried out and what the

recommendations were and if they have carried out the recommendations. We would not continue with the purchase unless you get a copy of the asbestos report.

We would always recommend any asbestos is removed from a property as it can not only be dangerous, it can affect the value of the property.

Please see the Other Matters Section of this Report.

3.0) Structural movement and cracking

These properties are known for having defects within them and as such they are we would say on the path of deterioration:

For example, they use high alumina cement concrete which degrades over time.

We have seen an entire multi-storey car park that has been affected by this having to have major work carried out to it. The concrete now unfortunately or fortunately is enclosed in the external wall insulation and can only be seen if we open up the structure which as mentioned earlier we are more than happy to do. However, the difficulty is even if we do find something it is what to do as the entirety of the external of this property is built in this manner.

4.0) Flat roof to outbuilding and walkway

There are areas of the roof that are deteriorating and will be letting water into the roof structure/timber decking/concrete roof.

Outbuilding roofs, link corridor roof (black oval)
~ Aerial View - 360 Photo ~

Link corridor roof needs replacing

Side detailing where we assume water getting through

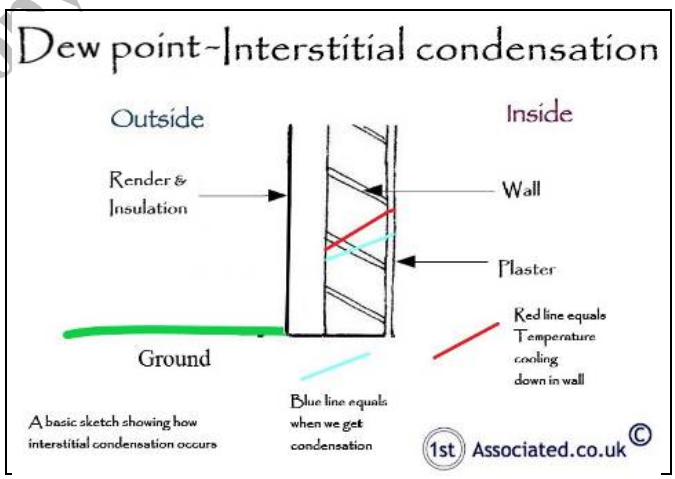
Deteriorating roof

ACTION REQUIRED: We recommend repairs to the roof. We believe you will probably need to start again with regard to the relatively small area of roof that has deteriorated.

Please see the Roof Coverings Section of this Report.

5.0) External wall cladding (insulation with thin render) onto non-traditional construction

The jury is still out with regard to future problems on external wall cladding particularly in relation to interstitial condensation.



Interstitial Condensation Defined

This is condensation within a material rather than on the surface of the material.

Render starting to deteriorate and reinforcement layer coming through

Insulation cut around pipe

ACTION REQUIRED: Your legal advisor to specifically request from the local authority did they have calculations carried out in relation to interstitial condensation and dewpoint and can you have copies of these. Also, we are aware that companies fitting this type of product normally give a guarantee. We believe that twenty to thirty years is fairly typical. You need to ensure that this guarantee will be passed onto you.

Please see the External Walls Section of this Report.

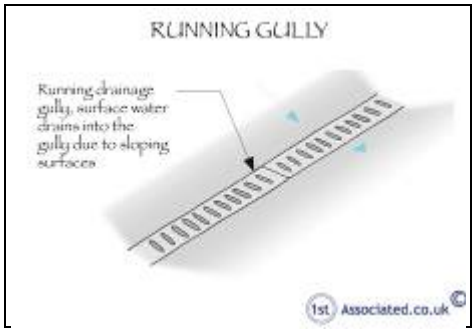
6.0) Sloping site

Sloping site

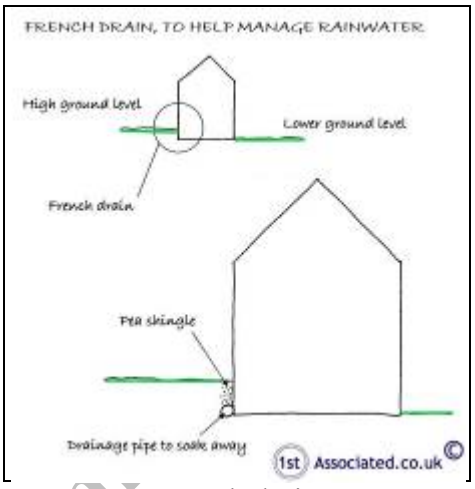
Water has been discharging towards the front of the building. There looks to be a relatively new parking area. Depending upon how this has been built, it could mean that water is being transferred and travelling towards the base of the front of the building.

As far as we can see (but bear in mind that a lot is hidden by the external wall insulation) there was not a problem at the time of our survey. However, we believe in the long term that there will be problems when you are discharging water to the base of this property particularly as the original pre-cast concrete structure will be affected by this dampness.

ACTION REQUIRED: A good way to reduce the dampness to the base is to add a running gully or a French drain. We would recommend this is carried out as soon as possible to limit further damage to the base of the structure.



Running gully



French drain

ANTICIPATED COST: £750 - £1,500. This should have a perforated pipe leading to a drain or to a soakaway; please obtain quotations.

7.0) Trees


Trees near property

There is a large tree in your rear garden as we are sure you are aware as you have lived in the property for many years. We are finding a few problems with trees that are not maintained (ie. cut back every year):

1) They reduce the light to the building and air movement and you can get more moss on your roofs and into your gutters.
2) They can affect the foundations depending upon the type of tree.
3) They can affect the drains which are relatively close by.

There are also bushes around the property which give us cause for concern as it means there is dampness to the base of the property which can affect the pre-cast concrete slabs.

Bushes to front

ACTION REQUIRED: We would recommend an arboriculturalist (not a tree surgeon) is asked to view the trees and give a ten year plan of maintenance.

ANTICIPATED COST: In the region of £250 - £750 for an arboriculturalist report plus the cost of any work; please obtain quotations.

8.0) Garden steps and retaining wall

The steps look to be partly finished work – they look like they need more support and finishing off.

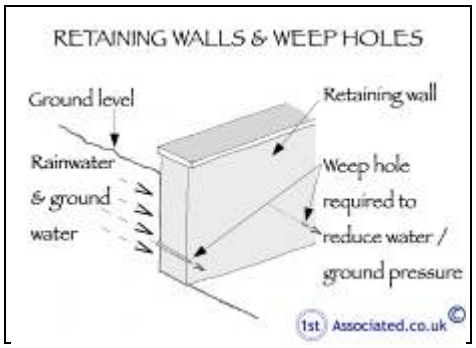
Steps

ACTION REQUIRED: Finish off steps and make safe.

ANTICIPATED COST: £250 - £500 depending upon what needs doing; please obtain quotations.

9.0) Retaining wall

The retaining wall needs weep holes.



Retaining wall needs weep holes

Small retaining wall needs weep holes

ACTION REQUIRED: Add weep holes.

ANTICIPATED COST: A few hundred pounds. Please obtain quotations.

Please see the External Areas Section of this Report.

10.0) Condensation

Humidity can be a big problem in these properties. We have mentioned interstitial condensation; we would recommend that you re-read this section as we feel this could be one of the major problems with this property causing deterioration to the structure.

ACTION REQUIRED: To help reduce this (although obviously it has been occurring for many years) we would recommend large humidity controlled extract fans are added to the kitchen, the bathroom and any areas that are used for drying clothes internally during winter months (we would assume that clothes will be dried externally during the warmer months). By large extract fans we mean 150mm.

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

Services

11.0) Dated electrics

The electrics are dated and better are now available.


Dated electrics

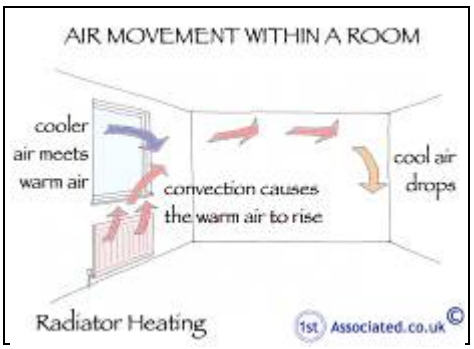
ACTION REQUIRED: We recommend a new fuse board with a metal casing; modern standards require half hour to one hour fire resistant casing around a fuse board.

An Institution of Engineering and Technology (IET) test and report and any recommendations to be carried out by an NICEIC registered and approved electrical contractor or equivalent.

ANTICIPATED COST: £250 - £500 for test and report and £250 - £500 for a new fuse board plus any work recommended. You may wish to add extra sockets which cost in the region of £100 - £200 per additional double socket point. Please obtain quotations.

12.0) Radiators

We noted the radiators in some areas are internal/not under the windows which is the usual position. This is often carried out on cheaper central heating systems to save the labour and piping costs of positioning the radiators underneath the windows. However, it then reduces the air movement in the room which can lead to black mould.

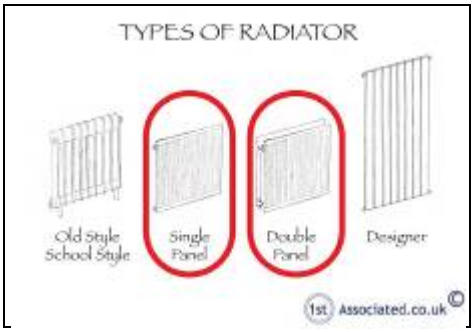


Air movement


Internal radiator

The property has single panel radiators. These may not warm the property to the heat that you desire. We much prefer to see double panel convection radiators.


Single panel radiator



Replace single panel radiators with double panel convection radiators

ACTION REQUIRED: We recommend you upgrade to double panel convection radiators and move the radiators underneath the windows as this gives a better circulation of air and reduces the chance of condensation.

ANTICIPATED COST: In the region of £100 - £200 per modern double panel convection radiator; please obtain quotations.

Please see the Services Section of this Report.

The Ugly

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

You need to fully understand what you are purchasing

You need to be absolutely certain that you understand you are buying a non-traditional building and the associated issues that can go with these inherent problems as it has been designated as being defective.

We would recommend you speak to estate agents in the area to see what the resale value would be for the property to give you a better indication of the market value and how sellable they are.

Other Items

Moving on to more general information.

Maintenance

There is the basic maintenance that you would associate with any building such as clearing gutters, checking that the gutters are not leaking and are falling towards the downpipes and redecoration etc.

In addition, you need to make sure that dampness and water is kept away from the building and any humidity created inside is removed as soon as possible. A budget for such work must be allowed to ensure it is maintained in a good condition. This will prevent undue and unnecessary deterioration.

With a non-traditional building you may also have deterioration occurring that there is little that you can do about as it is part of the structure.

Services and your own specific testing

Whilst we have carried out a visual inspection only of the services within the property we would always recommend you have your own specific testing for each of the services.

Electrics

The electric fuse board is 1980s/1990s and is located in the hallway above the entrance door to the kitchen.

> **ACTION REQUIRED:** Obtain records from the local authority. We recommend a new fuse board with a metal casing; modern standards require half hour to one hour fire resistant casing around a fuse board.
>
> An Institution of Engineering and Technology (IET) test and report and any recommendations to be carried out by an NICEIC registered and approved electrical contractor or equivalent.

Heating

There is a Vaillant boiler located in the cupboard off the landing (vented through roof space).

ACTION REQUIRED: Obtain records from the local authority. 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 have lifted the manhole cover to the rear of the property the only true way to find out the condition of the drains is to have a closed circuit TV camera report to establish the condition of the drains. In this age of property there have often been leaks over the years.

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.

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, it really depends upon how much time and expertise you have. You may be able to do some of the work that we have mentioned in the report.

Purchase Price

We have not been asked to comment upon the purchase price in this instance however we have looked on Rightmove and there are no sold properties in this area at the time of writing this report. 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 £200 per day for an accredited, qualified, skilled tradesman. Other variations include the quality of materials used and how the work is carried out, for example off ladders or from scaffold.

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

SUMMARY UPON REFLECTION

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

Whilst we appreciate you have lived in the building for a long time and are familiar with the building we hope this report allows you to reflect on what you are buying and future problems. There is a lot to think about and we would be more than happy to discuss with you.

You need to be absolutely certain that you understand you are buying a non-traditional building and the associated issues that can go with these inherent problems and also when you come to sell the property.

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.

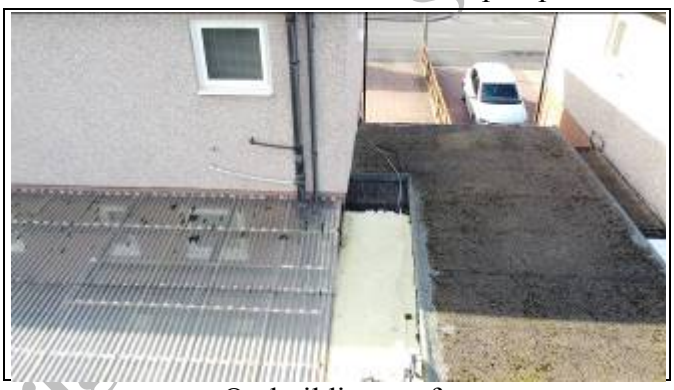
We would ask that you read the Report in full and contact us on any issues that you require further clarification on.

AERIAL VIEW – 360 PHOTOS

Where permission has been obtained from the owners we have carried out aerial photographs using an aerial drone, stationary drone or a mono-pod pole (where the environment and weather is suitable).

Drone and mono-pod pole

Hipped roof
~ Aerial View - 360 Photo ~



Outbuilding roofs
~ Aerial View - 360 Photo ~

Chimney and flue
~ Aerial View - 360 Photo ~

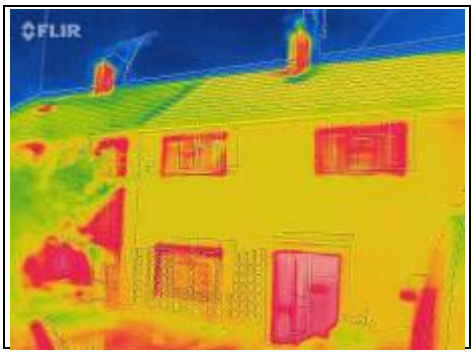
Front garden/parking area
~ Aerial View - 360 Photo ~

Rear sitting out area
~ Aerial View - 360 Photo ~

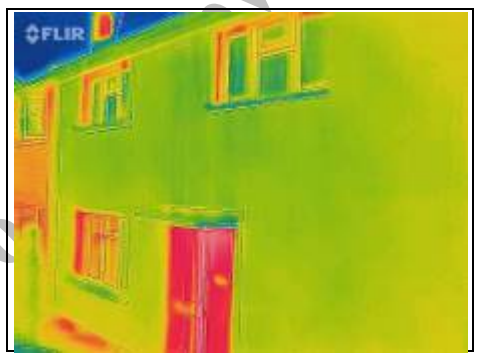
THERMAL IMAGE PHOTOGRAPH EXAMPLES

Thermal imaging photography can establish warm and cold areas, it also helps us identify materials within the property. In this case we have not carried out any thermal imaging as the property was not pre-heated and therefore we would not have obtained any beneficial results. Below are example thermal image photographs (not your property).

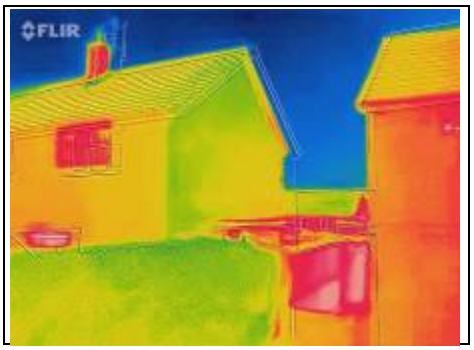
(Key to the colours; blue = cold, red = warm, green/yellow = cool)



Front of property showing heat coming through windows and door
(Not your property)



Close up of heat coming through windows and open front door
(Not your property)



Right gable end
(Not your property)

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

Whilst we appreciate that there is no estate agent involved with this transaction we do believe that you should contact estate agents to see what the resale value and market is for these type of properties.

SOLICITOR/LEGAL ADVISOR

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

TERMS OF ENGAGEMENT/LIMITATIONS

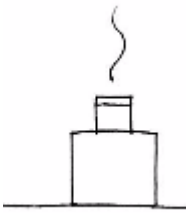
This report is being carried out under our terms of engagement for Building Surveys, as agreed to and signed by yourselves. If you have not seen or are not happy with the terms of engagement please phone immediately 0800 298 5424 or email the secretary from which this survey came from.

OUR AIM IS ONE HUNDRED PERCENT SATISFACTION

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

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

EXTERNAL



CHIMNEY STACKS AND FLUES

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 middle (all directions given as you face the front of the property).

Chimney One - Middle

This chimney is brick finished with a lead flashing and three chimney pots, one of which looks to be a flue. From what we could see from ground level it looked in average condition considering its age, type and style with some moss. The flaunching looks like it is cracked which may ultimately lead to water getting in but we could not see any dampness to the chimney breast within the roof space.

Chimney and flue
~ Aerial View - 360 Photo ~

Chimney

Chimney within roof space

We noted an aerial attached to the chimney which we are not keen on as it can de-stabilise the chimney and can cut into the brickwork rather like a cheese wire cutting into cheese.

ACTION REQUIRED: Periodically inspect the chimney.

Flashings Defined

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

Flaunchings Defined

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

Flues

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

The flue is internal and looks to be plastic where it is vented to the roof with a lead flashing.

Flue to left

Party Walls

The party wall relates to shared items, such as the firewall in the roof. 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 Etc. Act 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 and flue from the parts we could see above roof level. The inspection was made from ground level within the boundaries of the property (unless otherwise stated) using a x16 zoom lens on a digital camera and/or aerial photographs. A closer inspection may reveal latent defects.

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

ROOF COVERINGS AND UNDERLAYERS

The Roof Coverings and Underlayers section considers the condition of the outer covering of the roof. Such coverings usually endure the extremes of climate and temperatures. They are susceptible to deterioration, which ultimately leads to water penetration. The property may or not have an underlayer dependent upon the age of your property, please read on:

We will consider the roofs in four areas:

1) Main roof

2) Front entrance canopy

3) Mineral felt flat roof

4) Corrugated plastic roof

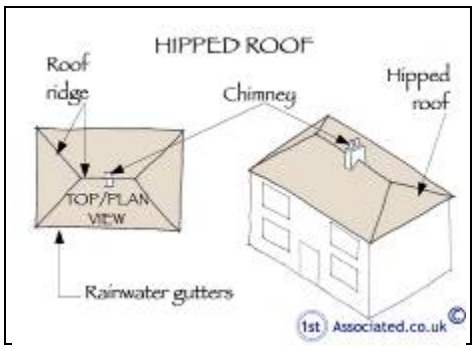
Main Roof

Hipped roof
~ Aerial View - 360 Photo ~

The property has a hipped roof which are integrally not as stable as gable end roofs as they effectively sit upon themselves.

The roof is clad with a concrete tile and, from ground level, this looks in average condition considering the roof's age, type and style. It looks like there is some deterioration starting to occur to the tiles and we noted the roof has a dry ridge.

Broken roof tile on flat roof



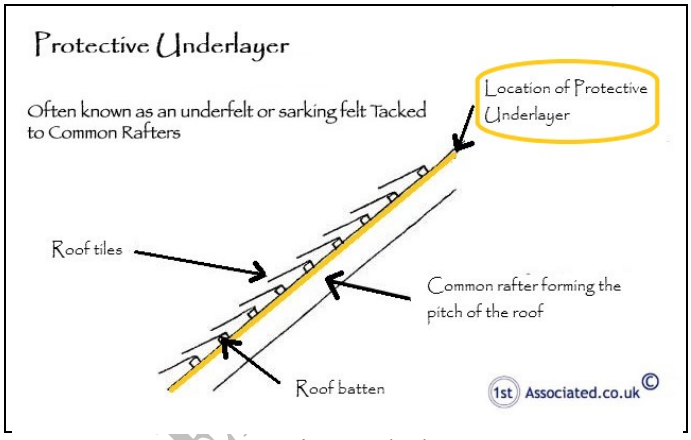
Hipped roof

Dry ridge

ACTION REQUIRED: Carry out periodic inspections and maintenance of the roof, 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

When we inspected the loft space we found a Hessian base Bitumen membrane. This type of membrane has been used since the 1960s. We generally found it to be in average condition, with damage in some areas which is what we typically find.

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

Entrance Porch Roof

The roof is pitched and clad with concrete tiles and, from ground level, this looks in average condition considering the roof's age, type and style. There is no gutter to this roof which is often the case with smaller roofs. We were pleased to see there was a lead flashing where the roof meets the building although these can come away on external wall cladding insulation panels.

No gutter to front entrance

Entrance canopy
~ Aerial View - 360 Photo ~

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.

Left Outbuilding Flat Roof

This is a flat roof covered in felt with chippings. There is a moss covering to this roof.

Moss

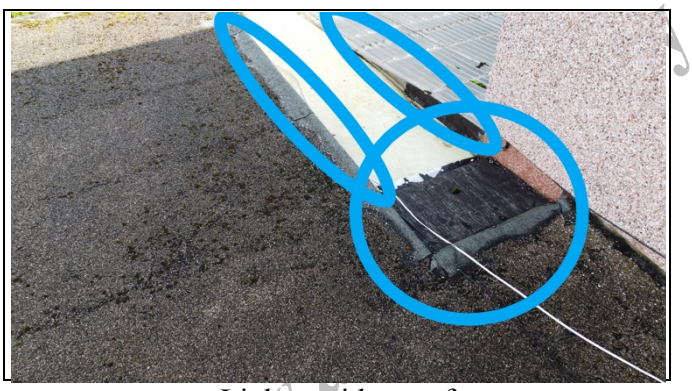
Flat roof
~ Aerial View - 360 Photo ~

What is underneath the felt?

Where we could see it in the locked store, it was a close boarded timber roof which we feel are one of the better types of flat roof, far better than a modern composite board.

Link Corridor Roof

This roof is deteriorating and in need of replacement.



Link corridor roof
~ Aerial View - 360 Photo ~

Roof needs replacing

Side detailing where we assume water getting through

Deteriorating roof

ACTION REQUIRED: Replace link corridor area. Please see our comments in the Executive Summary.

Corrugated plastic roof

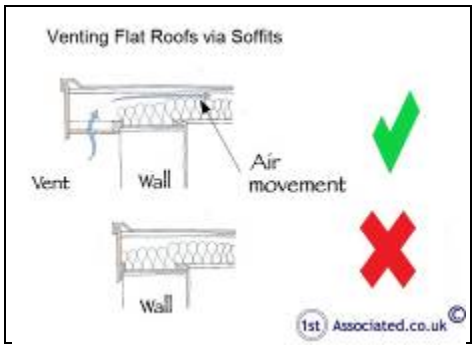
This is a large shallow pitched corrugated plastic roof. From ground level, this looks in average condition considering the roof's age, type and style. With shallow pitched roofs you do tend to get leaks and we can see some moss is sitting on the roof which may be difficult to clear.

Corrugated plastic roof
~ Aerial View - 360 Photo ~

Further information on flat roofs

Ventilation

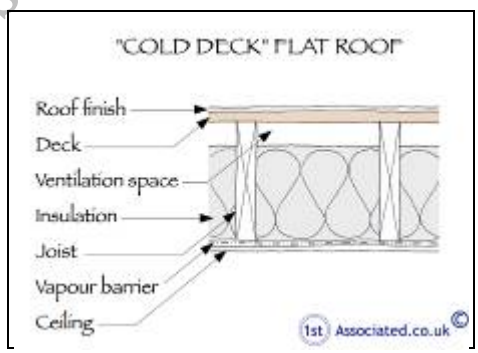
Building Regulations require flat roofs to be ventilated. Building Regulations are not retrospective but the reason for the requirement is to make sure that any moisture that enters the roof construction is dispelled by way of ventilation. We would suggest that if the opportunity arises ventilation should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



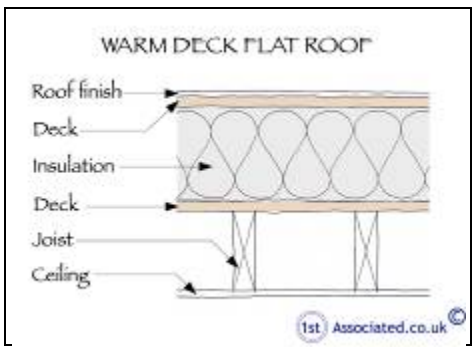
Venting flat roof via soffits

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.



Cold roof



Warm roof

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

Finally, we have made our best conclusions based upon what we could see, however a closer inspection may reveal other defects.

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

ROOF STRUCTURE AND LOFT

(ALSO KNOWN AS ROOF SPACE OR ATTIC SPACE)

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

Main Roof

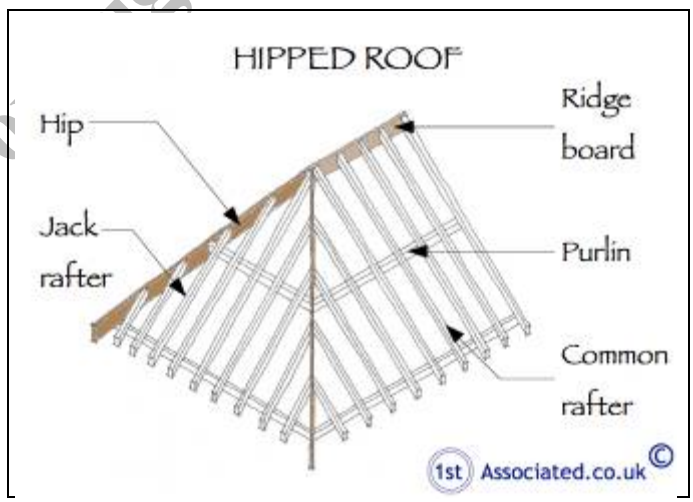
Roof Access

The main roof is accessed via the loft hatch located on the landing. The loft perimeter has been viewed by torch light, which has limited our viewing slightly.

Roof Structure

This type of roof structure has what is known as a cut timber hipped roof. This is a roof that is purpose made and hand built on site.

Due to the construction of hipped roofs, they are prone to slipping or to dropping which can, in extreme cases, push the walls out of vertical.



Cut timber hipped roof

Roof Timbers

We have inspected the roof structure for:

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

Our examination was limited by the general configuration of the roof and the insulation.

This is slightly unusual roof in that it is fixed to the concrete frame. There looks to be newer metal brackets that have been added at a later date.

ACTION REQUIRED: Your legal Advisor needs to check and confirm if the local authority/owner have carried out repairs retro-fits to the roofs. We would add that the only way to be one hundred percent certain is to have the roof cleared of all insulation, stored items, etc and checked.

Metal brackets added to roof

Metal bracket fixing timber to concrete frame

Brackets

Fire Walls

The property has one brick firewall to the right hand side (all directions given as you face the property). The firewalls are also Party Walls.

Fire Walls Defined

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

Fire wall

Flue

The flue travels through the roof space.

Flue

Ventilation

No ventilation was noted.

Insulation

Please see the Thermal Efficiency Section of this Report.

Electrical Cables

We can often identify the age of an electrical installation by the age of wiring found in the roof. In this case there was insufficient quantity of wiring to comment and our view was limited due to the mass of insulation.

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

Finally, we would ask you to note that this is a general inspection of the roof, 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.

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

To the outbuilding we could see metal gutters and there looks to be the same to the main building. As with most gutters we could see that they would benefit from a clean.

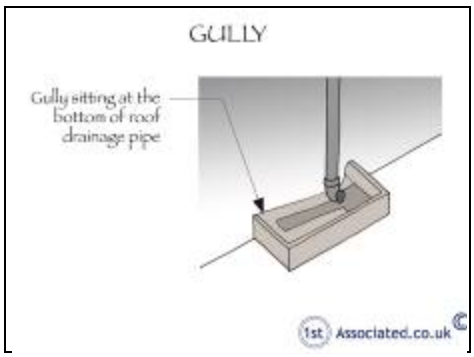
Metal gutter

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.

Debris to gutter on outbuilding roof

Wastepipe into metal gutter
~ Aerial View - 360 Photo ~

Gully



Gully with wall around it

Downpipe and no wall around gully

ACTION REQUIRED: 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.

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.

Plastic soil and vent pipe to rear

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 one hundred percent that the rainwater installation is free from blockage, leakage etc. or that it is capable of coping with long periods of heavy rainfall. Our comments have therefore been based on our best assumptions.

WALLS

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

Non-traditional building (sorry to repeat ourselves)

Sorry to repeat ourselves but this really is so important, this house is of a non-traditional construction. As mentioned, there are generally considered to be four different types of non-traditional houses:

1. Metal frame – a metal frame supporting the structure.
2. Pre-cast concrete - cast in a factory and then brought to the site.
3. In-situ concrete - cast at the site.
4. Timber frame – a timber frame supporting the structure.

Concrete frame visible within roof

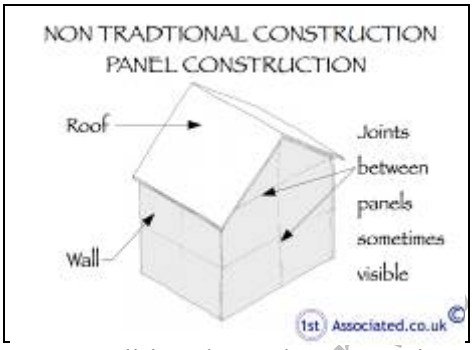
Close up of concrete frame

In this case we believe it to be a pre-cast concrete construction and from our searches via various data bases we believe it to be a Dyke non-traditional building. All we can see of it is a concrete frame within the roof (see adjoining photographs).

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

Pre-cast concrete walls

This house has been built using a pre-cast concrete method. We would term this as large panel construction (LPC), using large panels of pre-cast concrete (concrete made in a factory and then brought to the location to be built), lifted into place forming the front, rear and side walls and the floors.



Non-traditional panel construction

Concrete walls not visible

We have not been able to see the concrete walls with the exception of a very small area where it has been cut around a pipe. As mentioned elsewhere within this report we would normally open up the structure in three places of 1m wide openings which is our recommended practice.


Insulation cut a pipe

Render

The external walls are finished in a thin render which has been applied to the insulation board. It has a reinforcement beneath it which can be seen (see photo below – render starting to deteriorate). We would comment that there is not a long term history in England of the use of this type of finish and the jury is still out with regard to how it will perform.


Pea shingle render


Reveals around window

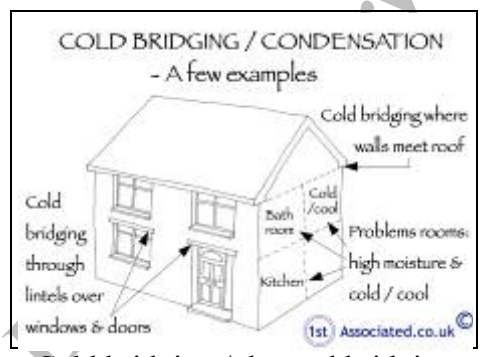

Render starting to deteriorate and reinforcement layer coming through

Cold Bridging

We still have concerns that this type of construction, even though it has an external wall insulation, may get cold bridging because there are cold elements within the original structure. This may lead to condensation and black mould in these areas.

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 render / plasterwork we cannot comment on their construction or condition. In buildings of this age concrete lintels are common, which can be susceptible to deterioration that is unseen, particularly if in contact with dampness.

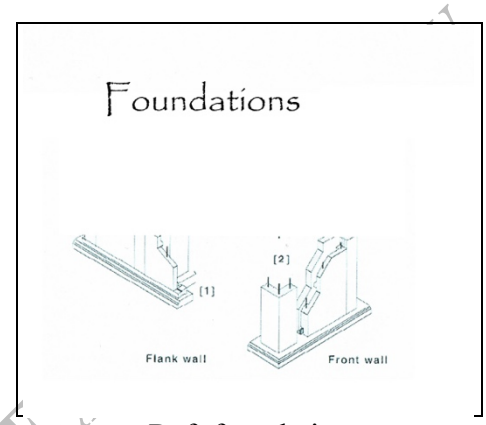
Our comments have been based upon how the render / plasterwork has been finished. We have made various assumptions based upon what we could see and how we think the render / plasterwork would be if it were opened up for this age, style and type of construction. We are however aware that all is not always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

FOUNDATIONS

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

Foundations

The data sheet advises it is a concrete split foundation with integral pads and brick underbuilding.



Raft foundation

Building Insurance Policy

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

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

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 one hundred percent certain as to how the foundation has been constructed and we can only offer our best assumptions and an educated guess, which we have duly done.

TREES

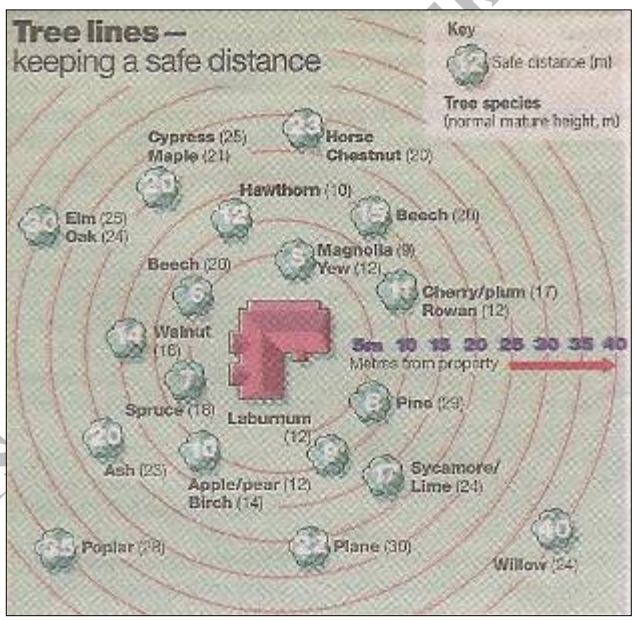
Trees within influencing distance of a property can affect the foundations by affecting the moisture content of the soil.

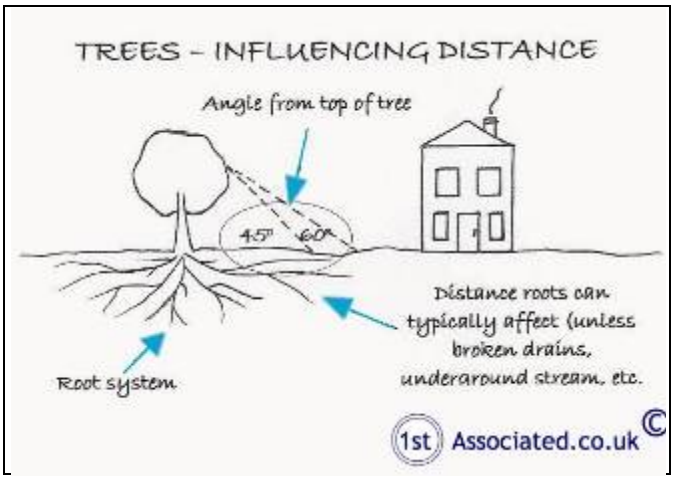
There are trees within what we would term as influencing distance but you do need to speak to your insurance company as they may have a different interpretation for insurance reasons.

Leylandii
~ Aerial View - 360 Photo ~

ACTION REQUIRED: Regularly maintain. Ideally we would recommend an arboriculturalist (not a tree surgeon) is asked to view the trees and give a ten year plan for maintenance of the trees.

Evergreen





Influencing distance of trees to a property

Influencing Distance Defined

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

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

Please also refer to the External Areas Section.

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 we cannot see a DPC due to the render and plinth.

Plinth to base

The Dyke data sheet advises the property has a DPC and a pre-cast plinth unit, it does not advise what the DPC is made out of.

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.

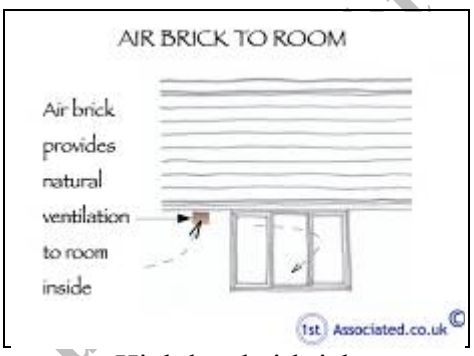
AIRBRICKS

High Level Air Bricks

There are vents at high level. High level air bricks are to help air circulation within the property.

High level air vent

High level airbrick in rear right bedroom



High level airbrick

Air brick

ACTION REQUIRED: Ensure the airbricks are clear.

Finally, we have made our best assumptions based upon our visual inspection of the outside of the property and our general knowledge of this age, type and style of construction. We have not opened up the walls/floor, unless we have specifically stated so in this section.

FASCIAS AND SOFFITS AND WINDOWS AND DOORS

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

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

Fascias and Soffits

The fascias and soffits are difficult to see however they look to be plastic and have a vent.

Vent to soffit

Windows and Doors

The property has plastic double glazed windows with trickle vents which generally look to be of an average quality.

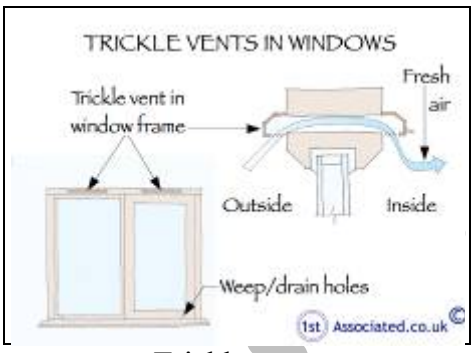
Trickle vents to windows

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 would comment that the sills, we believe, are delicate although they are a type that we are seeing more of and we would describe as a thin sill.

Thin window sill

Trickle Vents Defined

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



Trickle vents

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

EXTERNAL DECORATIONS

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

With regard to the building most of the original decorating components have been replaced. You need to be aware that you need to clean plastic from time to time. There is the framework to the rear covered area.

Finally, ideally external redecoration/cleaning is recommended every three to five years dependent upon the original material, its exposure to the elements and the material's properties. Where this is not carried out repairs should be expected. Ideally redecoration and/or cleaning should be carried out during the better weather between mid-April and mid-September.

Please see our comments in the External Joinery section.

INTERNAL

CEILINGS, WALLS, PARTITIONS AND FINISHES

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

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 proprietary boarding as this was fairly common in this era of property. The data sheet states plasterboard.

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.

Proprietary boarding Defined

Proprietary boarding are one off specially manufactured boards commonly used in years gone by which are now popular again.

Internal Walls and Partitions

The data sheet advises the internal walls are a clinker pre-cast block and there are some variations on these such as hollow blocks and timber stud panels filled with granulated cork lined with a plasterboard or proprietary boarding.

Separating walls, also known as party walls

The data sheet advises these are five inch pre-cast reinforced concrete panels with a cavity and plasterboard.

Perimeter Walls

The perimeter walls are formed in pre-cast concrete panels with a structural frame and a plasterboard or proprietary board finish. There are variations identified of plasterboard backed with cork crete which is a cork board or expanded rubber or building paper.

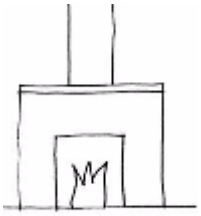
Opening up walls

Without opening up the walls we cannot confirm one hundred percent what the construction is.

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

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

CHIMNEY BREASTS, FLUES AND FIREPLACES



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

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

At the time of the survey no chimneys were in use. From the wood storage we assume that you do regularly use the log burner and you advised it was last swept in September 2020.

Fireplace

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.

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 data sheet advises the ground floor is concrete.

First Floor

The data sheet advises the first floor is pre-cast reinforced concrete beams with inverted T PRC secondary beams and restraining bars.

Opening up

Again, without opening up these areas we cannot confirm the construction.

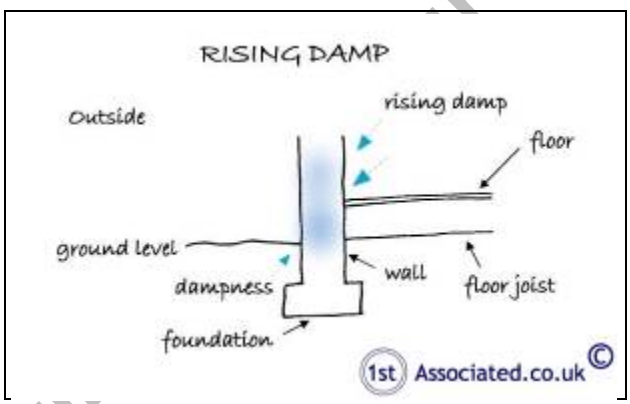
Finally, we have not been able to view the actual floors themselves due to them being covered with fitted carpets, floor coverings, etc. The comments we have made are based upon our experience and knowledge of this type of construction. We would emphasise that we have not opened up the floors in any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

DAMPNESS

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

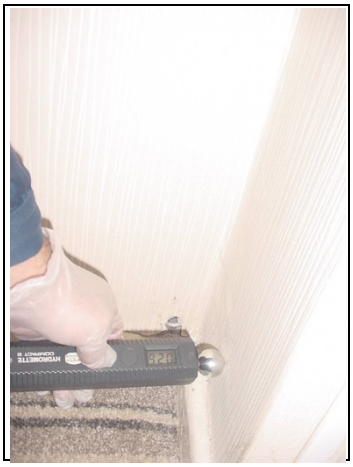
Rising Damp

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



Rising damp

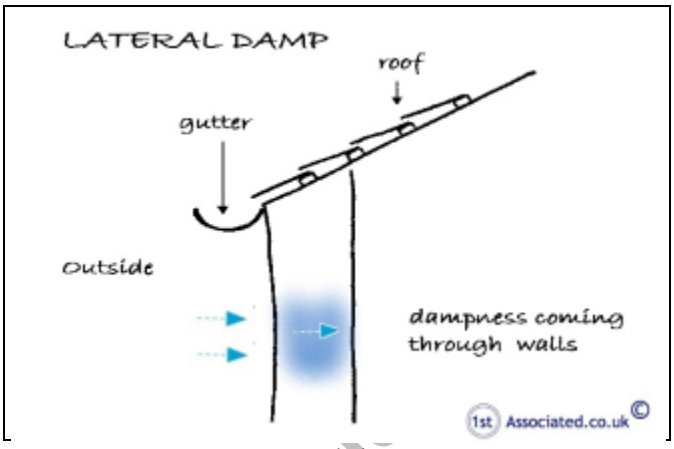
Due to the construction we are unable to take readings in the usual way. There were no obvious visual signs of dampness.



Testing for rising damp

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.



Lateral damp

Again, due to the construction we are unable to take readings in the usual way. There were no obvious visual signs of dampness.

Testing for lateral dampness

Damp test to reveal of window

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.

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. You need to have a balance between heating, cooling and ventilation of properties and opening windows to air the property regularly.

Extract fans in kitchens, bathrooms and drying areas

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

ACTION REQUIRED: We would recommend large humidity controlled extract fans be added to kitchens, bathrooms and any rooms used as drying areas.

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

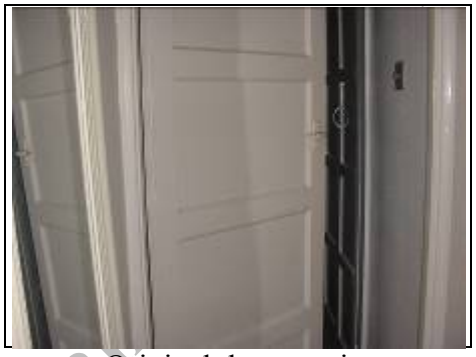
Finally, effective testing was prevented in areas concealed by heavy furniture, fixtures such as kitchen fittings with backboards, wall tiles and wall panelling. We have not carried out tests to BRE Digest 245, but only carried out a visual inspection.

INTERNAL JOINERY

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

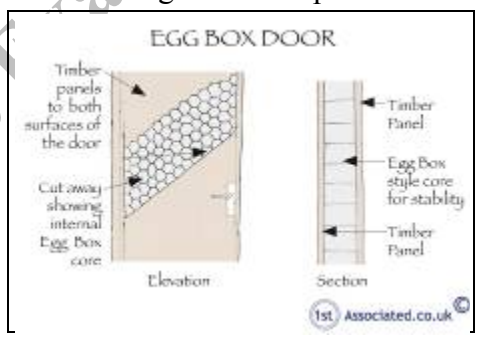
Doors

The property has a mixture of the original doors and hollow core doors (sometimes referred to as egg box doors, as this is what the internal of them looks like when they are opened up). Hollow core doors can damage very easily.



Original door upstirs

Hollow core door



Cross section of egg box door/hollow core door

Staircase

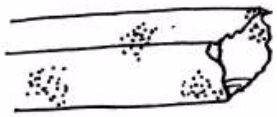
We were unable to examine the underside of the stair timbers due to it being lined where we could see it, which precluded our inspection, so we cannot comment further upon the stair structure. We can, however, say that the lining gives a resistance to the spread of fire if such circumstances were to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

Kitchen

We found the kitchen in average condition. 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 overview of the condition. Please also see the External Joinery/Detailing section.

TIMBER DEFECTS



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

As this is a concrete 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/White 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.

Dry rot is unlikely as most of the timber elements have been removed with the concrete frame structure or been replaced with cladding. We would advise that we have not opened up the floors and we had a limited view of the roof

Wet Rot/Brown 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.

Wet rot can occur in this type of building, for example to fascias and soffits but it does depend on whether they are made in timber or not. Again, as mentioned they could be made in asbestos.

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

Woodworm

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

In a non-traditional building we look in both the roof and at the floors where we can view them to see if there is any woodworm. Woodworm isn't a common problem as the main structure is in concrete. In this instance we did not note any woodworm.

> **ACTION REQUIRED:** If you wish to be one hundred percent certain that there is no woodworm the only way would be to check the property when is emptied of fixtures and fittings etc.

Finally, 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.

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 to good condition.

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.

THERMAL EFFICIENCY

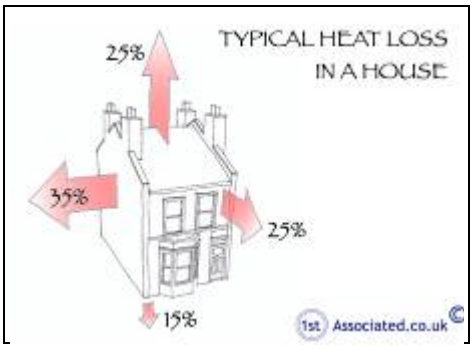
Up until the mid 1940s we did not really consider insulation in properties, for example it was only in the 1960s that we started putting insulation in the roof and then it was about 50mm, in the 1970s this was upgraded to 100mm. Then we started to think about double glazing and cavity wall insulation.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

Zoopla (and others may do similar) show an energy assessment of how much typical energy bills will be on a property. We have not had feedback on how accurate this is as yet however we feel it is an interesting step forward in looking at energy efficiency of a property, although there are all sorts of arguments as to how the energy efficiency calculations are carried out.

Roofs

Some roof insulation was present although not to current Building Regulations requirements of 300mm. In this case there is 200-300mm.

Layers of insulation



Typical heat loss

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 deterioration to the roof frame and the structural frame.

Walls

The walls have external wall insulation panels.

> **ACTION REQUIRED:** Your Legal Adviser to specifically ask the council for information with regard to the insulation energy efficiency values and also information with regard to interstitial condensation/dewpoint calculations.

Windows

The windows are double glazed and therefore will have reasonable thermal properties.

Services

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 (Centre for Alternative Technology)

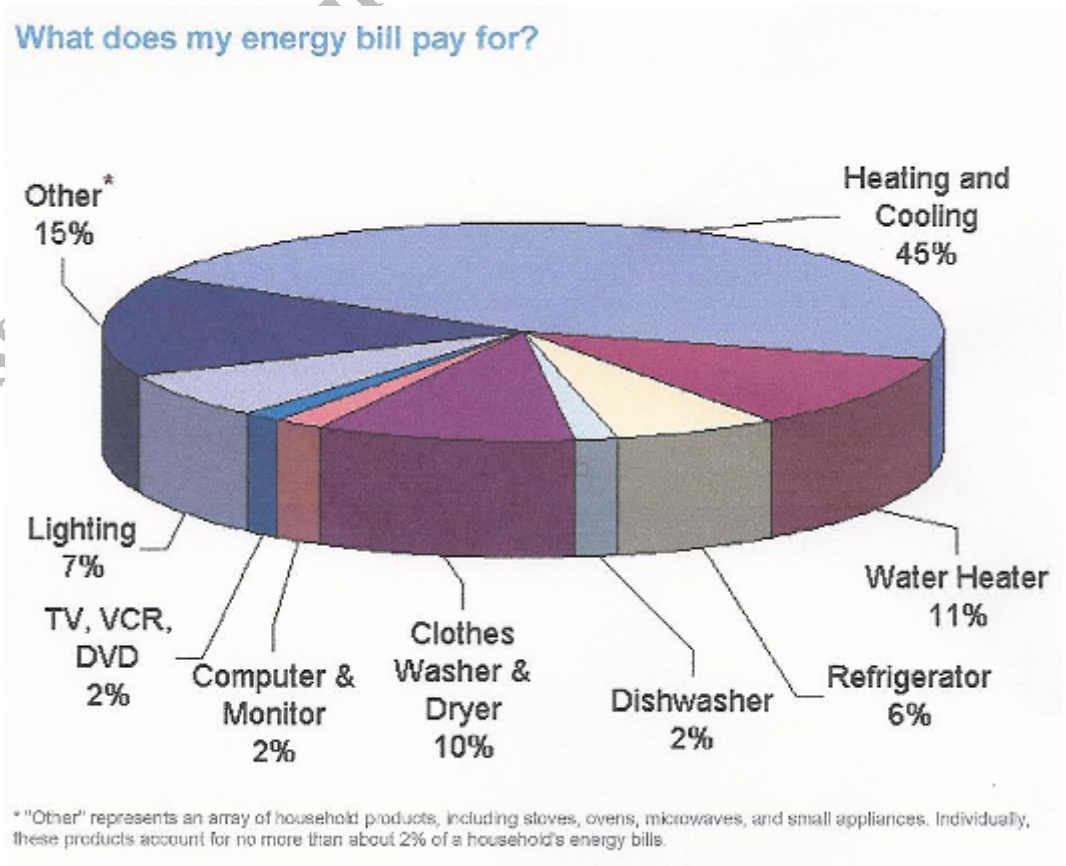
or Sustainable Energy Without the Hot Air by David J C MacKay HTTP//www.withouthotair.com/Videos.html to download for free or buy a paper copy as we did.

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

HIPs

We understand that HIPs were suspended from 20th May 2010. Energy Performance Certificates are required before a sale completes. Please note we have not seen the Energy Performance Certificate.

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.



OTHER MATTERS

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

Security

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

Fire / Smoke Alarms

Some smoke detectors were noted.

> **ACTION REQUIRED**: We would always recommend a hard wired fire alarm system and are also aware that some now work from a wireless signal which may be worth investigating. Whilst fire is relatively rare it is in a worst case scenario obviously devastating.

Insurance

We would 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. In this case there is some textured paint which may contain asbestos.

Asbestos was commonly used post war until it was banned only in the UK relatively recently. It is rumoured that it was still used after this point in time where products were imported from countries where it is not banned.

Our insurance company require us to advise we are not asbestos specialists and recommend you have an asbestos survey carried out by a specialist asbestos company.

ACTION REQUIRED: Your legal advisor to check and confirm if the council have had an asbestos test and report and obtain a copy. If not, the only way to be certain is to have your own test and report with samples carried out.

SERVICES

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

Services and specialist installations have been visually inspected. It is impossible to examine every detail of these installations without partially dismantling the structure. Tests have not been applied. Conclusive tests can only be undertaken by suitably qualified contractors.

ACTION REQUIRED: Your legal advisor to request from the vendor/seller (in this case the local authority) to provide copies of any service records, test certificates and, ideally, the names and addresses of the installing contractors.

BROADBAND CONNECTIVITY

We are sometimes asked regarding the Broadband Connectivity in the area. We have identified some websites which we believe are useful for this:

https://www.broadband.co.uk/
Advises whether there is phone line broadband or Superfast or Ultrafast broadband in an area.

https://www.ofcom.org.uk/
Allows you to check broadband availability, check mobile availability and run a speed test.

ELECTRICITY

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

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

Fuse Board

The electric fuses and consumer units were located in the hallway above the entrance door to the kitchen. The fuse board looked 1980s/1990s and better are now available.

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

ACTION REQUIRED: We recommend a new fuse board with a fire resistant metal case. An Institution of Engineering and Technology (IET) test and report and any recommendations should be carried out by a NICEIC registered, or equivalent, approved electrical contractor or similarly approved.

In addition to this your Legal Advisor is required to make full enquires with the local authority to establish if any electrical installation work has

been carried out and to provide suitable certification for any works carried out after 1st January 2005. Any comments made within this report or verbally do not change this requirement.

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

GAS

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

We are advised that the property has mains gas. The consumer unit is located externally on the left side.

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.

Carbon Monoxide

No carbon monoxide monitors were noted.

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

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 are advised that the internal controlling stopcock is located in the toilet area and the external stopcock is believed to be on the driveway (this is where they usually are). The stopcock and other controlling valves have not been inspected or tested for operational effectiveness.

Water Pressure

As you live in the property we assume that you are happy with the 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!).

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

There is a Vaillant boiler located in the cupboard off the landing (vented through roof space).

Boiler

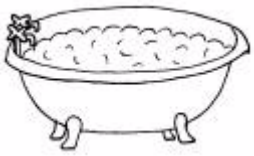
Vent from boiler in roof space

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.

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

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

BATHROOM



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

Bathroom

The property has a three piece bathroom suite, consisting of a bath, wash hand basin and WC, which looks in average condition.

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.

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 - Rear

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.

Rear manhole

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

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

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/shared drains which are 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.

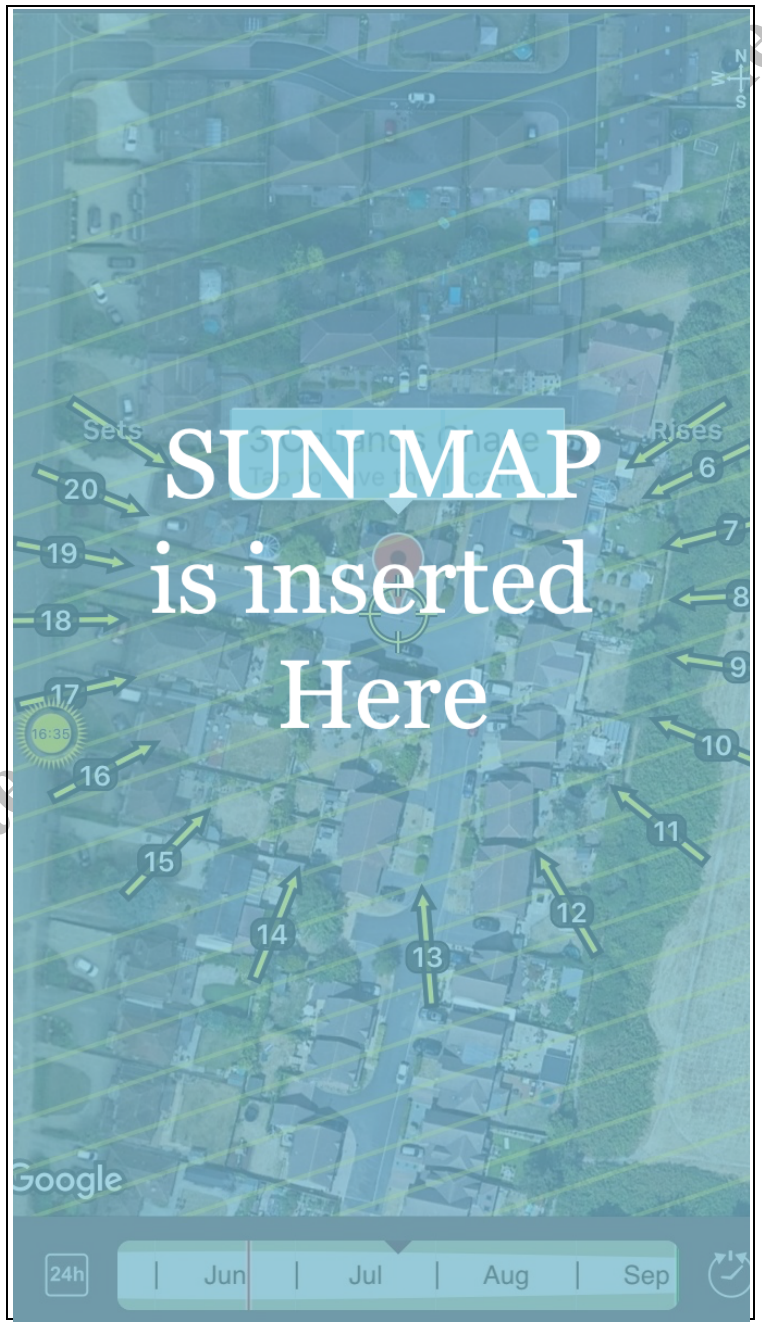
Finally, rain/surface water drains have not been tested and their condition or effectiveness is not known. Similarly, the adequacy of soak-aways has not been established although you are advised that they tend to silt up and become less effective with time.

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

OUTSIDE AREAS

Sun Map

The Sun Map shows the suns path as it travels around the property at a specific date; the date can be seen at the very bottom of the picture. The arrows show the sun's position using a 24 hour clock face around the property.



PARKING

There looks to be a relatively new parking area. Water has been discharging towards the front of the building.

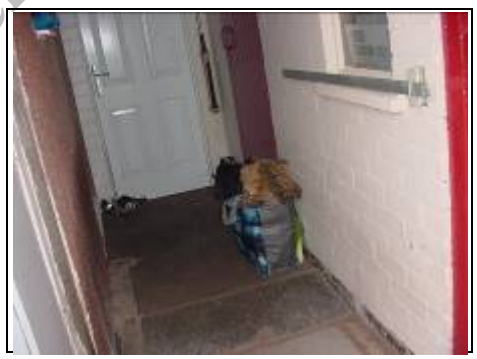
Sloping site

Front garden/parking area
~ Aerial View - 360 Photo ~

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

OUTBUILDINGS

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



Alleyway between house and outbuilding

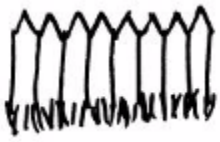
Access to outbuilding


Greenhouse and shed to rear


Tool shed to rear left


Shed has original boarded roof

EXTERNAL



Front Garden

There is a garden and a driveway to the front. The front fence needs re-staining.


Fence to front needs re-staining


Front garden with hedge

Rear Garden

To the rear is a good sized garden that has a patio area adjacent to the house which then drops away as the garden slopes away from the building.

Rear Garden

Covered sitting out area

Rear garden
~ Aerial View - 360 Photo ~

Rear sitting out area
~ Aerial View - 360 Photo ~

End of garden
~ Aerial View - 360 Photo ~

Boundaries

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

There is normally a 'T' marking which boundary is yours on the deeds which you can obtain from Land Registry.

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

We would normally chat to nearby neighbours, but in this instance we have not spoken to any.

POINTS FOR YOUR LEGAL ADVISOR

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

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) Removal of any chimneys in part or whole.
   ii) Certificates confirming chimneys have been swept
   iii) Roof and similar renewals.
   iv) Wall Insulation and guarantee, for example thirty year insurance backed guarantee.
   v) Cavity wall insulation
   vi) Amendments/removal of any walls in part or whole.
   vii) Double glazing or replacement windows.
   viii) Drainage location, maintenance and repairs.
   ix) Timber treatments, wet or dry rot infestations.
   x) Rising damp treatments.
   xi) Asbestos
   xii) Boiler and central heating installation and maintenance.
   xiii) Electrical test and report.
   xiv) Planning and Building Regulation Approvals.
   xv) Have there been any structural problems referred to insurance companies, any insurance claims, monitoring or underpinning, etc.
   xvi) 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.

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 Environmental report 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 Environmental reports 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 Environmental reports or similar general reports on the environment please see our article link on the 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.

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

If you would like any further advice on any of the issues discussed or indeed any that have not been discussed!

Please do not hesitate to contact us on 0800 298 5424 or send an email directly to whoever produced the report.

For and on Behalf of
Independent Chartered Surveyors

This Report is dated: Date

REFERENCES

The repair and maintenance of houses
Published by Estates Gazette Limited

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

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

House Builders Bible
By Mark Brinkley
Published by Burlington Press

LIMITATIONS

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 Date and should be regarded as a comment on the overall condition of the property and the quality of its structure and not as an inventory of every single defect. It relates to those parts of the property that were reasonably and safely accessible at the time of the inspection, but you should be aware that defects can subsequently develop particularly if you do not follow the recommendations.

ENGLISH LAW

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

SOLE USE

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

APPROVALS/GUARANTEES

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

ONLY HUMAN!

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

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

WEATHER

It was a mild autumn day at the time of the inspection. The weather did not hamper the survey.

As you are probably aware there has been some record breaking weather recently:

2018 being the driest start to a summer.
December 2015 was the wettest month
August 2004 the wettest August on record in many areas.
2003 was the driest year on record
2000 was the wettest year on record

This may have adverse effects on many buildings in years to come or the not too distant future.

NOT LOCAL

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

OCCUPIED PROPERTY

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

JAPANESE KNOTWEED

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

A BBC news report dated April 2018 states that the latest research has been carried out by Swansea University, where they carried out trials near Cardiff and Swansea and tested 19 main methods of controlling the plant and they found that none of these methods eradicated it. See our article:

https://buildingsurveyquote.co.uk/japanese-knotweed-buildings-and-resveratrol/

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

INSPECTION LIMITED

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

1) We did not have a full view of the roof due to the insulation covering the ceiling joists and general configuration of the roof.

2) Our view was limited as the building has an external wall insulation. We believe the only way to truly inspect these properties is to open them up in three areas which is what we always recommend to anyone having a building survey carried out by us; the openings need to be one metre square at appropriate junction points. We do not recommend investigations with an endoscope.

3) We did not open up the ground floor or the first floor as we could not see a way to do it without causing damage.

BUILDING INSURANCE

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

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

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

TERMS AND CONDITIONS

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

APPENDICES

1. The electrical regulations – Part P of the Building Regulations
2. Information on the Property Market
3. Examples of non-traditional housing
4. Non Traditional Housing
5. French Drain Article
6. Condensation and Cold Bridging Article

THE ELECTRICAL REGULATIONS
PART P OF THE BUILDING REGULATIONS

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

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

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

There will be two ways in which to prove compliance:

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

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

Work You Cannot do Yourself

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

INFORMATION ON THE PROPERTY MARKET

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

www.landreg.org.uk

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

www.rics.org.uk

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

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

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

www.hometrack.co.uk

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

www.motleyfool.co.uk

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

www.rightmove.co.uk

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

www.zoopla.co.uk

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

Sources of information

In the early 1980s, investigation of fire damage to an Airey house revealed cracking to the structural PRC columns caused by inadequate cover to the embedded steel reinforcement and chemical changes to the surrounding concrete. Subsequent investigations by BRE showed that a number of other house types built in the immediate postwar period exhibited similar defects, and that these would eventually lead to structural failure.

Accordingly, in 1984 the Government brought forward legislation to compensate owners who had bought, in good faith, houses from the public sector with serious structural defects which could not have been known about, or discovered on survey, at time of purchase. The Housing Defects Legislation (now Part XII of the Housing Act 1985) allowed the Secretary of State to designate particular dwelling types as inherently defective, and empowered local authorities to operate a Scheme of Assistance for eligible owners, either by way of repurchase or by way of reinstatement ('repair'). Over 28,000 households were aided under the Scheme of Assistance which is now substantially complete, with only a tiny handful of eligible properties remaining to be or repurchased or reinstated."

Most 'repairs' were carried out using systems of reinstatement licensed, inspected and certificated by PRC Homes Ltd, a wholly owned subsidiary of NHBC, but not all owners used this route, and in addition some local authorities carried out 'partial repairs' to their own stock which did not remove all the defective PRC structural elements from the dwelling. Surveyors encountering a house type which has been Designated Defective are therefore advised to check whether any 'repairs' carried out were in accordance with a PRC Homes Ltd licensed system, and certificated as such. PRC Homes Ltd was wound up in 1996. After that, houses repaired under licensed systems were generally accepted for mortgage purposes with an ordinary NHBC warranty."

The legislation did not allow for any 'betterment' during reinstatement, and therefore while, superficially, the appearance of a reinstated house may have changed dramatically, key identification characteristics such as window and door openings, and roof pitch, will remain constant, as demonstrated in the Before and After photographs of the houses below. Once again, it needs to be stressed that the presence of a new brick skin on such a house does not of itself signify that the house has been reinstated in such a way that it is generally acceptable for mortgage purposes.

Cornish Unit Type II (upper) and Airey (lower) houses before and after repair.

Thirty house types were eventually designated as inherently defective, in separate legislation in England, Wales, Scotland and Northern Ireland. The subsequent BRE research programme into all non-traditional housing revealed no further house types which met the Government's criteria for designation. However, it should be noted that designation was by reference to a construction drawing forming part of the Order, rather than a named house type, and some local authorities have determined that the construction of Lilleshall (P075) and Cheecol Keeland (P035) houses is substantially in accordance with the construction shown in the designation documents for Dorran (P046) and Woolaway (P138) houses, respectively.

Under the 'Notes for surveyors' on the relevant pages, a warning symbol appears:

The house types listed below are designated as inherently defective under the Housing Defects legislation (they are shown under the names and reference numbers listed in the Handbook):

Airey (P003)
Ayrshire County Council (P010)
Blackburn Orlit (P024)
Boot Beaucrete (P025)
Boot Pier and Panel (P026)
Boswell (S007)
Cornish Unit Type I (P039)
Cornish Unit Type II (P040)
Dorran (P046)
Dyke (P047)
Gregory (P055)
MacGirling (P078)
Myton (P087)
Newland (P090)
Orlit (P091, P092)
Parkinson (P094)
Reema Hollow Panel (P101)
Schindler (S049)
Smith (P107)
Stent (P110)
Stonecrete (P113)
Tarran Temporary Bungalow (P115)
Tee Beam (P117)
Ulster Cottage (P122)
Underdown (P123)
Unitroy (P126)
Unity Type I (P127)
Unity Type II (P128)
Waller (P129)
Wates (P130)
Wessex (P132)
WhitsonFairhurst (P134)
Winget (P137)
Woolaway (P138)

Manufacturer: Clothed Concrete Construction Ltd **Alternative names:** Clothed Concrete Construction Dyke

Designer: H G Dyke

Period built: 1940s

Number built: 450

IDENTIFICATION CHARACTERISTICS

2-storey semi-detached houses.
Medium pitch hipped roof covered with tiles.
External walls of storey height PRC panels.
First floor panels generally finished in darker aggregate overall ground floor panels.

NOTES FOR SURVEYORS

Cracking and spalling of PRC external wall components.
Cast-in chlorides not present in panels, columns and main beams, but present in posts and secondary beams.
Cracking of PRC posts.
Some posts of HAC concrete.
Corrosion of RSA fixed to foundation plinth.
Outward displacement of base of ground floor wall.

CONSTRUCTION

Substructure: Concrete strip footings with integral pad foundations. Brick underbuilding, DPC. PC plinth units **[1]**.
Frame: Storey height L-section PC corner columns **[2]** joined by connecting plate cast into ground floor column and bolted to upper column. Storey height PC columns **[3]** with upper and lower storey columns connected with bolted steel connection plates **[4]**. RSA **[5]** bolted to columns at first floor and eaves level. PRC beams **[6]** at first floor and eaves level.
External walls: 5" x 3" PRC posts **[7]**. Storey height textured finish tray-shaped approximately 2' width PRC panels **[8]**, stiffened by 3" webs on ground floor and exposed aggregate finish stiffened by 5" webs on first floor, cavity, PC panels **[9]**.
Separating wall: Storey height PRC columns, 5" PRC panels, cavity, plasterboard.
Partitions: Clinker PC blocks.
Ground floor: Concrete.
First floor: Inverted T-shaped PRC secondary beams **[10]** on RSA **[11]** bolted to PRC beam **[6]**. ¼" restraining bar **[12]**.
Ceiling: Plasterboard.
Roof: Inverted T-shaped PRC secondary beams on RSA bolted to PRC beam, timber rafters and tiles.

VARIANTS

External walls lined with plasterboard backed with 'Corkcrete' corkboard or expanded rubber and building paper, or with hollow clay block tiles.
Partitions of hollow blocks on ground floor and timber stud partitions filled with granulated cork and lined with plasterboard above.

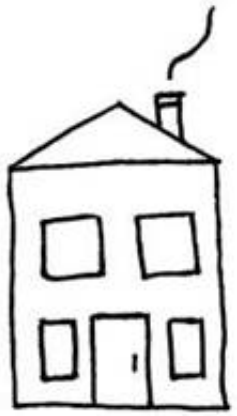
REFERENCES

Aid to identification: Dyke CCC houses (BRE OP 5, 1986)
BRE Archive (EP 43)

Non-Traditional Housing

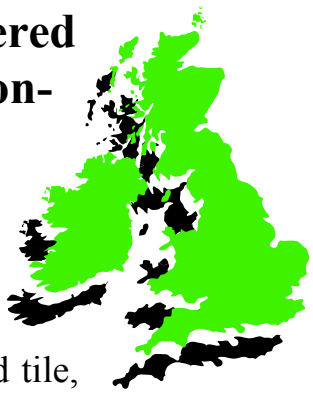
If you need help and advice with regard to independent valuations, property surveys, building surveys, structural reports, engineers reports, defects surveys and structural surveys matters please free phone 0800 298 5424 for a friendly chat with one of our chartered surveyors.

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.

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:

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.

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.

Boot

Believed to be named after the contractor of that name. Built on a concrete frame with more traditional brickwork or render typically found externally.

Cornish Unit

Although they are called Cornish Units, we have found them all over the country. They come in various makes and models as do the other houses that we mention. They were traditionally constructed with a concrete frame. The unusual thing was the mansard roofs that ran all the way down to the first floor level.

Dorran

These were pre-cast concrete panel buildings with a concrete ring beam at first floor level with a timber frame internally.

Dye Construction

This was concrete panels which were a storey height secured by metal angle brackets (believed to be steel) with concrete beams forming the first floor.

Gregory

This is pre-cast concrete, storey height columns with ring beams. These have mansard roofs to first floor level.

Myton

These are concrete panels.

Newland

Steel frame.

Orlit

A feature of these is that they may have a flat roof with an asphalt finish.

Parkinson

These are concrete column construction with a render or pebbledash finish externally.

Reema

Hollow panel. These are structural concrete columns and beams cast in situ.

Stonecret

This is pre-cast reinforced concrete frame with concrete panels, two storeys in height.

Tarran

Pre-cast concrete panels with first floor ring beam. The panels are very wide.

Unity and Butterly

Pre-cast concrete column, metal plated beams. An unusual external finish of a small looking concrete panel.

Wates

Believed to be named after the contractor of that name. Pre-cast reinforced concrete panels with ring beams at first floor level.

Wessex

Pre-cast reinforced panels.

Wimpey No Fines

In situ mould type no fines concrete with a variety of different thickness of walls depending upon the age and type.

Laing Easyform

Comes in both solid and cavity wall forms built from a no fines concrete.

Arrowhead

Steel structural frame albeit that it is lightweight. They tend to have cladding to the front of them.

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

Dorlonco

They have a very well hidden structural metal frame.

Hawthorn Leslie

This is a mixture of both a metal frame and a timber frame.

Howard

We have come across quite a number of these in our surveys. This uses a lattice work of metal beams.

Lowton Cubit

Possibly named after the contractor. Again this is a steel framed building.

Thorncliffe

Cast iron panels bolted together.

Swedish timber dwelling

Built with a timber frame.

Reema conclad

This is a good example of a large panel concrete house.

This is but a brief run-through of some of the non-traditional houses. There are many, many different types. We have surveyed ones where there are only a few thousand ever produced and we have also surveyed other types of non-traditional houses where there are many thousands produced. In our experience as chartered surveyors they all need their own individual survey as they have their own unique problems.

It may look traditional 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?

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.

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.

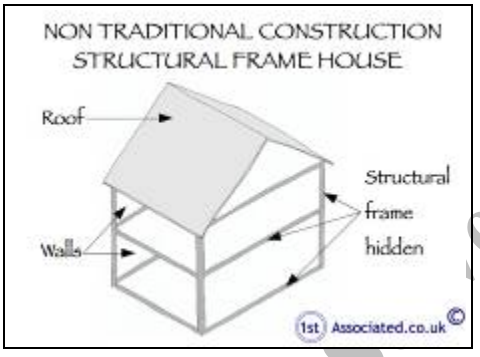
We have seen during our surveys other more recent innovations within the modern timber frame market, such as using composite wood products for floor joists and also for the flooring, together with an increased use of external cladding, as it is more economical and faster to put up than brickwork.

Not lending against non-traditional construction

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
- Innovatory construction

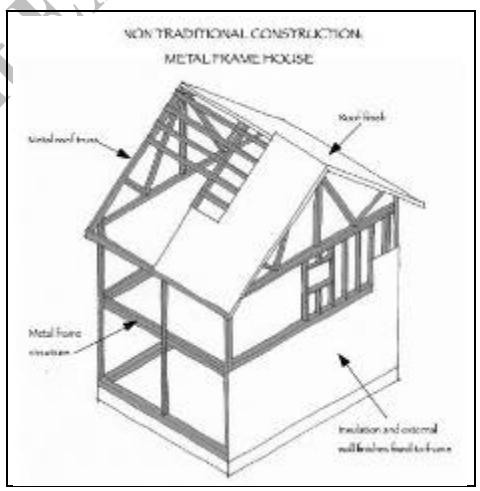
Structural frame



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.



Original condition of non-traditional house with roof replacement

Close up of cladding on non-traditional house

Non-traditional metal frame house

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

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

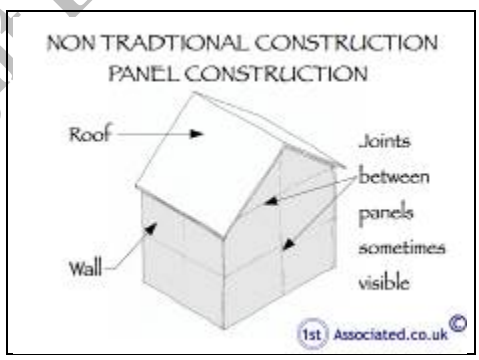
The adding of modern things can affect the building

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

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.

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.

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).

French Drain

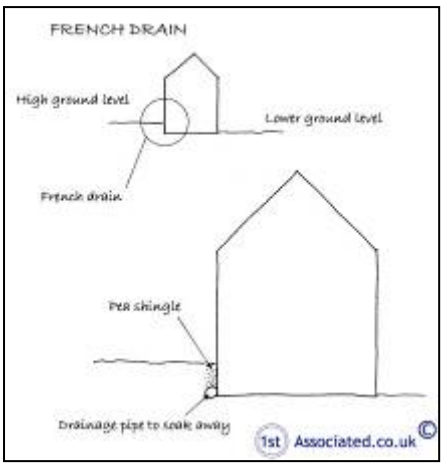
Using a French drain to resolve a dampness problem

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.

French drains must be on a slope

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

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

The French drain system that we would recommend

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

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

The French pond!

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

Condensation and Cold Bridging in Non Traditional houses

What is cold bridging, how does it work?

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

Non traditional house mainly asbestos

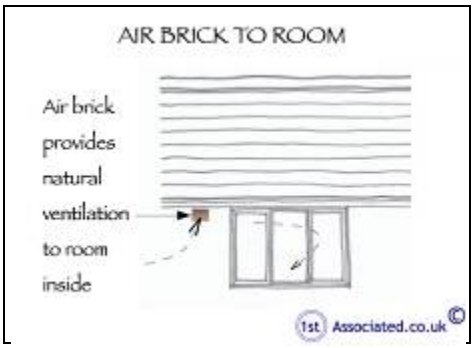
Cold Bridging

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.

British Steel frame house (BISF)

Ventilation is important

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.

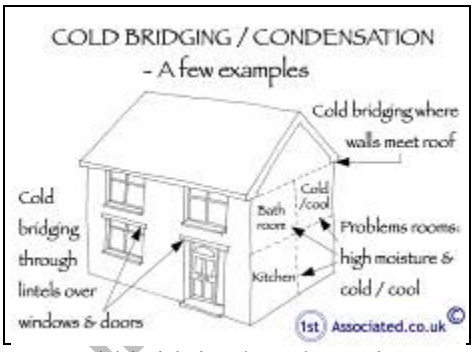


Airbrick provides ventilation

Condensation and Cold Bridging in certain susceptible constructed properties

Survey 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/condensation

Cold Bridging isn't just about condensation on mirrors

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

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


Rusting within the roof between the insulation and plastic protective underlayer

Buying a modern building

If you buy a 1980'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.

Metal frame non traditional construction

When is Cold Bridging Likely?

In our experience we have seen cold bridging occurring in:

1) Eras of properties where there are warm elements and colder elements to the building.

2) Where you have a mixture of warm rooms and cold rooms.

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

Black mould and high damp meter readings

3) Humidity internally is high

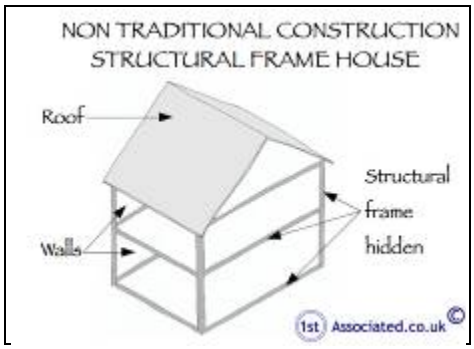
4) Where it is colder but by no means very cold outside

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

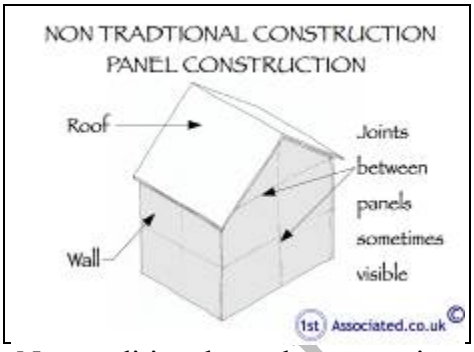
For example with:



Non traditional structural frame house

1. cavity wall insulation or

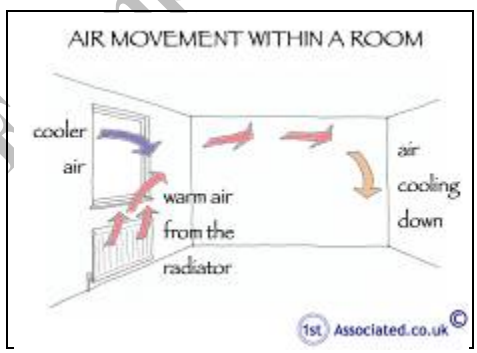
2. double glazed windows.



Non traditional panel construction

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.

How to solve Cold Bridging



Air movement within a room

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?


Metal cladding roofs

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.

Can lifestyle be a factor in Cold Bridging?


Cooking produces steam and requires ventilation

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.

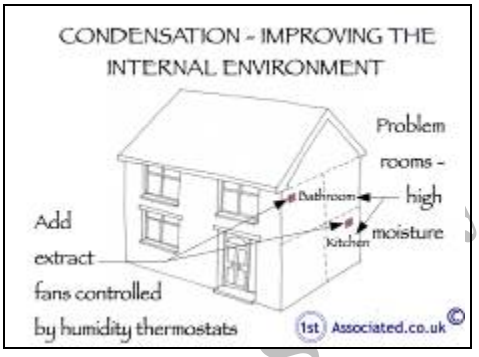
Is Cold Bridging and Condensation a design problem or a lifestyle problem?


Non traditional BISF property

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 can be amended. This may involve the occupier having an understanding of the problems they are causing. For example, drying lots of washing on a radiator inside may be causing excessive moisture in the atmosphere. Equally not opening the windows and closing or sealing up vents can be a problem.

Design of the Building

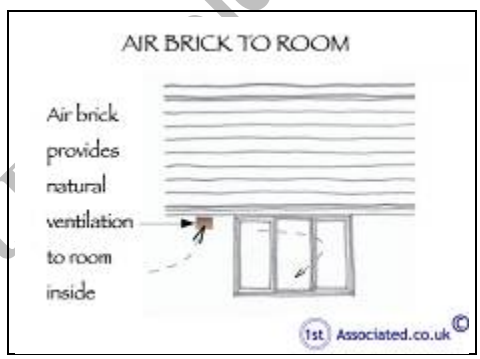
Sometimes it really is down to the design of the property. Where there are cold elements in it, such as a concrete structural frame or concrete lintels, when these are in contact with moist air condensation occurs. Sometimes this is impossible to stop but often it is possible to reduce it by having a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



Condensation

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 inch 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

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

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

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).

Removing electric points to view construction

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.

Cold bridging what can we do?

There are limited things you can do with regards to cold bridging as it is about the original design of the property and needs to be considered as a characteristic. However, we do always recommend large humidity controlled extract fans are added into the bathrooms, kitchens and any areas that you intend to carry out drying of clothes to ensure moisture is removed as quickly as possible.