

# SPECIFIC DEFECTS REPORT

Relating to dampness

XXXXXXXXXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXX

Lincolnshire

x



FOR

XXXX XXXXXX

Prepared by:

XXXXXXXXXXXXXXXXXXXX

INDEPENDENT CHARTERED SURVEYORS

Marketing by:

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0800 298 5424



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## **INTRODUCTION AND INSTRUCTION**

We have been instructed by xxxxxxxxxnd to prepare an independent report on the dampness and we have also discussed the drains and roof problems that are covered briefly in this report.

We have carried out a visual inspection (non evasive) of the property on xxxxxxxxxxxx.

The weather was a dry spring day at the time of the inspection.

We are Independent Chartered Building Surveyors and professional members of:-

The Royal Institution of Chartered Surveyors (RICS),  
The Independent Surveyors and Valuers Association (ISVA),  
and  
Chartered Association of Building Engineers (CABE)

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

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## **SITUATION AND DESCRIPTION**

(We do appreciate you live in the property however we need to record the situation and description for completeness of the report).

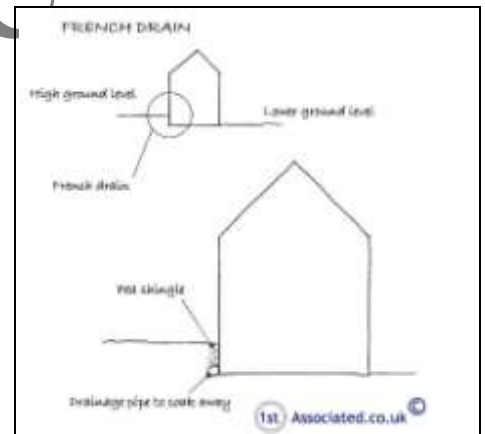
This is a detached bungalow with surrounding gardens and a detached garage to the right side. There have also been some trees cut down on the left side. There is a rear extension that was possibly built as a store or similar and has an unknown construction.



Front left view

### **Work being carried out at time of survey**

At the time of the survey work was being carried out around the property to add a French drain, which was partially completed on the left side, completed on the front and also the drains have been dug up on the right side.



French drain

### **Era of construction**

You advised the property was built in the xxxx. This style and type of construction was fairly common between the xxxx and xxxx. The Deeds may be able to give a more exact record of the date.

### **Alterations**

There have been various chimneys and chimney breasts removed to the property. It has a hipped roof with an interlocking concrete tile, typical of those added from the xxxxx onwards. It has stretcher bond brickwork and a semi-engineered brick, bedded in what we believe to be a lime mortar.

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### **High ground water table level?**

From what you advise there is a relatively high ground water table level in the area, which leads to the gravel driveway and parking area becoming saturated during the winter months.

### **Amendments**

We believe you have carried out various alterations over the years, including the adding of an en-suite shower room, a guest bedroom and replacement plastic windows and you have a timber flooring all ready to go down in the hallway.

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

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

- |      |   |
|------|---|
| 1931 | The Highway Code launched improving road safety   |
| 1935 | The driving test becomes compulsory, making roads safer and saving lives                |
| 1937 | The emergency (999) telephone number introduced   |
| 1941 | The National Fire Service established   |
| 1947 | The Polaroid camera is invented by Edwin Land   |
| 1948 | Olympic Games held in London, known as the Austerity Games                              |
| 1950 | The concept of artificial intelligence for computers was developed by Alan Turing (MOD) |

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## **SYNOPSIS**

You have asked us to advise with regard to dampness and black mould within the property that you have had for some time and have tried various things to get rid of.

We do need to advise you that a visual inspection is not an exact science and we would have to carry out various other experiments and such things as data monitoring for about a month, possibly more, to establish exactly how the property is being used to advise in further detail. However, we do feel that what we have seen and understand of the property this is your best way forward.

## **EXECUTIVE SUMMARY**

Summaries are not ideal as they try to précis often quite complex subjects into a few paragraphs. Here we give a summary of the problem and our various suggestions on how to solve it and all costs it relates to.

## **THE DAMPNESS**

### **1.0) Building construction and environment**

We wish to start with the few concerns we have about the construction and ground conditions:

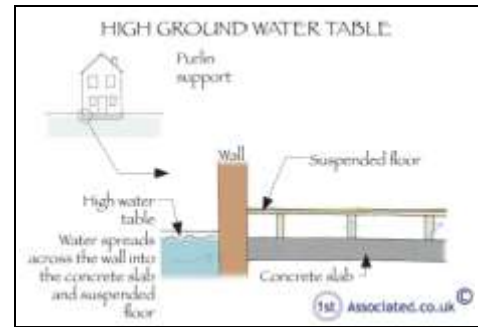
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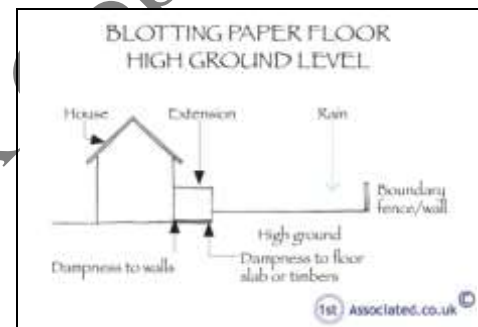


## 1.1) Relatively high water table level

It would appear there is a relatively high water table level around the property. You mentioned that during the wetter months you can sometimes see sitting water on the stone shingle in the car park area. If it is the case that you have a relatively high ground water table level, then we think it will also probably be soaking the concrete floor to the rear of the property and also the concrete underfloor to the bungalow which has a suspended timber floor. The concrete will be acting almost like blotting paper.



High water table level



Blotting paper floors

High damp levels may also relate to leaking supply pipes or sewerage pipes, at the time of the survey you had the drains and the supply pipes dug up. It may be worth having a closed circuit TV camera report of the drains to establish their condition, also their location with regard to the manhole that we also discussed. More about this later.

The damp floor slab is something that will affect the condition of the property and the black mould, although we do not think it is probably the main factor in this instance.

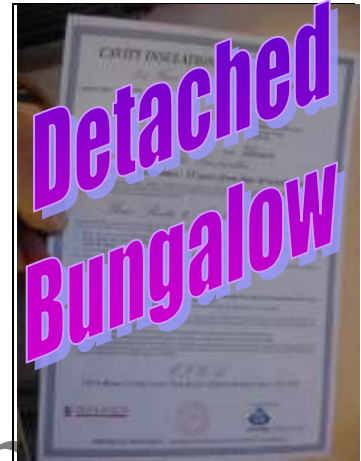
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## 2.0) Wall insulation

The walls have had insulation added. This may, in a worst case scenario, be acting as a damp bridge depending upon what insulation was used. We do feel that most of the wall cavity insulation industry is now aware of the problems that can be caused. This is why CIGA (Cavity Insulation Guarantee Agency) in Leighton Buzzard has been set up.



CIGA certificate

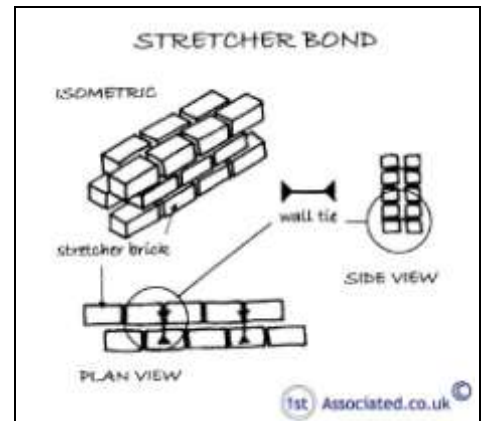
**ACTION REQUIRED:** We understand you have now contacted the company. You need to find out if you are covered by the guarantee.

*Please see xxxxxxxxxxxx article in the xxxxxxxxxxxx on xxxxxxxx on cavity wall insulation which can be found in our Appendices at the back of the report.*

## 3.0) Walls of the property

### 3.1) Original bungalow

The original bungalow was built in an early Stretcher Bond brickwork which was meant to be a step forward in construction to stop the walls getting damp, the idea being that the outer brick got wet and dried out, and the cavity gap meant no water was transferred to the inner cavity of the wall.



Stretcher Bond

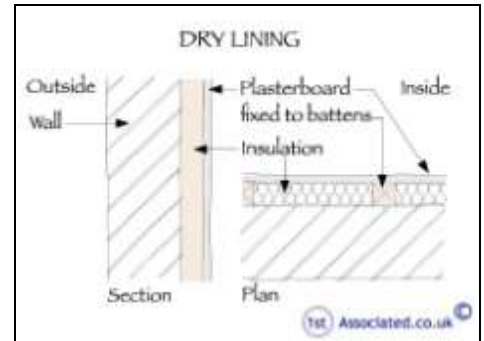
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### 3.2) Rear extension

The rear extension (kitchen/dining room/lounge) is a mixture of construction. This area may originally have been a storage shed or similar meant for non-habitable use and has therefore been built differently. It is possible that there is some Stretcher Bond brickwork to this area; it is also possible that there is some solid brickwork here and/or single brickwork with a dry lining inside.



Dry lining

This mixture of building types and design, together with the vaulted roofs, means you will get solar gain during the summer months and heat loss during the winter months.

These two parts of the building act very differently, particularly as you live in the rear part of the property and cook in there (giving off humidity) and this was relatively warm on the day of our visit, with the bungalow being relatively cool.

### 3.3) Natural balancing of the relative humidity

We recorded a difference of relative humidity readings of 40% in the rear area and 20% in the master bedroom. This then, after having a period of having the doors open, both externally and internally, the readings starting to balance and transferred to 31% relative humidity in the rear area and 30% within the master bedroom.

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Relative humidity readings of 40% in the kitchen/diner/lounge



Relative humidity readings of 20% in the master bedroom



Relative humidity readings of 31% on the kitchen/diner/lounge after opening doors



Relative humidity readings of 30% in the master bedroom after opening doors

### **3.4) Dust, dirt and skin particles travelling in the humid air**

At the same time as this balancing out was occurring, what would have been happening was humid air would have been travelling from the rear extension into the bungalow, which will go to any cold spots, which inevitably tend to be in cupboards and corners and you get black mould forming.

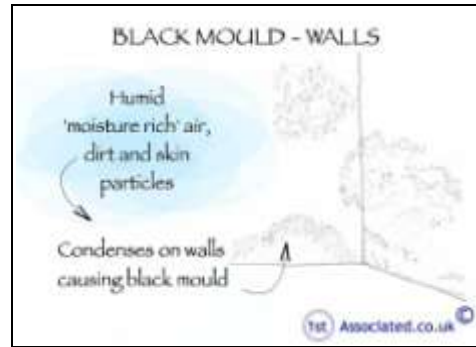
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Black mould in corner of master bedroom



Black mould



Black mould in bathroom



Black mould in en-suite shower

**ACTION REQUIRED:** We recommend large good quality humidity controlled extract fans are installed in the bathrooms and kitchen and any rooms used for drying clothes internally. It is best to have one that is a quiet/low noise fan.



Humidity controlled extract



Extract needs improving in en-suite shower room

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However, we would add that we think even an extract fan like this will have difficulty coping, so it may also be worth putting a borrowed light/window/vent over the door or in a similar place, which allows heat to travel from one area to the other and also relative humidity.

We spoke about the door being removed during the summer but this also needs to be removed during the winter months.

#### 4.0) Chimneys and chimney breasts

Discussing more generally the evolution of the chimneys. First of all, before the chimney had been invented we used to literally burn fires in the centre of the rooms and allow the smoke to go up. Then with the invention of the chimney it made the rooms much more pleasant to live in, but every room had a chimney in it because an open fire was the only way to heat the room, which would have been the case in this property. It is therefore reasonable to assume that chimneys have been removed from this property in a number of cases.



Left side of property where a chimney has been removed

One of the remaining chimneys is the one to the front left side. You kindly marked out the pattern of the dampness to the chimney breast which seems to follow the line of the flue. As you are aware, there is no visible chimney on the left side.



Pattern of dampness found within chimney breast to left lounge

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#### 4.1) **Removal of chimney, best practice**

We are not sure if there is a guide to the best practice and way to remove a chimney. We normally say to people that it is important to make sure where a chimney has been removed at roof level, that the tiles are correctly positioned to make it watertight if you are removing it completely. Ideally we would always recommend leaving part of the chimney up and then putting air bricks/vents in this to allow a through flow of air into the chimney breast.

We would recommend an air vent at the base of the chimney if it was being blocked up and we would also recommend that the chimney be cleaned before any of the blocking up is carried out. We believe the soot within the chimney acts like blotting paper drawing dampness to it and you can get what is known as sulphate attack, which brings an orange/yellow dark stain to the chimney.

**ACTION REQUIRED:** We recommend you have a chimney sweep clean the chimneys.

#### 5.0) **How do you heat the property?**

It is possibly best to heat this property by having the heating on at a low level all the time in the bungalow area so that you have a better balancing of heat and relative humidity between the bungalow bedroom and bathroom areas to the kitchen/dining room/lounge area. This will help reduce the movement of the humid damp air with the dust and skin particles in it from one area to another.

#### 5.1) **Controlling the temperature within the kitchen/dining room/lounge area**

It is worth considering how you control the environment in the kitchen/dining room/lounge. We feel that first an awareness of the temperatures here would be a good start. Heat and relative humidity thermometers, similar to the ones that we gave you, would be best installed in as many rooms as possible. This will allow you to see the imbalance between the kitchen/dining room/lounge area and the bungalow/bedroom/bathroom area.

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## 5.2) Heat gain during the summer months

One thing that concerns us is that you will get heat gain during the summer months, with the rear of the property being warmer due to the way it is constructed, compared with the bungalow bedroom/bathroom area and you do need to watch how the temperatures change.

## 5.3) Heat loss during the winter months

Equally during the winter months you will get heat loss from the kitchen/dining room/lounge area. Without knowing the construction of this area it is difficult to gauge how much heat loss and heat gain you will get. We think the starting point is to monitor it and know the temperatures in these areas and the relative humidity.

## 5.4) Improving the thermal efficiency of the kitchen/dining room/lounge area

You can add insulation, this can come in the form of:

1. External insulation, where an insulation with render is added all the way around the building, or
2. Internal insulation.

These are relatively expensive alterations. We have not calculated the cost in relation to your property but we did recently carry out calculations in relation to a three bedroom house of approximately 125m sq. and discovered that the pay-back period of the insulation costs for external insulation would be in the region of 30 years. This is purely based upon the savings you get in the heat loss on the property. We do appreciate that adding insulation has other benefits, such as a better environment to live in and you may wish to look into this further.

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### 5.5) Heat gain from roof window

One area that it may be worth experimenting with is whether a blind over the roof window in the kitchen/dining room/lounge area would help reduce the heat gain and heat loss.



Roof window where we suggest a blind is added

### 5.6) Why have an extract fan rather than just opening the windows?

Sometimes we are asked why we recommend having an extract fan rather than just opening the windows. This in part goes back to years ago when opening the windows in the morning to air the building was more standard practice, as were other things such as wearing jumpers when it got colder rather than turning the heating up, etc.

One of the main problems however with just opening windows when it is getting high relative humidity in the building, is that externally there could be a higher relative humidity and unless you actually have an extract fan drawing the air out and literally pushing it outside you do not get a transfer between one area and the other.



Outside of the kitchen/  
dining room/ lounge area



Kitchen/dining room/lounge area

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A good way of showing this is when we carried out the second draft of this report. The relative humidity outside was 55% which means that if we had the situation that we had in the building when we visited to carry out our inspection, where we had 40% relative humidity in one side and 20% in the other side, if we had opened the windows we would have added to the problem and the relative humidity would have gone up trying to balance with the outside relative humidity.

## 6.0) Air Movement

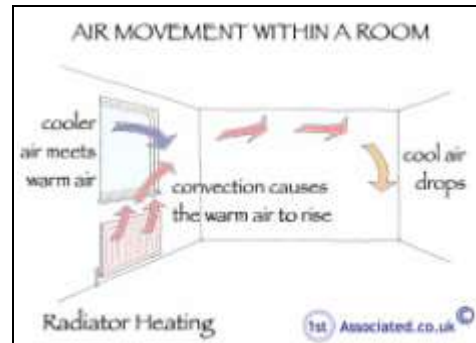
Air movement is important in the property.

### 6.1) Radiators positioned internally

We also noted that some of the radiators are not positioned under windows. Again this means there will be lack of air movement in these areas.



Internal radiator in front left lounge



Air movement from radiators underneath windows

In years gone by when there were fires internally there would have been good air movement in the property created by the fires. In addition to this you would have had timber or metal windows which would not have fitted so exactly and these would have been single glazed which would also have created air movement.

You may need to experiment with adding fans at high level in the vaulted ceiling area to move the air around.

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## 7.0) Trees removed

We are not sure when the trees were removed. There look to be large trees to the left side of the property and you should be aware that trees have various functions and effects:

1. The root system takes water away from the property so when you remove them you tend to get a higher ground water table level, which may in turn be affecting this property more.
2. Where trees are close to a building you do tend to get the branches and leaves stopping air movement around the building, preventing the drying out of the building in these areas, so removing trees also has the effect of allowing the sun, air and wind to get to these areas to allow them to dry out more.

So there are positives and negatives to having trees/removing trees.



Trees removed



Tree stump

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## 8.0) An element of experimentation is required

Though this is a very inexact science, strange as it may seem as we have been living in buildings for a long time, a combination of different types of construction where you use the building and your heating requirement is unique to you, as such the solution that works best for you varies from what it would be for someone else.

*For example,*

*A humidity controlled extract fan in the kitchen area may work very well for you, but for others the noise of the extraction fan coming on an off may be unacceptable.*

Equally for some opening the windows and doors both externally and internally would be a way of managing the relative humidity, when worked in combination with relative humidity temperature gauges. It may be all you need to record the temperatures for some time to see what pattern of relative humidity you have.

## 9.0) Other thoughts and ideas - a positive pressure fan unit

This is something that we have experimented within some of our tenanted properties where there has been excessive black mould. The units are fitted within the roof space and draw air in from the roof space and then warm it to a certain temperature, or cool it depending on the time of year, then this is forced into the building, normally via a vent in the ceiling. This then creates air movement in the property and also ensures, generally speaking, air with a lower relative humidity. We have seen this successfully used in other properties, but we have not had the benefit of being able to see it used over the long term in any of the properties that we manage.

We have heard reports, both good and bad, and we are testing these on some of the buildings that we manage and have not concluded on our findings on them to-date so cannot advise further.

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Example of a positive pressure fan



Positive pressure fan

#### 10.0) The paint you use is important as is the plaster

A modern paint is often plastic based which does not allow moisture to fuse into the surface of the plaster as it would have done in years gone by when it was water based. There are still paints available that are water based but you do need to specifically search these out.

We would also add that with regard to plaster that modern gypsum plaster (pink coloured plaster) tends not to be able to cope with moisture as well as an older lime based plaster and you can, for example as was seen in your kitchen/diner/lounge area, get popping/blistering around where any nails are affected by humidity.

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## **REPORT PART TWO**

### **1.0) Drains**

We will also talk briefly about the drains.

We think you have already solved this problem.

**ACTION REQUIRED:** We would just recommend that perhaps you have a closed circuit TV camera report of the drains to establish exactly where they are going, particularly in relation to the pipe that you believe is redundant. It may well have been to an old toilet like you suggested, or equally it may be from a downpipe.



Soil and vent pipe that we believe is working



Supply pipe



Redundant soil and vent pipe that needs to be checked

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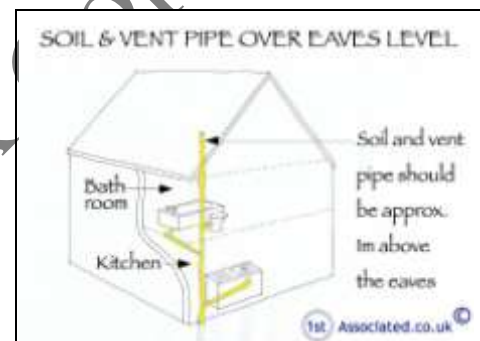


### 1.1) Adding of a manhole

Building Regulations now require manholes to be added wherever there is a change in direction or where pipes meet each other. We do not think this was a requirement until about the late 1940's (1948 was when the Building Regulations Act became National, up until that point there were various local legislations that were being enforced to different levels) so we would always recommend manholes are adding, as discussed.

### 1.2) Adding a soil and vent pipe

We would agree that the adding of a soil and vent pipe is the ideal solution. Typically this should be 0.5m to 1.0m above the eave level of the roof.



Soil and vent pipe over eaves level

### 1.3) Building Regulation permission

We believe you may well need Building Regulation permission to carry out the alterations you wish. Please phone the local authority to discuss this matter.

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## THE ROOFS

### 2.0) Roofs

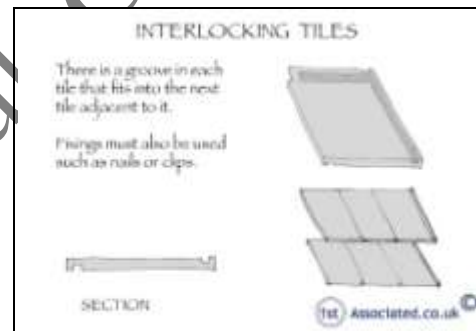
#### 2.1) Are the walls getting damp from the roof?

You have an interlocking concrete tile roof, which is typical of the type of roof added during the 1960's/1970's. Originally it would have had a lighter weight nibbed clay tile roof.

This is a picture of the rear of the property (as you know because you live in the building!) with the tiles that were damaged, with the replacement ones in a slightly different colour.



Interlocking concrete tiles to rear of roof, with lighter coloured tiles being replacement tiles that were broken



Interlocking tiles



Close up of tiles. Are the walls getting damp from the roof?



Lifting the edge of the roof tiles

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It does of course make sense to have a look to see if the roof is leaking when you have a damp problem, which we duly did. We can see where you have added the damp proof course to the edge and can also see in the roof space that there is some minor efflorescence coming through on the rear of the property which would be above the master bedroom towards the external corner.



Inside the roof

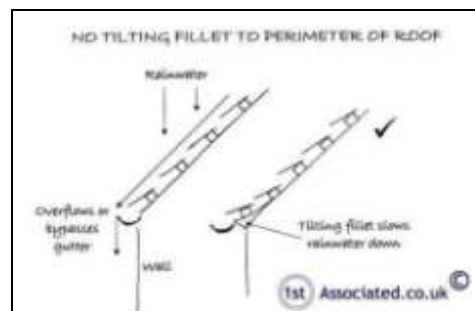


Efflorescence on timbers to rear left side

#### Efflorescence Defined

Efflorescence is the white salt found on brickwork/stonework/timbers. It is a natural phenomenon which is where the minerals in water as they dry out come to the surface of stone, brick or timber and leave a white crystallised powder, almost flour like. On a red brick it can stand out considerably, almost appearing bright white on a lighter white or yellow brick it can almost disappear.

It is worth keeping a constant check on this roof because the replacement of the roofs in the 1970's were often carried out with minimal skills levels, for example there should be a tilting fillet to the base of the roof to slow the rainwater down and we cannot see one in this case.



No tilting fillet

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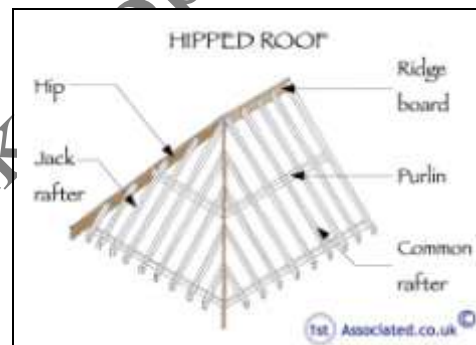


**ACTION REQUIRED:** Next time it rains heavily literally stand outside the property and check to see that the water is being transferred from the roof into the gutters without it discharging down the walls. This can have quite an effect on the property.

It may be worth adding air vents to the soffit boards when you next carry out work to allow a through flow of air and to reduce any dampness in the roof space.

## 2.2) Hipped roof

Hipped roofs are integrally less stable than gable end roofs. As mentioned it is clad with interlocking concrete tiles that is likely to have been re-roofed in the 1970's as this is when this was common. It is an older roof as it is close boarded internally, which means it is a strong roof which is good in the case of hipped roofs which are integrally liable to move.



Hipped roof

## 2.3) Roof Structure

When we were in the roof we noted that the purlins were fairly true and level, which is a sign there has been little movement in the roof.

### Purlins Defined

The purlin is the horizontal timber member usually running from gable end to gable end and parallel with the walls which supports the jack or common rafters (the angled rafters forming the slope to the roof).

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#### 2.4) Felt lapping into the gutters

We discussed the felt lapping into the gutters. Where secondary protection is present in the form of protective underlay, originally felt, the correct detail is to lap into the gutters, although we do find that over the years this detail can disintegrate particularly where it is in the gutters.

#### 2.5) Bungalow

Originally in the era this bungalow was built you never would have had a protective underlayer in the roof space, it may or may not have one now. Whether it does or does not have one, the roof should be cross-battened to allow ventilation.

#### 2.6) Rear right roof

This is a gable end roof, finished with an interlocking concrete tile, with a roof window on one side. The exact construction is not known, from what we understand there is a polystyrene style insulation in the roof. This could lead to sweating and condensation in the timbers.



Mass of insulation in roof

**ACTION REQUIRED:** We do think it is worth opening up one section of the roof to see if there is any deterioration occurring. It may even be worth under cladding this roof with a modern dense insulation, such as Kingspan or Celotex (trade names).

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## **SURVEY FINDINGS**

The following is a brief summary of our investigations and what was found and includes what has been inspected and a photographic record. We reserve the right to add additional information as required and requested.

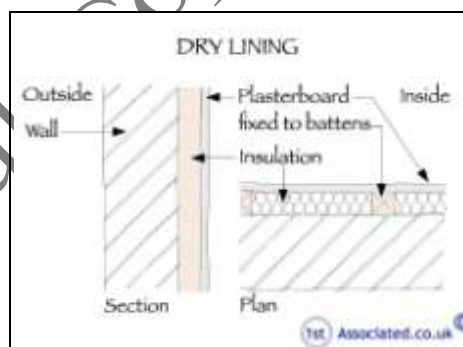
### **EXTERNAL**

1. From our visual external inspection we noted:

#### **1.1 Characteristic of this type of building**

The bungalow has been built with an early style Stretcher Bond /cavity brickwork that has now had some type of insulation added to it which needs investigation.

The kitchen/dining room/lounge area is of unknown construction, although it is likely to be a solid wall/cavity wall bond and dry lined and possibly other forms of construction; investigation required.



Dry lined walls

#### **1.2 Roofs**

The hipped roof is clad with interlocking concrete tiles which is likely to have been re-roofed in the 1970's as this is when this was common. It is an older roof as it is close boarded internally, which means it is a strong roof which is good in the case of hipped roofs which are integrally liable to move.

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### 1.3 Walls

The bungalow is a cavity wall construction with insulation added and the rear extension has various type of construction.

### 1.4 Windows and doors

We noted that the windows have no trickle vents, which means there will not be any air movement around them.



Front bay without trickle vents



Trickle vents

#### Trickle Vents Defined

Small vents to the windows to allow air movement inside the property to stop/reduce a build up of fumes or humidity.

### 1.5 Outside areas

Please see our comments with regard to the trees.

There seems to be a high ground water table level to the area.

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## **INTERNAL**

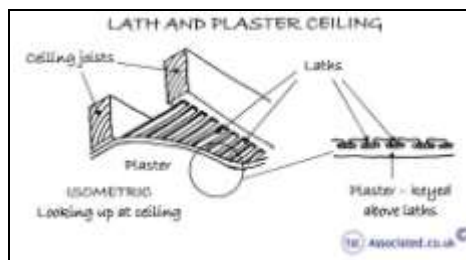
1 From our visual internal inspection we noted

### **1.1 Roof Space**

This is where we could see that the property had close boarding.

### **1.2 Ceilings**

The ceilings are lath and plaster. Dampness in a roof can lead to these deteriorating.



Lath and plaster



Lath and plaster

#### Lath and Plaster Defined

Laths are thin strips of timbers which are fixed to the structure. Wet plaster is applied to the laths, usually in several layers. The plaster forms a key as it is forced between the laths. This plaster, once dry, is given further coats and often a decorative finish.

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### 1.3 Internal Walls

Unknown construction, not opened up.

### 1.4 Floors

Suspended timber floor to bungalow and solid concrete floor to the kitchen/dining room/lounge area (assumed)

Note: We have not moved furniture or fixtures and fittings unless stated.

The full areas inspected are identified within the Appendices in the Inspection section.

## 2 Resistance Damp Meter Readings

We had a mixture of readings, generally we would consider them to be what we would expect to find, with the exception of the chimney area.



Taking rising damp meter readings



Taking lateral damp meter readings

## 3 Relative Humidity Readings

Please see our earlier comments with regard to our very brief recordings of relative humidity of 40% in the kitchen/dining room/lounge area and 20% in the bungalow. We typically find readings from the early 40's down to 20% relative humidity.

**ACTION REQUIRED:** Please see our comments earlier in the report.

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## **SUMMARY UPON REFLECTION**

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

This is quite a complex problem in some ways because there are various number of unknowns, such as how the insulation has affected the walls and how the various different types of construction have affected the building overall.

However, generally speaking we feel that your best course of action is to remove humidity at source with good quality large humidity controlled extract fans to ensure there is a balance of warmth and relative humidity between all the areas of the property. The first step in this is to get an awareness of what these temperatures are by adding thermometers and relative humidity devices in these areas, similar to the one that we gave you.

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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.

For and on Behalf of

xxxxxxxxxxxxxxxxxxxxx

xxxxxxxxxxxxxxxxxxxxx

xxxxxxxxxxxxxxxxxxxxx

xxxxxxxxxxxxxxxxxxxxx

xxxxxxxxxxxxxxxxxxxxx

xxxxxxxxxxxxxxxxxxxxx

xxxxxxxxxxxxxxxxxxxxx

**This Report is dated: xxxxxxxxxxxxxxxx**

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## APPENDICES

Inspection

Photographic Record

Construction Summary

Time Line

Requests for Information

Contact Information

Estimate of Costs

Article about cavity walls by Jeff Howell

Limitations

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## **INSPECTION**

Our inspection has been specifically related to the dampness, drainage and roof problems detailed below:

### **Visual Inspection**

Our inspection has taken the format of a visual inspection:

#### **External**

1. We have viewed:

- 1.1 Front - garden area
- 1.2 Rear – large garden
- 1.3 Left side – garden area with trees removed
- 1.4 Right side – parking area and garage

We have had the benefit of an optical lens on a digital camera.

#### **Internal**

2. We have viewed each room:

- 3.1 Front left reception room
- 3.2 Front right guest bedroom with en-suite shower room
- 3.3 Rear left master bedroom
- 3.4 Right side bathroom
- 3.4 Rear kitchen/dining room/lounge

#### **Roof Space**

In this instance we have viewed the roof space.

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3. **Damp resistance meter readings**

Dampness resistance meter readings using a Gann Meter have been taken but we have not taken a pattern of readings.

4. **Surface temperature readings**

We have not taken surface temperature readings in this instance.

5. **Owner/occupier**

Thank you for helping us during the course of the survey.

6. **Neighbours**

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

7. **Thermal imaging**

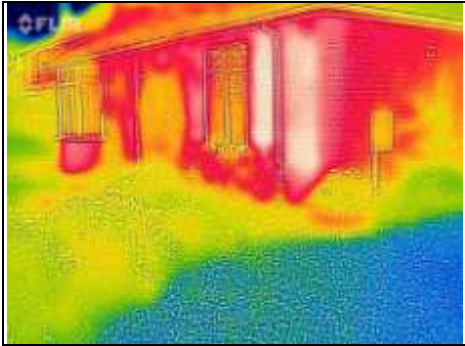
We did take some thermal image pictures and they showed the coldness of the floor and the base of the wall, however there was no pre-preparation of the structure. Ideally you need at least a ten degree differential between the inside and the outside of a property.

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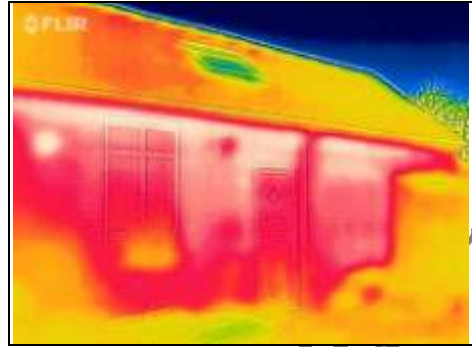
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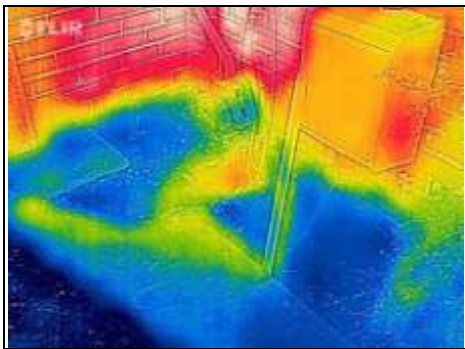
## Thermal Images



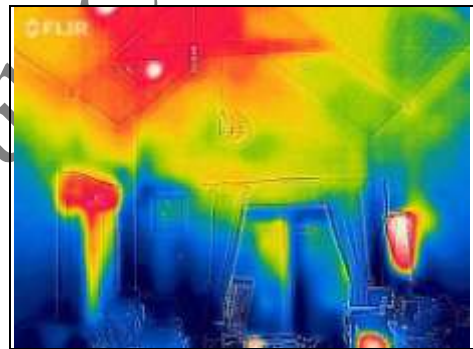
Front of property.  
Red shows heat loss



Rear of property



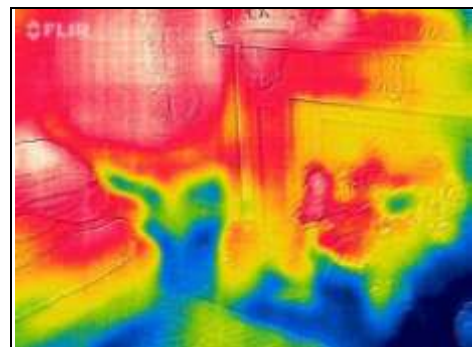
Drains



Vaulted ceiling



Heat loss through external bay  
walls



Heat loss to walls around chimney  
breast

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## PHOTOGRAPHIC RECORD

We appreciate it can seem strange to have a photographic record when you live in the property, but it does help the completeness of the report and does of course give you a picture of what the property looked like over a certain time period.

### External



Front view



Rear view



Left view



Right view

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French drain being added to left side



Basic French drain to front. It should really have a perforated drain on it to allow water to get away from the building, albeit you have more than two bricks between the DPC and the ground level



High level drill holes to left side where insulation has been added



Plastic profile gutter



Fascias and soffits with vents. Are they being blocked by the insulation in the roof?



Vents have been added in the roof. These work in conjunction with the soffit vents so you may have to move the insulation back in the roof space

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Vent under floor needs checking to see if it is blocked by insulation, particularly if there is a defective DPC. Check with a long screwdriver that it is working



Blocked air brick which leads us to believe there is no longer a through flow of air at low level



Crack to front right corner



Valley gutter looks to have been tarred. Double check to make sure it is watertight



Substantial rear garden. Be aware that trees too close to a building can change the air movement around it



Patio area to rear, where a new door has been added. Has a vertical DPC been added around the door?

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Flue from multi-burner



Under roof tiles

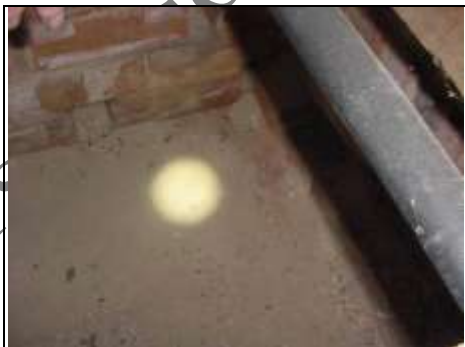
### Internal



Hallway. We personally would not recommend laminate/parquet as it stops the floor from 'breathing'



Floor opened up



Good quality underfloor under suspended timber floor



Laminate and tile flooring in front guest bedroom

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Tiled floor to rear kitchen/diner/  
lounge



Vaulted ceiling to rear extension

### Roof Space



Insulation may be blocking air  
ventilations although can't be  
certain



Mass of insulation



Lath and plaster ceilings



Close boarding

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## **ACCOMMODATION AND FACILITIES**

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

The accommodation consists of:

- 1) Front left lounge, with fireplace
- 2) Front right guest bedroom, with en-suite shower room
- 3) Rear left master bedroom
- 4) Middle right office
- 5) Middle right bathroom
- 6) Rear right kitchen/dining room/lounge area,  
with vaulted ceiling

### **Outside Areas**

There are gardens surrounding the property.

There is a detached garage to the right side.

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## **CONSTRUCTION SUMMARY**

### **External**

Main Roof:	Hipped, pitched, clad with interlocking concrete tiles
Main Roof Structure:	Hipped cut timber roof with close boarding
Rear Roof:	Hipped, clad with interlocking concrete tiles
Rear Roof Structure:	Cut timber roof, with Hessian based felt underlayer
Gutters and Downpipes:	Plastic
Soil and Vent Pipe:	Feeds directly into the ground
Walls:	Early Stretcher Bond Brickwork, with insulation added Rear extension construction unknown. There is Stretcher Bond brickwork visible. There is also areas of render
External Detailing:	Plastic double glazed windows without trickle vents

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### **Internal**

Ceilings:	Lath and plaster and plasterboard to newer areas (assumed)
Perimeter Walls:	Wet plaster finish and dry lining (assumed)
Internal Walls:	Mixture of solid and studwork with a mixture of old and modern plaster (gypsum) (all assumed)
Floors:	Suspended timber floor, with laminate over the top in many areas Concrete to rear, with underfloor heating in parts

### **Services**

Heating:	The boiler is located in the kitchen.
Electrics:	The electrics are located in the cupboard to the front right guest bedroom
Drainage:	The manholes are located to the right side

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

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## **TIME LINE – A BRIEF HISTORY OF THE STRUCTURE**

The following has been supplied following conversation/email with the client.

DATE	DESCRIPTION
xxxx	Black mould first noticed upon moving into property.
xxxx	Adding of a door to the rear right extension.
xxxx	Replacement of some of the windows.
xxxx	Bay window added
xxxx	New front door
xxxx	Adding of under floor heating.
xxxx	Re-plastering of the walls.
xxxx	Re-plastering of hallway.
xxxx	Adding of an en-suite shower room to guest bedroom.
xxxx	Trees cut down to rear to make way for garage
xxxx	Trees cut down to front
xxxx	Timber floor ready to be installed in the hallway and we take on board your comments that the flooring is draughty when the wind is in the wrong direction.

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## **REQUESTS FOR INFORMATION**

- 1) Any drawings you have with regard to the property
- 2) Any history you find with regard to the insulation added.
- 3) Any works you have had carried out

## **CONTACT INFORMATION**

Company: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx  
Address: xxxxxxxxxxxxxxxxxxxx  
Tel: xxxxxxxxxxxxxxxxxxxx  
Email: [xxxxxxxxxxx](#)  
Website: [xxxxxxxxxxx](#)

Company: xxxxxxxxxxxxxxxxxxxx  
Address: xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx  
Tel: xxxxxxxxxxxxxxxxxxxx

You have now contacted us to say that this number does not exist and you believe the company may have now ceased trading.

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## **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 £100 (seventy five pounds and one hundred pounds) per day (the higher costs in the city areas) and for tradesmen we use between £100 and £200 (one hundred and two hundred pounds) per day for an accredited, qualified, skilled tradesman. Other variations include the quality of materials used and how the work is carried out, for example off ladders or from scaffold.

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

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# Could the cavity-wall insulation scandal rival PPI?

## Jeff Howell reports on a breakthrough for people with damp problems caused by unsuitable cavity-wall insulation.

It's not often that this column's influence extends as far as Parliament. But an issue that I have been warning readers about for many years – cavity wall insulation (CWI) – was debated at some length at Westminster last week.

I cannot claim full responsibility for this. All I really did was introduce to each other three Telegraph readers – Pauline Sanders, Claire Eades and Dianna Goodwin (who featured in this column last October) – whose homes had become damp and mouldy following the injection of insulation material into their cavity walls.

Together, these three formidable ladies formed the Cavity Wall Insulation Victims Alliance (CWIVA) and have been lobbying the insulation industry, trading standards departments and their MPs to try to get justice for the many people whose homes have been blighted by this ill-advised practice.

They finally succeeded in getting a debate in Parliament, secured by John Denham, MP for Southampton, Itchen, and supported by several other MPs.

Many victims' cases were described by the MPs, and all had features in common. One was the way in which the idea of CWI had been presented to them by door-stepping and cold-calling salesmen, describing cavity insulation as being "Government-backed" or "Government-funded". This is not the case.

Whatever the name on the side of the installers' vans, the process is almost always funded by one of the major energy suppliers.

Now, the energy suppliers have certainly been given targets by the Government to insulate homes, and if they miss those targets, they can be fined by the energy regulator Ofgem (hence the pressure to install as much CWI as possible)

But while retrofit CWI might result from Government policy, it is neither controlled nor overseen by the Government.

This distinction is important, because it means that when things go wrong, the Government can deny responsibility.

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Another factor that the victims' cases have in common is the role of the Cavity Insulation Guarantee Agency (CIGA), which issues 25-year guarantees. Salesmen often describe these as "Government guarantees", which they are not.

CIGA is a limited-by-guarantee company that was set up by the insulation industry. CIGA proclaims itself on its website to be an independent body, but it doesn't say exactly who, or what, it is supposed to be independent from.

As Denham pointed out in the debate, CIGA is certainly not independent of the insulation industry.

Seven of CIGA's 11 current directors are also directors of firms that either make or install insulation, or of trade associations that represent the interests of installers.

Two are directors of the National Insulation Association (NIA), which claims on its website to carry out "expert lobbying to influence Government and other stakeholders". Another is a former director of the NIA and former managing director and chairman of the Association for the Conservation of Energy, which runs a permanent Parliamentary campaigns unit, which it boasts has "close working relations with politicians", and has "led to major changes in the law on energy efficiency".

These split responsibilities would not be a problem, of course, were CIGA doing the job that it claims to do. In a briefing note to MPs before the debate, CIGA wrote, "If there is a problem with the workmanship or materials of an installation, we will ensure the installer puts things right," and, "CIGA exists to protect consumers; they are our number-one priority."

Strange, then, that in every case raised in the debate, CIGA appeared to do its best to deny the installer's or its own responsibility.

Householders who complained of dampness following retrofit CWI were told that this could not possibly be a result of the insulation. They were told that pre-existing building defects must be to blame (even though the installer is supposed to have carried out a thorough pre-works survey to spot any such defects), or that the dampness was caused by "lifestyle condensation" (even though the occupants might have lived in the property for many years with no previous condensation problems).

Denham concluded in the debate that "CIGA colludes with installers to suppress evidence of failure and mis-installation" and "CIGA takes active steps to avoid installers having to put things right".

I am pleased to say that the Minister in attendance, Amber Rudd, Under-Secretary of State for Energy and Climate Change, seemed to take these complaints seriously, and undertook to review the situation and implement changes.

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The current Parliament will be dissolved on xxxxxxxx, and I will be reporting back in the coming weeks on whether these promises have been kept. There are pressing questions that need to be addressed.

The industry and the Department of Energy and Climate Change claim repeatedly that CWI is almost always successful, and that only a tiny proportion of installations go wrong. They have no way of knowing this, because there has never been any follow-up testing. I believe CWI problems are vastly under-reported, and that many more will come to light in the coming years.

Most dampness problems do not show up in the first few weeks following installation – they become apparent after two or three winters, or even longer. Some customers will have dampness and condensation problems that they do not realise are caused by the CWI, and will therefore not have reported them to anyone.

Others have not noticed any physical symptoms, but neither have they seen the promised reductions in their fuel bills (this is because wet insulation does not prevent heat loss, and can even draw heat out of a house, in the same way that a damp sweater makes you colder than no sweater). And there are many CWI victims who have reported problems to their installers and to CIGA – sometimes repeatedly – and simply never received a response.

What is needed is long-term monitoring of walls that have been filled, by taking samples of insulation from the cavities and measuring their moisture contents.

It is not true that only “unsuitable” walls can suffer from damp cavity insulation. As a former bricklayer, I know that no wall has ever been built well enough to withstand wind-driven rain. That is the whole point of the cavity – to stop rainwater crossing to the inside. Moreover, even in sheltered areas, retrofit CWI is likely to cause problems, because its installation is contrary to the basic scientific principles governing thermal insulation.

Thermal insulation in dwellings requires a vapour barrier to be fitted on the “warm” side of the insulation, to stop moisture-bearing air from inside the dwelling finding its way through to the “cold” side and condensing out as liquid water.

Retro-fit CWI cannot allow for the fitting of a vapour barrier. Therefore it must result in interstitial condensation in the depth of the wall. Retro-fit CWI is a scientifically unsound idea.

Some six million UK homes have had retrofit CWI, and a large number of these are likely to suffer associated dampness problems at some time in the future. It is possible that the mis-selling of CWI will come to rival the Endowment-selling scandal, or even Payment Protection Insurance.

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As I write this, I wonder about the future of CIGA, whose accounts show enough funds to honour only 900 of its six million guarantees. It has £18 million in the bank and promises remedial works up to £20,000 for each person affected. CIGA declined to comment.

I also wonder whether this is yet another case where government “targets” have had the opposite effect to that intended. Who on earth would think it’s a good idea to blow mineral fibre insulation into cavity walls in rain-swept west Wales or the south coast of England? Why, an energy company that stands to get fined if it doesn’t, of course.

xxxxxxx, *Daily Telegraph* xxxxxxxxxxxxxxxxx

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## **LIMITATIONS**

### **Specific Defects Report**

#### **1. Conditions of Engagement**

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

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

Based upon a visual inspection as defined below the Surveyor will advise the Client by means of a written report as to his opinion of the visible condition and state of repair of the specific problem or problems only. In this instance we have been looking mainly at the black mould and the reasons for it. We have also had a cursory inspection of the drains and the roof.

#### **2. The Inspection**

##### **a) Accessibility and Voids**

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

##### **b) Floors**

The floor has been opened up in this instance.

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c) Roofs

The Surveyor has inspected the roofs.

d) Boundaries, Grounds and Outbuildings

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

e) Services

No services inspected.

f) Areas not inspected

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

g) Specific Defects Report

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

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

### 3. Deleterious and Hazardous materials

a) Unless otherwise expressly stated in the Report, the Surveyor will assume that no deleterious or hazardous materials or techniques have been used in the construction of the property. However the Surveyor

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will advise in the report if in his view there is a likelihood that high alumina cement (HAC) concrete has been used in the construction and that in such cases specific enquiries should be made or tests carried out by a specialist.

#### 4. Contamination

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

#### 5. Consents, Approvals and Searches

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

Drawings and specifications will not be inspected by the Surveyor. It is the Clients responsibility to forward any drawings and specifications that he has or knows the whereabouts of to us to include information in our report. If these are not forthcoming we will make our best assumptions based upon the information available.

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

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## 6. Fees and Expenses

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

## 7. Restrictions on Disclosures

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

## 8. Safe Working Practices

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

## 9. Disclaimer

This is not a structural survey or building survey. This report looks at one specific defect. We may mention other defects in passing but the focus of the report is on the specific defect.

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