

SPECIFIC DEFECTS REPORT

**Relating to dampness
in the Garden Room**

at

**xxxxxxxxxxxxxxxxxx,
xxxxxxxx, Norwich,
Norfolk, NR15 xxxxxx**

FOR

Miss xxxxxxxxxxx

Prepared by:

xxxxxxxxxxxxxxxxxx

INDEPENDENT CHARTERED SURVEYORS

Marketing by:

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INTRODUCTION AND INSTRUCTION

We have been instructed by xxxxxxxx to prepare an independent report on the dampness in the Garden Room.

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

The weather was cold and bright at the time of the inspection.

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

The Royal Institution of Chartered Surveyors (RICS)
and
The Independent Surveyors and Valuers Association (ISVA).

Report prepared by:

Mark G Hurst BSc MSc FBEng MRICS, MCIOB
Chartered Building Surveyor

For and on behalf of
GEM Associates Limited

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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SYNOPSIS

We were advised that you moved into the property in xxxxxxxxxxxx and noticed dampness in the garden room almost immediately together with a general coldness in the room.

We understand the developer has returned to the property and increased the single panel radiators to double panel convection radiators but as yet this has not resolved the dampness issues. We have been asked to inspect the dampness and advise you.



Garden room front view



Garden room rear view

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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.

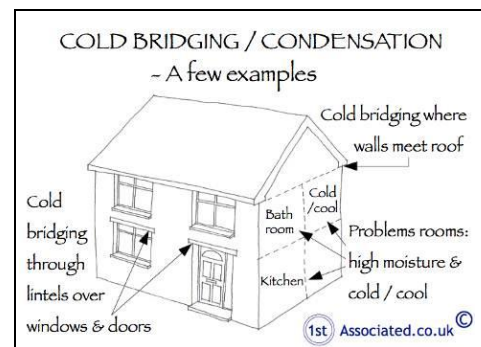
Cause and effect

We would advise that the dampness is the effect of various problems within this property. We believe the dampness is caused by a combination of issues. The main deterioration around the windows is being caused by cold bridging and poor construction although there are other factors to take into consideration.

We would firstly say that the garden room is effectively a cold design with three external walls and is directly under the roof. This in itself shouldn't cause there to be dampness providing it has been designed and constructed well.

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

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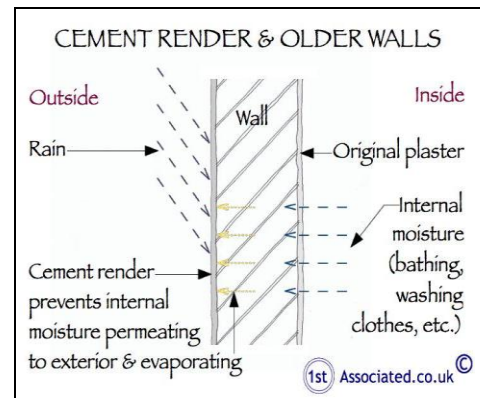
External

1.0) **Render**

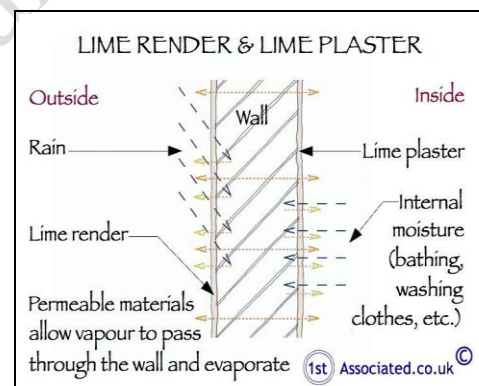
1.1) **Cement render?**

Externally there appears to be a cement render which limits the breathability of the construction (or it may have minimal lime in it). This type of construction means that it does not breathe and cannot dissipate the dampness similar to how a Gore-tex (breathable fabric) overcoat would but instead is acting as a raincoat which is not typically what is found in older buildings such as this although we appreciate this is a 'new' construction.

ACTION REQUIRED: Check with the developer to see how the exterior of this building should work and possibly take samples to see if there is a lime content.



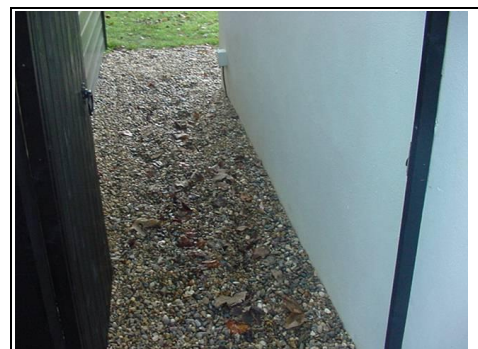
Cement render



Lime render

1.2) **Capillary Action bridging the damp proof course**

The render runs directly down to the ground and as such could be bridging the damp proof course causing capillary action drawing dampness into the building. We were unable to physically see a damp proof course.



Render runs directly into ground with no bell mouth

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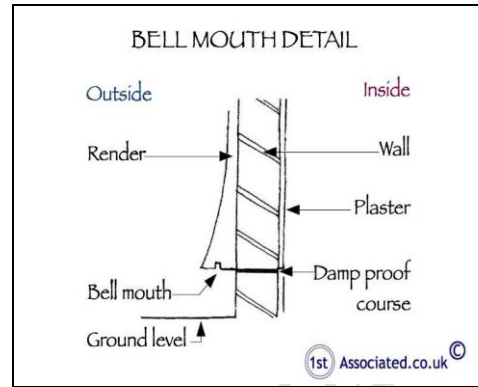
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ACTION REQUIRED: Again the developer to confirm if there is a damp proof course. Ideally we would prefer a bell mouth detail to the base of the render as this will stop the capillary attraction being drawn from the ground.



Bell Mouth

We do appreciate that as this is a Grade II Listed Building that this may not be something the conservation officer will allow.

ANTICIPATED COST: In the region of £2,000 to £4,000 (two thousand to four thousand pounds) to have a properly detailed bell mouth render added and appropriately re-decorated; please obtain quotations.

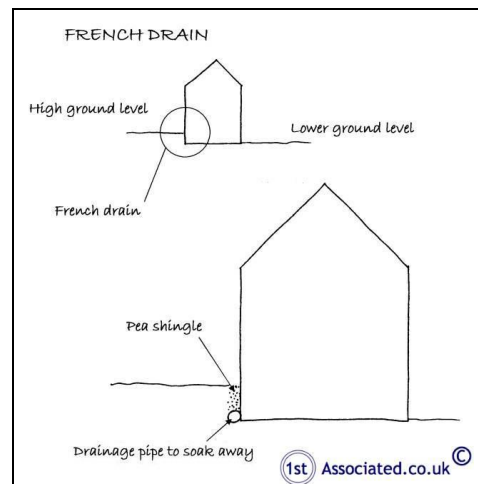
Capillary Action defined

This is where liquids are drawn up through a material.

2.0) French Drain

The French Drain that is around the property has been dug up in two sample areas, one to the front and one to the rear of the property, and from what we can see this is not a functioning French Drain. We would have expected it

1. To be deeper
2. To have a run off of some sort for the water that has been collected.



French Drain

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ACTION REQUIRED: Add a fully functioning French Drain

ANTICIPATED COST: £3,000 to £5,000 (Three to Five thousand pounds); please obtain quotations.



French drain (front)



French drain (front) dug –up
to approximately 150mm deep



French drain (rear)



French drain (rear) dug-up
approximately 100mm deep

3.0) Thermal images

We have taken thermal images of the property and we would add that the images taken on the floor showed coldness around the perimeter indicating that possibly the insulation has not been laid to the floor edge at all.

ACTION REQUIRED: The developer to confirm the construction.

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4.0) Building where our ancestors would not have built

We would also make the general comment that today we are often building on land that our ancestors would not have built on due to the natural factors such as the water level in this area. As such we are causing ourselves problems that we have not come across in the past. As we explained some of the issues we are looking at do not have a clear quick way to resolve them. As there is likely to be a high water level table the building should have been built with this in mind.



Weeping willow indicates a lot of water in the ground



Stream nearby (far left) with is possibly where the water drains to from the land



Pond

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Internal

5.0) No cavity closers to the windows

Traditionally there would have been a brick closer around the windows to the reveals. In this instance we simply cannot see anything other than the plasterboard. This has deteriorated



No cavity closer

ACTION REQUIRED: A suitable cavity closer needs to be added and the plasterwork made good.

Dampness to reveals

The dampness to the door and window reveals was considerable. This indicates that door closers are not present. These areas indicate a general design fault.

Door



Door reveal



Close up of deterioration



Lower area of door reveal.

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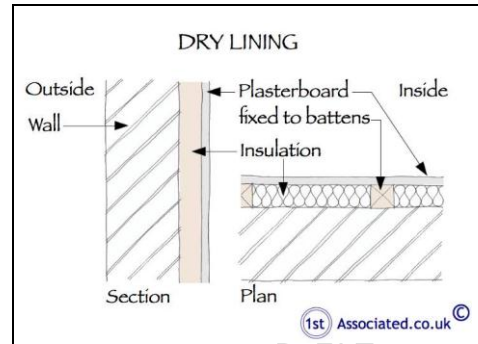
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6.0) More dampness

Electronic resistance/ damp meter readings were taken throughout the interior of the property and we identified spot areas of dampness indicating general defects in the construction of the dry-lined walls. There seems to be a lack of membrane in the walls to prevent the dampness coming through.



Dry lining

ACTION REQUIRED: The walls need to be opened up to be checked for their construction and appropriate amendments made.

ANTICIPATED COST: Not possible to cost without opening up the walls.



Damp meter reading of 101

7.0) Plastic/Polymer paint

There appears to have been a plastic/polymer based paint used. It is not possible to be one hundred per cent certain from a visual check and this needs testing. If this is the case then this type of paint can stop the general breathing of the property.

8.0) Cold room

The garden room, having three external walls and being directly under the roof, does we suspect, tend to be colder than the other rooms. It is damp because of the factors that we have mentioned and in addition to this it is located close to the kitchen (humidity generating area). We would recommend that back ground heating is kept on in the garden room whilst various building works are being completed.

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SURVEY FINDINGS

A brief summary of what was found.

EXTERNAL

1. From our visual external inspection we noted:

- 1.1 Front

Walls - Cement render and rendered down to the ground.



- 1.2 Rear

External of garden room where it meets main building

Walls - Cement render and rendered down to the ground.

- 1.3 Left hand side(gable)

Walls - Cement render and rendered down to the ground.

Generally the French Drain runs around the perimeter of all the walls and from our inspection (digging up) this does not appear to be working properly. A check needs to be made to see if there is a damp proof course in the walls.

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INTERNAL

2. From our visual internal inspection we noted

Garden Room

2.1 Ceilings

These are plasterboard and follow the line of the ceiling. These do need to be opened up to check if they are insulated



Garden room looking towards the kitchen

2.2 Walls

No cavity closers to the windows and doors. Generally dry-lined and need to be opened up to check the construction. Check to be made to see if plastic/polymer paint has been used.



Garden room looking towards the end of the building

2.3 Floors

Thermal imaging indicates that there are cold areas around the perimeter of the floor.

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.

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3. Resistance Damp Meter Readings

The resistance meter readings were over and above what we would expect for a dry-lined wall which would typically be 15-30. In this case we were receiving readings of up to about a hundred.

We refer you to the Inspection section in the appendices



Damp meter reading of 104
on the reveal

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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:

There are a combination of issues, as mentioned, with regard to the garden room which makes this a very difficult problem to resolve one hundred per cent to your satisfaction.

There may be other factors contributing to this such as the ground water being absorbed into the concrete slab and being drawn into the building. We also believe cold bridging / thermal bridging is a factor.

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.

XXXXXXXXXXXXXXXXXX

BSc MSc FBEng Chartered Building Surveyor

For and on Behalf of

XXXXXXXXXXXXXXXXXX

Independent Chartered Surveyors

This Report is dated: XXXXXXXXXXXX

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APPENDICES

Construction Summary

Inspection

Photographic Record

Time Line

Location Map

Requests for Information

Estimate of Costs

Limitations

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CONSTRUCTION SUMMARY

External

Main Roof:	Pitched, clad with pantiles
Roof Structure:	Not viewed
Gutters and Downpipes:	Plastic
Walls:	Construction not known. Cement Painted Render (assumed)
External Joinery:	Plastic double
Foundations:	Not inspected



Front view



Rear view

Internal

Ceilings:	Plasterboard (assumed)
Walls:	Dry - lined (assumed)
Floors: Ground Floor:	Solid (assumed)

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

We are advised that the property is Grade II Listed.

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INSPECTION

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

Visual Inspection

Our inspection has taken the format of a visual inspection of the Garden Room only (the main property has not been inspected):



1. External of the Garden Room of the

- 1.1 Front Wall
- 1.2 Rear Wall
- 1.3 Left Gable Wall

Rear of property

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

2. Internal of the property

We have viewed:

Ground Floor

2.1 Garden Room

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3. Damp resistance meter readings

Typically readings will be taken just above the skirting, at approximately 1m and then approximately 2m in height. Therefore there will be three readings for each area.

Room	Readings Obtained	Typical Readings
Garden Room		
<u>Front wall</u> (all directions given as you face the property)		
Middle left	16,24, 29	15-30
Middle right	29,23,20	
Right	24,25,22	
<u>Rear wall</u>		
Left hand side	103, 105, 93	15-30
Middle door side	98, 104, 32	
Middle window side	22,24,29	
Right hand side	16, 24,29	

4. Roof space

Not accessible,

5. Surrounding areas

5.1 Pond to the front

5.2 Stream to the rear

5.3 French Drain around the property (not functioning)

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6. Owner/occupier

We have had a question and answer session with yourselves.

7. Neighbours

We have not had the benefit of talking to the neighbours

8. We have utilised a Gann resistance meter for measuring dampness

9. Surface temperature readings have been taken.

Room	Readings Obtained
Garden room	
<u>Front wall</u> (all directions given as you face the property)	
Middle	61,64
Right hand side	59,62
<u>Rear wall</u>	
Left hand side	68,60
Middle	75,64
Right hand side	57,65

10. We have used a thermal imaging camera, manufactured by Flir, to obtain the best readings we can given the fact 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.

11. At the time we carried out the survey the temperature ranged from fourteen to fifteen degrees and fifty one degrees relative humidity.

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PHOTOGRAPHIC RECORD

EXTERNAL



Front of property



Rear of property



Guttering to downpipe needs to be checked it is watertight.



Trickle vent in window



Pump house



Stream



Pond

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INTERNAL

Garden Room



Garden room



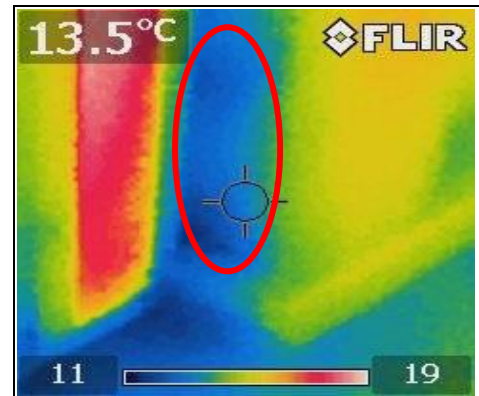
Front wall



Rear wall



Doors



Thermal image shows coldness on reveal of the window



Flaking reveals



Reveals to the rear wall are flaking

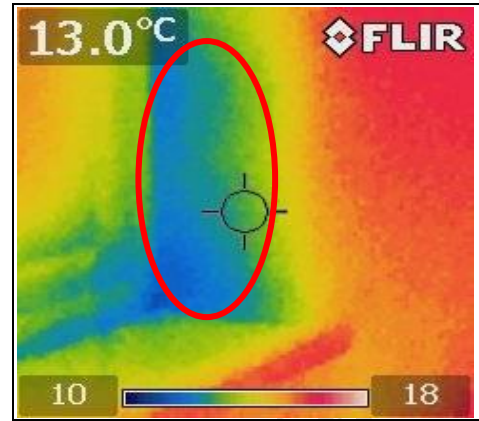
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Window and reveals



Thermal image shows coldness on reveal of window



Skim coat of plaster that's been put on top of plasterboard. This is saturated.



Saturated plasterboard to the reveal of the window



Celotex insulation board visible to the wall side of the window

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Time Line – A brief history of the structure

This has been based upon a discussion with xxxxxxxx on the xxxxxxxxxx.

DATE	DESCRIPTION
18 th Century	Property originally built
XXXXXXXXXX	Rebuild/conversion
XXXXXXXXXX	Moved into the property
XXXXXXXXXX	Noticed the damp problems in garden room
XXXXXXXXXX (approximately)	Double panel convection radiators added by developer
XXXXXXXXXX	Developer emailed – states building drying out as expected, would be on site shortly to further investigate/recoat as necessary
XXXXXXXXXX	Site meeting arranged property developer did not show
XXXXXXXXXX	Damp readings sent to developer.
XXXXXXXXXX	Developer emailed – said would visit site but has not as yet.
XXXXXXXXXX	Developer emailed – said would carry out work early November – no details provided (which our client then asked for)
XXXXXXXXXX	Developer emailed – said work will take two days to complete – still no details provided
XXXXXXXXXX	We carried out our survey and inspection

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LOCATION MAPS



Please note this map from GoView does not name xxxxxxxx.

We note there is water that sits above the property and below it.

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REQUESTS FOR INFORMATION

- 1) From the developer, detailed drawings particularly of the garden room area.
- 2) Trial hole reports

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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 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.

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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 dampness in the Garden Room.

2. The Inspection

2.1 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.

a. Floors

We have not opened up the floor structure. We have only carried out a visual inspection and any conclusions will be based upon our best assumptions. We can open up the floor if so required at an extra fee.

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2.3 Roofs

The garden room roof was not accessible.

2.4 Boundaries, Grounds and Outbuildings

We had a brief tour of the grounds.

2.5 Services

No services inspected.

2.6 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.

2.7 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

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