

Property Review

The property was built in the 1950s, 3 Bedroom semi-detached, cavity wall, face brickwork construction, solid concrete ground floor, interlocking tiles on hipped pitched roof retro fitted with uPVC fascias, soffits and rainwater goods, ventilation for roof provided by vented soffit. Windows are uPVC with trickle vents. The entrance porch has been built as an extension to the original building

Damp and Mould Issues

- Mould growth above lintel bottom edge to ceiling intersection all rooms on 1st floor, party wall unaffected.
- Mould growth around window reveals in main bedroom and ceiling at wall intersection
- Mould growth low level at ground floor in hall and lounge
- Mould growth on clothing, furniture, and other possessions in front bedroom

Surveyors Notes

had apparently bleached the mould affected areas last week but staining still evident, areas affected consistent in all 1st floor rooms, from bottom edge of lintel line to ceiling intersection, moisture content varied from 14 to 0.21%

External

1. Due to the roof pitch, approx. 33 degrees, the height from internal lintel reveal to ceiling is 465mm, the soffit level is 65mm above the window head and is 225mm wide, it is unlikely that the brickwork has been built to the top edge of the rafters, this would leave the external skin of the inner wall exposed, a cold bridge in the soffit area would cause moisture to condensate on this area of wall
2. There were filled drill holes in the brickwork to suggest that the property has cavity wall insulation
3. There was no evidence of displaced roof tiles, defective rainwater goods or any evidence of water penetration.
4. The side entrance porch is not part of the original structure.
5. There is one external air vent low level in the lounge front elevation

Internal

1. Mould growth evident above lintel reveal line to ceiling all 1st floor rooms external walls. The worst affected room is the main bedroom, the occupiers do not use the bedroom due to the mould and sleep in the ground floor lounge, the damage caused to possessions obvious, the room temperature at the time of visit was 15.9C the Relative Humidity 75.7, spot readings of the external wall were taken with a temperature probe at floor, mid height and ceiling levels. The ceiling level 14.1C mid 15.2C and floor 15.3C. The moisture content readings 18-23% There was mould also on the window reveals of both windows, the chimney passes through the room into the roof, heavy mould growth was evident on the ceiling at the intersection, the

- remaining rooms including the bathroom all have mould staining but not so apparent as in the front bedroom
2. Mould growth evident on all 1st floor window reveals, high moisture meter 21% readings recorded.
 3. The bathroom ceiling mould growth had been recently cleaned off but staining was still evident, the wall mounted extractor fan was functioning
 4. On the ground floor, mould growth was evident behind the sofa and small table in the lounge and low level in the hall by the door jamb.
 5. In the roof void the insulation was approximately 250mm deep, and as the roof is hipped the eaves continue at the side elevation. The quilt had been laid to finish under the roofing felt at wall plate level. There were no airspace trays or ridge/tile vents to maintain airflow through the roof space.
 6. The heating system is a gas fired boiler wet system with panel radiators, TRV,s, roomstat, and programmer. The system is functional but the cover was off. The boiler is not Class A rated.

Conclusion

The consistency of the affected areas of mould on the external walls in the bedrooms on the 1st floor indicate that a possible cause is the inner leaf of the cavity wall is exposed to external elements in the vented soffit, it is highly unlikely that the external face of the inner wall is insulated, this would create cold bridging to the internal face of the wall attracting moisture which always condensates on the coldest surface.

In the roof space the roof insulation quilt is approximately 250mm deep and extends to the wall plate, an airspace tray has not been fitted between the rafters at wall plate to maintain airflow, the quilt finishing against the underside of the roofing felt at ceiling level preventing airflow through the soffits, a common cause of condensation in roof voids.

The cold bridge created by any lack of insulation above the window line to the inner skin combined with the increased moisture content of the internal structure provides an area for the moisture laden air to condensate, in turn an ideal breeding ground for mould growth.

Before the advent of double glazed windows moisture condensated on the inner face of window glass as it would be the coldest surface, this would not be the case with double glazing, the moisture instead condensating on the coldest area of wall available.

In the lounge there was mould behind the sofa, the airspace between wall and sofa 150mm, the sofa is a large corner type which returns across the front bay, air movement is restricted but the table on the opposite wall has only legs and mould is still evident. On inspecting the walls externally the wall where the sofa is streaming with water, other external areas were not affected. There was only one low level vent in the bay area.

Recommendations

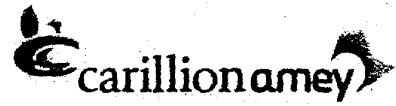
- Drill a trial hole in front rear and gable wall to confirm if wall insulation has been installed.
- Open up roof above soffit, 2 roof tiles, to confirm if the inner wall has any protection from the elements i.e has the external wall been built around the rafters or finished above the soffit line. If this is the case the area above should be installed with insulation material (quilt or batts) airflow to be

- maintained to the roof space. Alternatively the soffit area could be inspected using a borescope either from the roof space or by drilling a hole in the soffit.
- An alternative solution would be to create a sloping false ceiling (aslin) above the lintel line internally using insulation board material, or fixing a 60mm strip of insulation material directly to the wall surface above the window, neither solution is aesthetically correct but should prevent further problems.
- Replace the bathroom extractor fan with a humidistat operated type.
- The damp in the lounge is at low level, a large area of wall is behind the sofa, the occupants have left an air gap to compensate for the lack of airflow but the mould is still quite extensive on the bay wall, there is a patch on the opposite wall but there is sufficient air space. Confirmation of cavity wall insulation will be required, as the front bedroom is uninhabitable at the moment 1 are sleeping on the sofa, the enclosed space and 2 people exhaling for long periods would cause excess moisture, a dehumidifier should be used as soon as possible to remove any moisture excess. The Relative Humidity reading was 76.6RH a comfortable reading should be 55-65RH. The bay floor area is 5.4m², the external walls 6.6lm a high percentage for such a small area. This would also apply to the bedroom above.
- There is a low level airbrick in the bay area of the front elevation lounge, as the fireplace has been sealed off an additional vent on the adjacent wall would help re-establish airflow in this area. The inner door area of the hall should be fitted with an air vent at low level.
- Check front gutter at where roof valley discharges is clear.
- Retro fit airspace trays at the eaves above insulation quilt to maintain airflow in roof void.

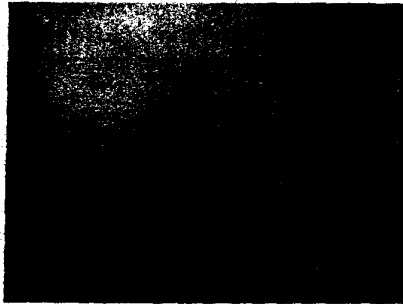
Hazard Title	Damp Mould and Growth
Deficiencies	<p>Before the inspection was carried out, recent photos showed the areas affected by damp and mould in the property prior to the inspection. The cause would seem to be condensation. Cavity Wall Insulation will have to be confirmed by the methods mentioned previously in this report. Due to pitch of the roof the distance between the ceiling level and the soffit works out to 465mm, the external face of the internal wall is unlikely to be insulated, this would create a cold bridge where any moisture present in the air internally would condensate. There is a lack of ventilation in the bay area of the lounge.</p> <p>The regular removal of mould growth by using bleach etc will not cure the problem, remedial works will be required.</p> <p>For the above reasons the likelihood of poor health due to damp and mould growth increases significantly from the average, giving this property a potential Category 1 hazard over the course of the next 12 months.</p>

Damp and Mould Management Summary

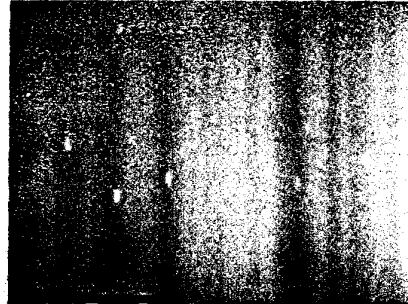
Weather: Light Rain 13C



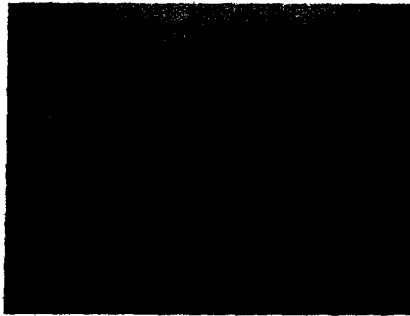
11th December 2015



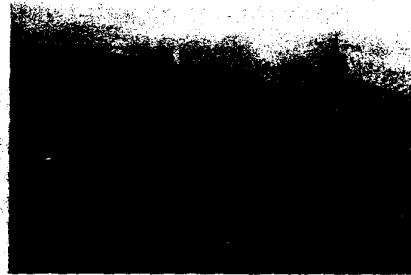
Front Valley



Front Hip End



Front Hip End



Front Roof Layout



Front Elevation



Front Elevation

Damp and Mould Management Summary

Weather: Light Rain 13C



11th December 2015



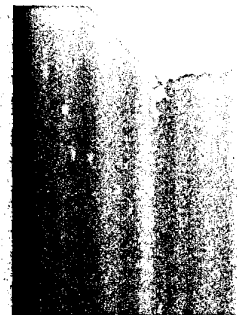
Side Elevation



Front Hip End



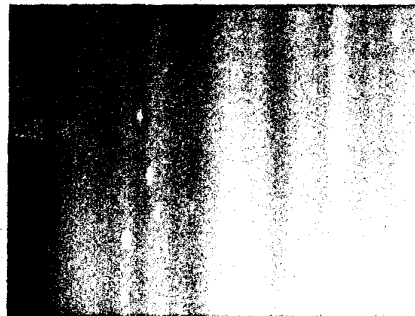
Front Hip End



Entrance Porch



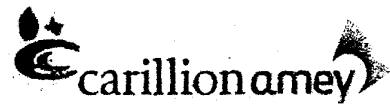
Entrance



Front Bedroom

Damp and Mould Management Summary

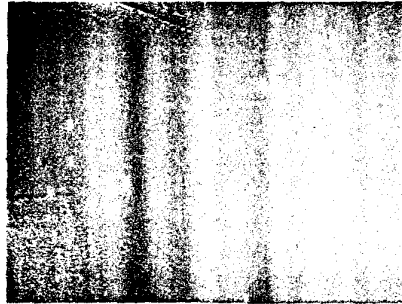
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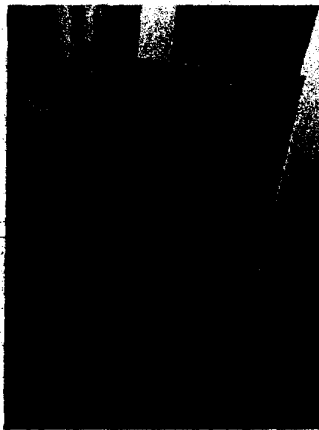
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Front Bedroom



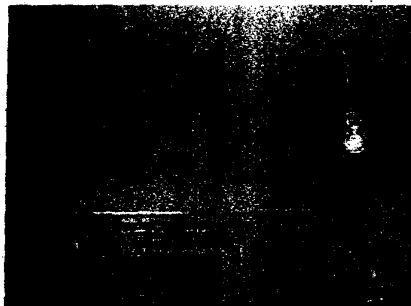
Front Bedroom



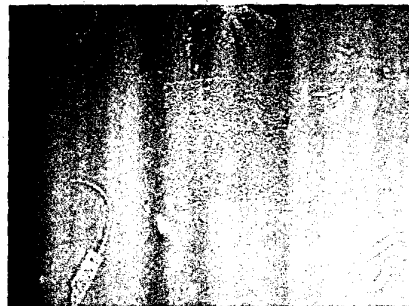
Front Bedroom



Front Bedroom



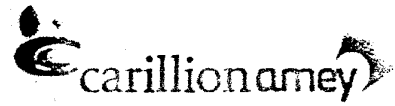
Front Bedroom



Mould

Damp and Mould Management Summary

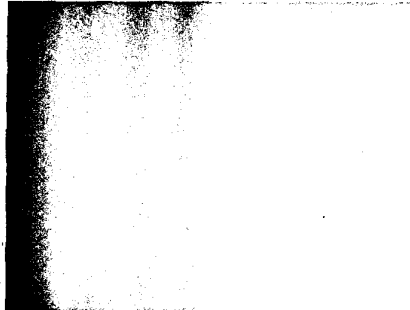
Weather: Light Rain 13C



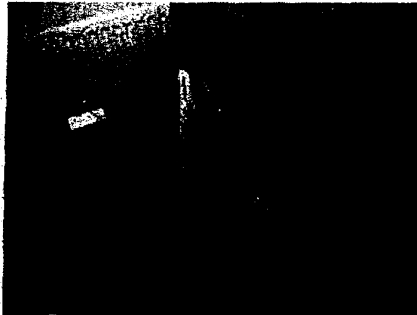
11th December 2015



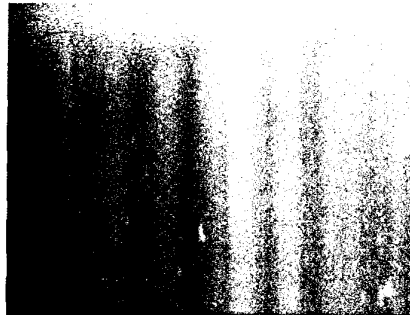
Front Bedroom Chimney



Front Bedroom



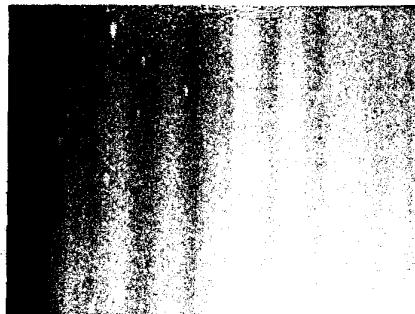
Mould



Rear Bedroom



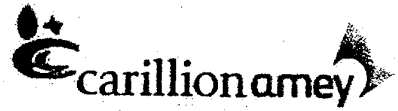
Rear Bedroom



Rear Bedroom

Damp and Mould Management Summary

Weather: Light Rain 13C



11th December 2015



Roof Void