

HOW EXTENSIVE IS RISING DAMP?

It is a frequent worry for home owners and purchasers, but is "rising damp" really as common as we are led to believe?

"Householders and even some surveyors are too quick to assume that problems with dampness are caused by rising damp. In fact, true rising damp is not very common. Because the remedies for rising damp are so expensive it is doubly important to ensure the diagnosis is correct before starting work." **Building Research Establishment (BRE) Good Repair Guide 6 - Treating Rising Damp in Houses - January 1997**

The BRE, which until recently was UK Government funded, have been highlighting that dampness was being misdiagnosed since the early 1980's!

"Because of the high cost of remedial work, it is essential that the diagnosis is as positive as possible to distinguish between rising damp and other sources of damp."

BRE Digest 245 - January 1981 "Rising Damp in Walls: Diagnosis and Treatment"

"Investigations have revealed many instances in which systems intended to combat rising damp have been installed in buildings where rising damp is not occurring. A frequent reason for this has been a wrong interpretation of high readings obtained when using an electrical moisture meter. Another reason was the failure to recognize other causes of the damp conditions." **Building Research Advisory Service, Technical Information Leaflet TIL 47 August 1982**

"The diagnosis of rising damp needs careful and systematic thought because it can easily be confused with penetrating dampness and condensation. The Building Research Establishment (BRE) have suggested that only 10% of the dampness problems it investigates are attributable to rising damp. Unfortunately, there are a number of companies specializing in d.p.c. replacement who obviously have a commercial interest in finding problems with rising damp. The diagnosis needs to be treated with caution. Although there are several reputable companies working in this field, it may be wise to seek independent advice. Further "encouragement" to find problems of rising damp is provided by banks and building societies who often request a damp report as a condition of a mortgage advance. **Understanding Housing Defects (Estates Gazette) 1998**

There are many contractors advertising specialist services to remedy dampness by installing damp proof courses. Yet most apparent rising dampness cannot be attributed to the absence or failure of a damp proof course." **The Remedial Treatment of Buildings by Barry Richardson 1995**

THE NEED FOR ACCURATE DIAGNOSIS

"Dampness of one sort or another is the most common problem in housing. It results in visible wetting of walls, ceilings and floors, blistering paint, bulging plaster, mould on the surfaces and fabrics and sulphate attack on brickwork. It can also lead to less obvious problems - thermal insulation is reduced in effectiveness or brickwork because metal components imbedded in it have corroded. As with all repair work, the first step to solving any damp related problem is to diagnose the cause correctly." **B.R.E. Good Repair Guide 5 - Diagnosing the Causes of Dampness, January 1997**

"Before any measures are undertaken, the problem should be analyzed in order to identify the cause properly. In the first instance professional advice should be obtained rather than that of

a specialist contractor." **The Repair of Historic Buildings (English Heritage) by Christopher Brereton**

Often specialist remedial treatment companies report "they have diagnosed rising damp" and specify remedial treatment which is possibly inappropriate, to be carried out by themselves. If a Specialist Contractor is to be used they should be a member of the Property Care Association who are more likely to provide an accurate assessment. However, an Independent Surveyor with specialist knowledge of Historic Buildings will look at the property holistically using his/her residential survey experience to provide the broader picture without the potential influence of profit on the opinion given.

Building Research Digest 245 recommends that samples of brickwork are taken from within the wall and laboratory analysis undertaken to determine the actual amount of capillary moisture which is present. This test is invasive as holes are drilled (10mm diameter) in walls to obtain plaster and brick samples but it is a lot less destructive than having plaster chopped off to a height of approximately 1 metre all round the house in order to install a chemical d.p.c. when the treatment is not necessary. After collecting samples we can make good walls and the cost of accurate diagnosis usually results in avoiding unnecessary expenditure on disruptive, messy work, which often results after incorrect diagnosis.

Moisture content of samples can be determined by 2 methods (Not currently undertaken by David Rawlins, who is anxious to keep costs low).

1. Carbide or Speedy test

A measured sample of brick dust or plaster and a measure of calcium carbide are placed in a special pressure cylinder. The moisture in the test sample reacts with the calcium carbide to form acetylene gas. This gas creates a pressure, which registers percentage moisture content on an appropriately calibrated pressure gauge. The carbide meter reading is not affected by salts and moisture content readings from within the thickness of the wall and can be obtained in approximately five minutes. Actual moisture content is determined rather than the Wood Moisture Equivalent (WME) readings displayed on a moisture meter.

2. Gravimetric or oven-drying method

The Carbide test provides actual moisture content but does not determine Hygroscopic Moisture Content (HMC) and Capillary Moisture Content (HMC).

All building materials are hygroscopic and absorb a certain amount of moisture and no amount of 'damp-proofing' will remove this and it is not doing any harm. The moisture that concerns people is actually capillary moisture i.e. within the capillaries and pores of the wall.

Hygroscopic Moisture Content is determined by allowing the sample to come to its equilibrium weight under controlled conditions and the sample is then oven dried to determine the Capillary Moisture Content. If this sample is taken from the base of a wall and has a moisture content of less than 5% it is unlikely to be affected by rising damp.

Other sources of damp ingress, such as leaking gutters and downpipes, bridging of physical damp-proof course by external renders and paving etc., should also be checked and repaired before going to the expense of expensive & damaging chemical treatments.