DAMPNESS IN OLDER BUILDINGS

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It is necessary to work out where dampness is coming from before making any final decisions on a course of action.

Issues such as

- water table level,
- soil drainage,
- exterior/interior ground levels,
- inappropriate external renders,
- acrylic masonry paints,
- inappropriate pointing mortars,
- porous substrates (e.g. brick and some stone types)
- rainwater goods such as guttering,
- dew point/humidity in the rooms,
- poor air circulation and ventilation,
- damp proofing membranes,
- floor coverings etc.

all play a part, together with exposure to the weather, construction materials etc.

Moisture in old buildings goes with the territory to some respect but its still important to know whether it's

1. penetrating rain (stone and brick have varying porosity)

2. rising moisture

3. condensation on cold surfaces

or a combination of all 3.

If you have penetrating dampness then you may have to consider whether the stone or brick has become excessively porous or any pointing or external render is failing or inappropriate.

Walls may be relatively thin so extra protection might be needed outside in the form of render/slate hanging etc. Lime mortars used for pointing and rendering are more porous than a cement render, although this depends on the proportions of sand to binder, but this can be a mixed blessing on a permanently saturated westerly wall.

Limewashes would be used to help resist penetrating rain and were often mixed with oils, tallow or other ingredients to reduce water penetration. So if penetrating rain is the

problem the right mix of lime mortar/limewash is needed otherwise there's no improvement other than that a lime render will crack less and will breathe more if you get warm dry sunny days!

If there is rising dampness, this is usually caused by a high water table/high external ground level/porous substrate e.g. brick/some stones/earth. In many types of stone wall damp proof injection can be a total waste of time and money as you can't get a continuous barrier in a bedding mortar. The worst case scenario is 90% success where any rising dampness is then concentrated into the 10% failure. Where it does work it can concentrate any rising dampness in vulnerable areas such as timber joists, window seats, sills or occasionally electric sockets! Most damp-proofers insist on removing internal plaster to a height of 1 - 1.5m and putting on a cementitious waterproofing plaster system to mask whether the injection actually works. In time you can get a tide mark as the tanking drives moisture ever higher - above the tanked level - causing structural damage to any timber fixings e.g. joists, window seats, sole plates in partition walls, studs for plaster lath etc.

If you have condensation this can be caused by a number of factors, modern dense plasters, damp wall through penetrating or rising dampness. Soluble salts deposited on wall etc. and water vapour in the room then condenses on a colder surface. This can be a vicious spiral down as the condensation gets absorbed, lowers the wall temperature and so on. Ideally you need to know the moisture content at the centre of the wall - surface meter readings can be totally misleading as salts deposited on an inner surface will carry electric current even if the wall itself is relatively dry.

A lime plaster is useful as it is more porous than a modern gypsum plaster and reduces condensation problems. Typically a coarse haired mix 3/1 sand/lime for the backing coats and a 2/1 fine sand/lime mix for the finishing coat. It can then be painted with a limewash or alternative breathable paint.

There are additives for lime plasters to help them set in damp conditions. These are called pozzolans, and are types of burnt clay. clay plasters only set by evaporation of the moisture in the plaster so may not be suitable if you have an area of permanent dampness.

Its best to look for and take action with the easiest and cheapest solutions first. If the problem is serious enough it may be necessary to consider having moisture readings taken in the centre of the wall but this can be a disruptive and expensive option. At Ecomerchant we can give you advice and technical help for your situation.

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