



This house was built about 1890, has solid brick walls and has a dpc from new. What are we looking at here...? Is this 'rising damp' that requires £4000 to repair, or something quite obvious and straightforward?

# 'Damp Surveys' of Traditional Buildings

by Dr Duncan Philips FRICS

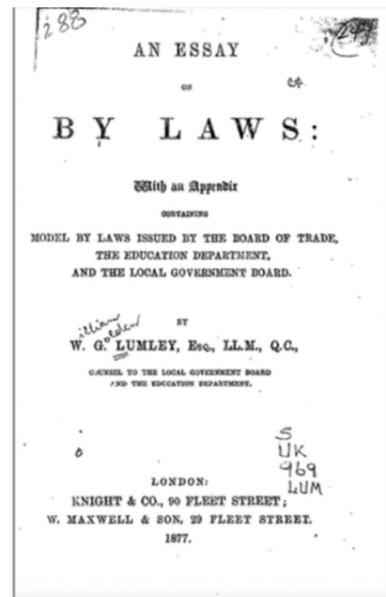
In this article I am referring to all buildings of a traditional solid wall construction. They may or may not be listed or 'historic', but they will all tend to be older. The scenario that many homebuyers face will often start with the mortgage valuation.

It is important to point out that a mortgage valuation inspection is not a building survey. I often hear homebuyers refer to them and say, "We're just having the basic survey done by the mortgage lender." This is not the case at all. A mortgage valuation is not the same thing as a building survey. It is quite common to find that a mortgage valuation, and some building surveys, will report 'high damp readings/measurements' and then require or suggest that you get a 'timber and damp inspection'. They will sometimes say that the house doesn't have a dpc.

## WHAT IS A 'DPC' AND DO I NEED ONE..?

'DPC' is the commonly used abbreviation for damp-proof course. This means a layer within the wall which prevents moisture being absorbed into the upper parts of the wall from the ground. 'DPM' means damp-proof membrane and does the same thing under the ground floors. Traditional buildings are unlikely to have a dpc. The earliest I have

seen a dpc installed as part of the original construction is 1820, but that is probably very rare. By about the 1860's and 1870's we start to see dpc's becoming increasingly used and the earliest 'regulation' for their use is the 1877 Model By-Law which, on page 348, paragraph 17 says that an impermeable layer shall be at a height of not less than six inches above the ground. This is still the same today in current Building Regulations.



thickness of good concrete, or upon some other and sufficient sub-structure, as a foundation. 17. He shall cause every wall of such building to have a proper damp course of sheet lead, asphalt, or slates laid in cement, or of other durable material impervious to moisture, beneath the level of the lowest timbers, and at a height of not less than six inches above the surface of the ground adjoining such wall. 18. For the purposes of the By Laws with respect to the structure of walls of new buildings, the measurement of height of stores and of height and length of

The use of over-lapping roofing slate was a common material for dpcs and this later changed to liquid bitumen and tars. Asphalt was less commonly used. Today, modern dpcs tend to be thick plastic sheets.

Of course, it is more likely that a traditional building doesn't have a dpc at all. You would not expect to find a dpc, or dpm, in a historic timber-frame, stone, or cob (earth) construction, for example. The absence of a dpc in these buildings does not imply that you have a problem that needs to be fixed.

## WHAT IS A 'TIMBER AND DAMP REPORT'..?

Following the mortgage valuation, or if you had a building survey done by someone who isn't experienced or knowledgeable of building conservation and historic building construction, you may be asked to get a 'timber and damp report' and 'quotes for repairs required'. This may be requested

following internal observations such as might be seen in these images.

A 'timber and damp report' will usually be done by a contractor and it will often be done for free and will include a quotation for remedial damp-proofing work. This will often contain the recommendation for removal of internal wall plaster and injection of the wall with chemicals and replastering with a mix that contains water-proofing additives.

These recommendations are rarely impartial and, importantly, if you have a listed building, you would not be able to do the work without first getting Listed Building Consent. It is unlikely that you would be able to justify an application for consent without first doing a thorough inspection of the circumstances.

## ASSESSMENT OF MOISTURE IN TRADITIONAL BUILDINGS

The only way to form a valid opinion on the presence, or not, of moisture in a traditional building is to look at all the evidence and the circumstances in detail. A quick inspection with a handheld 'moisture meter' is not a definitive method of assessment and it can lead to a judgement that does not consider all the facts. It is not a measurement of the dampness in a wall.

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It would be interesting to hear the justification for the injection of a dpc in this lintel – in a listed building



All traditional buildings will have some presence of moisture from time to time. This does not mean that there is a problem that needs to be fixed. It requires some understanding of traditional materials and perhaps even some education on how to live in the building. Since the 1950's and 1960's, right up to the current day, we have seen a vast number of modern products being sold that will 'cure' the damp house. Experience shows us that these products have limited initial cosmetic benefit and will invariably lead to long-term harm and damage to the building.

It is actually all very simple. Traditional materials tend to be slightly porous and will absorb moisture. If you have one brick in each hand, where on your left you have a brick from 1780 and on your right you have a brick from 1980 - they might feel the same and look very similar but actually they will be very different. They will not perform the same and you should not expect them to. The 1980 brick will be hard, dense and will be built into a wall using a cement mortar. The 1780 brick will be softer, the internal core may be only partly fired and it will have been built into a wall using a traditional non-hydraulic lime mortar. The 1780 brick and the wall it is built into will be susceptible to moisture whereas the 1980 brick and its wall will be more resistant.

On the inside, the 1980 wall will be plastered with gypsum plaster. The 1780 wall will be plastered with lime plaster. These two walls do not function in the same way and should not be expected to. The 1980 house will have a dpc whereas the 1780 house will not.

Now, let's change the circumstances in the 1780 house. Common changes might be..:

- External ground levels gradually get higher and higher in relation to the internal floor level, blocking air bricks for the cellar or timber floor
- Gutters and downpipes leak a bit and are ignored

- Heating that isn't working too well
- Drying washing indoors
- Not venting bathrooms or kitchens
- 'Modernising' the house by replastering with gypsum and putting vinyl wallpaper on
- Repointing the bricks with a cement mortar over the lime mortar
- Replacing the sash windows with new double-glazing
- Blocking up the fireplaces
- Painting the outside wall with a modern masonry paint
- Painting a historic timber-frame with modern gloss paint
- Adding a cement render to a cob house

There are many things that can change and the result is always the same. The wall will struggle, and most likely fail, to allow for natural moisture evaporation inside and out. It will then appear to be 'damp' because the inherent moisture is trapped and held in, unable to evaporate, and thus we get back to where started with this article.

The answer is not to jump to an immediate conclusion and assume that the building is inherently defective and that there is a magic cure to the 'problem'. There won't be.

All that is required is some common sense, awareness of all the circumstances, and reversing the use of modern interventions where required. It really doesn't have to be difficult or expensive. You do need patience though. There is no 'quick fix' and it will take several months to bring under control, maybe longer in severe cases.

It is important that you use an experienced person who will provide totally impartial advice and who understands historic construction and the problems that are caused by modern interventions. 



Leaking rainwater pipes cause long-term problems. Lower ground levels to below internal floor level

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