Peter Grant on measuring dampness

Air today, gone tomorr ow, and the floor becomes a soak

A SUFFOCATING floor is bad for the environment. No do carry on reading, I'm not about to harangue you about saving the planet, measuring your carbon footprint or how wicked it is to even think about exotic hardwoods entering the saw mill!

However, you do need to consider how your new floor will live and breathe.

Where you live, the type of house you live in and your lifestyle preferences will all have an influence on the floor, some more than you would think.

So what exactly am I getting at? Imagine you have acquired a dilapidated old barn to convert into your des res.

You have discussed the plans with your nearest and dearest and your architect, decided how you wish the interior to look and feel, but essentially you aim to retain the appearance and style of the original barn, which could be 500 years ago.

You might also want under floor heating, double glazing and to stop any nasty troublesome drafts to chill your ankles as you sit in 'period' comfor t sipping fine malt!

Such a building would be mainly constr ucted from oak timber frame and in filled with stone and/or brick plus lath and lime plaster. Such a constr uction 'breathes' quite naturally.

Whether in the original build this was by design or a happy accident nobody really knows but it does breathe and this confers several benefits on the building and its occupants.

For example, when it rains, not uncommon in this countr y, the structure takes up moistur e.

This does not necessarily translate into gallons of water flooding into the building, but it does raise the moistur e content of the walls and hence the surface humidity of those structures and this in turn will raise the inter nal relative humidity.

Likewise, as the sun comes out and the structure dries, it leaves the interior pleasantly cool (by the process of latent heat of evaporation for those of you not awake in double physics!)

Damp air internally was not a problem because most of the excess moistur e was removed from the building through natural ventilation via open eaves and windows i.e. it was drafty!

Go forward a few hundred years and we put in double glazed sealed units, block of f all vents and fit state of the ar t door seals to eliminate the drafts!

You know a 'but' is coming and it is simply that the building is now suffocating. If you don't remove damp air from within the property this creates a vapour pressur e differential between that air and the other constr uction materials.

For example, your splendid solid wood floor will gratefully soak up the moistur e as it is in a dry state – 9% moisture content as fitted being equivalent to an ERH of around 40%.

This will be par ticularly apparent in the summer when the underfloor heating is switched of f and a summer rain raises RH of the air.

What will you notice? The floor may crown. You might be tempted to sand it flat and re-finish. If you do, then bewar e of the time when the underfloor heating goes back on in the autumn. The floor will now dry out from below and that crowning may re-appear along with gaps you wouldn't want to fall into!

OK, so we know what causes the problems, how do we sor t it out?

The clue is in controlling or, more accurately, managing the environment. There is little you can do to influence what happens outside the building apart from changing the Range Rover for a Prius (or is that a 'Pious'?), if our dear lor ds and masters in Westminster ar e to be believed!

The interior, of course, is a different matter. If you have compromised the natural ventilation of the building then you should take steps to cor rect it by providing for extract ventilation in key wet areas such as kitchen and bathroom.

This needs to be balanced with appropriate passive vents in other areas such as bedr ooms to ensure that damp air can be removed before it wicks into dr y materials and/or condenses onto cool sur faces and aids the growth of moulds.

How do I know what goes on with the atmosphere inside my house? A ther mo-hygrometer of course!

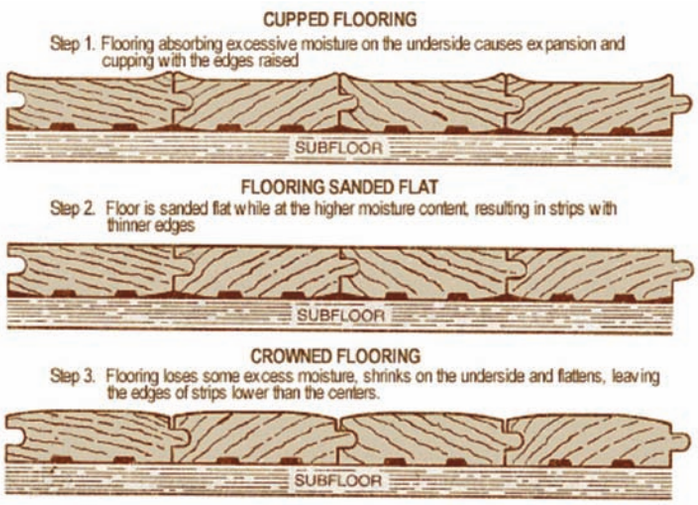
Every house should have one and there is a welcome trend now for some supply and fit flooring companies to price this into a job.

As an aid to providing a complete and professional approach, it is to be applauded.

Oh, and make sure you take your size 12 boots of f before you come in, we wouldn't want to leave evidence of too big a carbon footprint would we, the government will tax it, don't you know! CFJ

Peter Grant is technical sales manager at Martin Lishman

Further information on
T: 01778 426600



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From cr unchy nuts to climate obsessives

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now and why it is important for you as a contractor to embrace these changes.

As well as aler ting you to possible pitfalls, I'll be looking at how new products can help in this dynamic climate (and I don't mean global warming), such as pumping and spray systems, high temperature adhesives, low odour smoothing compounds, etc.

These things wer e not needed 30 years ago, but can have a major impact on today's world of contract flooring.

I will also look at some of the important site considerations necessar y to help get the most out of new products and how manufacturers' guidelines and data sheets r eally are the key to a successful installation. Flooring may be static by its ver y nature, but the industr y is now far from it and change is nothing but a good thing for all. CFJ

Martin Cummins is Laybond's technical advisor

Further information on
T: 01244 674774