

# TECHNICIAN'S ADVISORY

Steven Richford  
BDMA SenTech  
BDMA HonFellow

*The Technicians' Advisory column is intended to add to a technician's existing knowledge base and offer alternative solutions to specific issues.*

*It is not intended as a definitive tutorial, nor to imply the recommendation of a particular methodology, since all situations must be assessed individually and any action taken is entirely the responsibility of the technician or organisation involved.*

## HOW INQUISITIVE ARE YOU?

**T**HE DAMAGE MANAGEMENT technician needs to have a working knowledge of many different things including historic and modern building structures, the services within buildings, the performance of different materials used and an infinite variety of contents.

When the BDMA was formed the Education Committee was charged with creating a syllabus, a definition of the core areas of knowledge required by practitioners in this field. For it to be a practical but manageable size we knew many things would have to be excluded.

A damage management technician has to confidently approach many different problems, while being aware of areas where their own competence may be limited. Being clear that you don't know enough about something to make a decision, or take appropriate action, is in itself a demonstration of competence.

Many successful damage management technicians are naturally curious, and have an appetite for new information. They continually add to their knowledge and skill by being inquisitive and seeking out answers that are not always apparent, as in the following examples.

### Staining

Noticing that a newspaper very quickly turns yellow in the sunshine, sometimes within a few minutes of exposure, you might, for instance, want to find out what causes this transition. This is a wood-based material, but is the colour changing process the same that causes curtain linings to develop brown stains when partly soaked with clean water?

*Both are made of plant derived materials, and a little research would reveal that one involves a change in the colour of lignin, and the other of cellulose, both components of plant cells. The cellulosic browning and staining on partially wet cotton curtain linings can sometimes be easily reversed. The change in the colour of lignin in newspaper is less easy to resolve. Therefore, although these are related phenomena they respond differently to the same remediation treatments.*

### Humidity

Sometimes you may notice that the specific humidity (SH) increases when a building, which is not suffering from any water related problem, is warmed well above its normal condition, although there are no other changes. Why?

*The much lower RH resulting from elevating the temperature causes the release of moisture from hygroscopic materials as they equilibrate to the lower RH conditions, resulting in a tendency for the SH to continue to increase, until a new equilibrium is reached.*

### Fire odours

After some fires odours persist, and at other times disappear after a few days. Is there a way to predict when there will be a residual fire odour problem?

*Sometimes this can be caused by partial combustion, when there is a slow rate of combustion, leaving very odorous residues. Understanding the way the fire occurred can help predict this – a slow smouldering fire in interstitial spaces with limited oxygen, for example, can result in very persistent odours.*

### Intermittent damp patches

Damp patches appear randomly on an internal masonry wall, with no associated water leak, and can then disappear again a few days later. Could this be caused by hygroscopic salts contaminating the render, and if this is suspected what test would be needed to confirm it?

*This phenomenon can be caused by hygroscopic salts from contaminated sand in render or from rain penetration through traditional stone and rubble walls, resulting in salts depositing on the inner wall surface on evaporation. Measuring moisture uptake after oven-drying a sample can indicate if these troublesome salts are present.*

The BDMA syllabus and education programme provide a very valuable foundation but, as you can see, it wouldn't be possible to include everything you will need to know. However, you can gather a lot of knowledge just by having an enquiring mind.

The professional damage management technician will recognise that it is just the beginning of the journey.