

# WHAT LIES BENEATH...

Creating your dream bathroom can cost a fortune. If you don't check what your expensive taps and tiles are built on, you might flush your bathroom budget down the toilet.

BY AMANDA FALCONER

**Building experts agree that one** of the most common defects they're called upon to fix is water leakage through showers. If a bathroom is on a second or upper floor, the leak will be through the ceiling and into downstairs rooms. This can be very unpleasant and expensive to fix.

For Master Menders, one of Victoria's largest building insurance rectifiers, fixing renovation defects accounts for about 60% of their business. More than half of the defects they fix are related to bathroom defects or "wet area failure".

A wet area is any space that's supplied by water – that means

bathrooms, laundries, kitchens and toilets. They're generally divided into two groups: areas like showers, which are most susceptible to water damage; and more general semi-wet areas like floors and walls that are next to baths, basins, toilets and laundry tubs.

## HAVE YOU USED THE WRONG MATERIALS?

Master Mender's Director Steve Peluso says that a combination of poor workmanship and the wrong materials for the waterproofing and the linings are the main causes of bathroom defects. →

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Fixing a wet area can be expensive, particularly if linings, waterproofing and tiles need to be replaced. Peluso advises that for a typical bathroom with an average size of about 2.2 metres by 2 metres, with wall tiles and tiled base, the costs are usually between \$12,000 and \$15,000. "People are shocked," he says.

Jack Winter, his wife Alison and their three teenage daughters live in Sydney's northwest suburb of Bella Vista. Their Georgian-style home is about nine years old.

Over a year ago they noticed water in the garage and thought the problem was a leaking roof. When they later saw that the carpet outside an upstairs bedroom was wet they realised the cause must be the ensuite bathroom.

The first rectifier told them that the membrane had broken which meant that the water was going through the bottom of the tiles, flowing through the carpet and down the side of the building into the garage.

Jack says that the whole bottom of the triple shower was removed and resurfaced at a cost of around \$2,500. "It still hasn't fixed the problem," Jack says. "We called the guy back, showed him it was still leaking, and he did a runner."

The Winters are pursuing *that* matter with the Office of Fair Trading. In the meantime, they can't use the ensuite.

**WATERPROOFING THAT WORKS**

The standard of waterproofing has been a longstanding industry issue. In fact, the Master Builders Association of NSW Waterproofing Council was established specifically to address the problems with waterproofing quality through training and other measures.

However, if waterproofing does fail then the materials that are the substrate for the waterproofing are



critical. Sometimes little pinholes in the waterproofing membrane are accidentally made during construction. The problem is they're very hard to see. The pinhole in the waterproofing membrane can let in water which may increase the risk of damage to the substrate.

When it comes to linings, Master Menders' Steve Peluso says: "We see WR board [water-resistant plasterboard] fail so many times. Any moisture that gets in capillaries through any little hole that's there in the waterproofing. This then actually escalates the problems that people have."

It's not true that all water-resistant plasterboard is doomed to fail. Typically, water-resistant plasterboard has a water-resistant seal. However James Hardie fibre cement and Scyon™ products are

homogenously resistant to moisture damage which means that even if the material does get wet, it won't deform or lose its structural integrity, like many other materials.

Master Menders uses a solid fibre cement lining when rectifying or building bathrooms, like James Hardie's Villaboard® lining. It does that because they know that fixing a wet area can be really expensive, particularly if not only linings, but waterproofing and tiles need to be replaced. Furthermore, Peluso says using Villaboard® lining is "easier for tilers," Peluso says. "They prefer it," he says.

"What happens from there is that if the builder hasn't used a compressed fibre cement sheet (or Scyon™ wet area flooring) on the floor and the shower's been leaking, then they'll start having

*About 20% of the defects fixed by insurers on new homes are related to water ingress from balconies at an average cost of between \$12,000 and \$15,000 each time.*

swelling problems with the chipboard they've used," Peluso continues. Particleboard with a waterproof membrane is commonly used when cutting corners in construction.

"And once the waterproofing's failed, it doesn't matter how far you've gone with it originally, [the water] will actually capillate through and go into the substrate and cause tiles to crack, lift, bulge and pop." This often results in increased water penetration which just makes the problem worse. "Then they have to redo the entire bathroom," says Peluso.

**BRINGING THE OUTSIDE IN**

Peluso says that the second most common defect his firm is called on to fix is balcony failure caused by water penetrating where it shouldn't.

While many defects are fixed by builders without going to insurers, Peluso says: "About 20% of the defects fixed by insurers on new homes are related to water ingress from balconies at an average cost of between \$12,000 and \$15,000 each time." It tends to cost a little more – between \$15,000 and \$17,000 – to fix balconies that are built by renovation builders.

"The most common reason you hear why these things fail comes back to the costs that the builder has quoted," he says. "The builder hasn't allowed enough for it so he's had to cut corners. As a result he may then do his own waterproofing which is fine if he knows what he's doing. But it's not if he doesn't – or if he uses the wrong materials."

Poor design is another factor, Peluso says. "Sometimes a designer has recommended a chipboard flooring for an external use with no threshold below doorways or windows. Add to that very little fall on the balcony for water to run away and you've got a design issue that the poor builder cops the blame for."

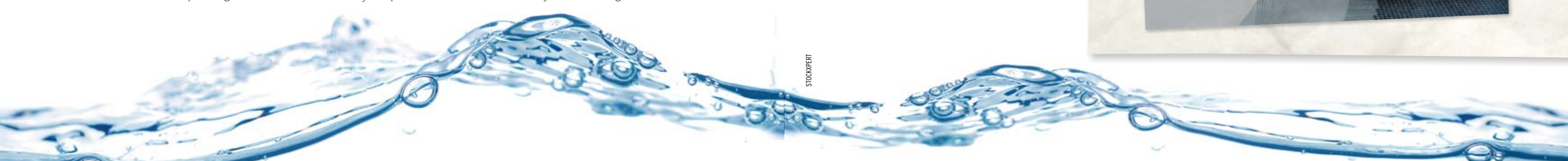
Mark and his wife Jane have a wide-ranging harbour view from the

deck of their waterfront home. The 45 square metre terracotta tiled deck above a dining room, was built as part of a major renovation about eight years ago.

Unfortunately when Mark's builder took on another renovation he left his inexperienced partner in charge, and he allowed their subcontractors to take advantage of her. When it came to the deck, the builder's tradespeople installed a rigid fibreglass membrane instead of a more expensive flexible membrane.

Unfortunately, things tend to move, particularly with older houses. In this case, the rigid waterproofing cracked and water seeped through to the ceiling of the dining room below.

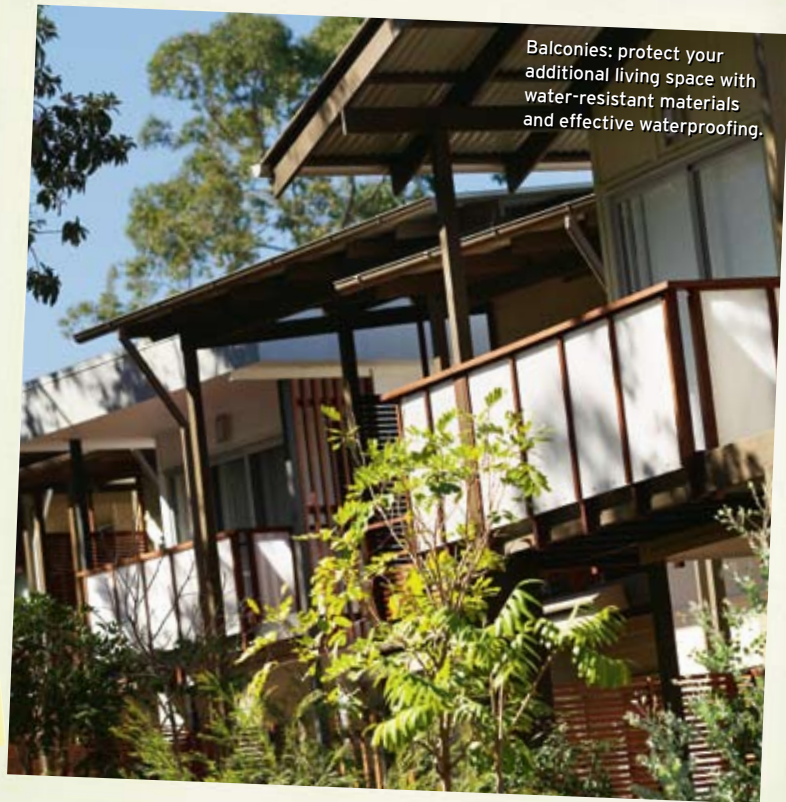
For seven years Mark and his wife couldn't use their dining room because of the water damage to →



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**TOP TIP**

Even though you can't see it when it's finished, ask your builder or designer what's in the specification for the wet area wall lining and the floor substrate. Our tips: Villaboard® lining for wall linings and Scyon™ Secura™ wet area flooring for the floor. On balconies go for Scyon™ Secura™ exterior flooring with a top quality waterproofing system where the balcony acts as a ceiling for a room below.



Balconies: protect your additional living space with water-resistant materials and effective waterproofing.

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the ceiling. Friends would come over and ask, "Haven't you fixed that yet?" But Mark was reluctant because he'd completely lost confidence in builders. "How can I trust anyone?" he says.

Finally Mark found someone he could trust to fix it. Almost \$50,000 later, with more than \$6,000 spent on the flexible waterproofing membrane alone, the job's been done – on the deck and down below.

### ADVANCED COMPOSITE ADVANCES BALCONY CONSTRUCTION

While compressed fibre cement sheeting is regarded as the benchmark product for tiled balconies with joists, building with it does involve some special techniques. The compressed sheet is relatively heavy and is hard to handle and work.

Building Manager Ralph Ganino has been with Orbit Homes for eight years, but in the building game for 30. "When

I first started, [the main building] failures were balcony, balcony, balcony," Ganino says. "We used to use the chipboard flooring on balconies and because of movements and what-have-you we had leaks and problems."

When Scyon™ Secura™ wet area flooring was released Ganino thought they'd found a product that would also deal with balcony problems. However more research and product development was needed to take the interior wet area flooring and modify it to create a product truly suitable for external use.

The result is the just-released Scyon™ Secura™ exterior flooring, the simplest way to help protect tiled balconies and decks against moisture damage. It's sealed on all sides with an advanced polymer coating that helps protect the board from moisture-related problems. A top coat on the surface of the board provides good adhesion. The mesh reinforcement

on the underside enhances the heavy duty performance of the Scyon™ material, adding extra strength and impact resistance to deliver a suitable external residential flooring substrate.

For balconies that aren't over habitable rooms – verandas for example, no additional waterproofing membrane is needed once Secura exterior flooring is installed. For balconies over habitable rooms, a waterproofing system needs to be applied; but waterproofing *and* Secura exterior flooring give you peace of mind the easy way.

Following trials of prototypes during James Hardie's research and product development cycle, Ganino says that while the total installation cost of using Secura exterior flooring is slightly more than using chipboard, it's a much more purpose-designed product. "In the end it pays for itself," Ganino says. "It just flows through. It's a better product for that use." ■