

Smarter options for balconies and decks

This home features Scyon™ Linea™ weatherboard.

The quality of waterproofing – or lack of it – in the building

industry has been a longstanding issue. The Master Builders Association of New South Wales recognised this and established the Waterproofing Council to address it.

Steve Peluso, a director of Master Menders, one of Victoria's largest building insurance rectifiers says that fixing defects in new homes accounts for about 40% of his business. Of that, water ingress, usually over balconies, accounts for 20%. On the renovation side, balcony failures account for 40% of the defects. Peluso says the average time to failure is typically about 18 months.

"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," he says. "That doesn't include the ones that are fixed by builders that don't go to insurers." Costs tend to be higher on renovation rectifications with balconies costing between \$15,000 and \$17,000 to fix.

The most common reason for balcony failures is because some builders cut corners or use the wrong materials.

Cutting corners and poor design

“The most common reason you see and hear about why these things fail comes back to the costs that the builder has quoted,” says Peluso. “The builder hasn’t allowed enough for [the project] 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 know what to do or 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, so you can’t create an up-stand with the membrane. 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.”

Apartment residents not so jolly after balcony failure

Almost within earshot of crowds next door at the Melbourne Cricket Ground are the balconies of an upmarket apartment complex. Partying might seem inevitable in this location. However, now that the balconies in the complex need to be replaced because of building defects, owners are no longer in a jolly mood.

Master Menders has been called in by the insurer. According to Peluso, it is required to “make safe the existing balconies which are in danger of collapsing because of the material that was used.”

Built with a chipboard substrate with tiles direct stuck, water has penetrated and there’s no sign of any waterproofing. “They are dangerous and the owners know not to go on them,” says Peluso. “There are a couple of spots where the tiles have caved in and what’s happened is that the water’s gone through to the soffit lining on the other side and caused that to collapse.”

All 40 balconies will need to be replaced. Peluso says that the problem comes just after their completion of another apartment balcony rectification in Collingwood. Poor waterproofing was the issue in that four-storey complex. “We had to demolish all 15 balconies and reconstruct them using James Hardie compressed sheet,” Peluso says.



Designer: Mirvac

HardiFlex® sheets with battens for walls and ExoTec® facade panel and fixing system for ceilings are used in the sala of this home at Waterline at Bulimba in Queensland.

Scyon™ shifts the benchmark

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

All Scyon™ products are designed to challenge performance and ease-of-use conventions. It's about delivering a smarter way to build. In developing Scyon™ Secura™ exterior flooring, the James Hardie research and product development team focused on creating a balcony flooring product that had a workability similar to timber with extremely high moisture resistance.

To be released in mid 2008, Secura exterior flooring is the simplest way to help protect tiled balconies against moisture damage, and that's definitely smarter construction.

At around 40kg and 2,700mm long by 600mm wide, Secura exterior flooring is about 20% lighter than compressed sheet (per square metre) and can be carried by two people, tucked under the arm like a large surfboard. It's also tongue and grooved which delivers engineered joints and eliminates the need for timber trimmers under these joints.

Secura exterior flooring is sealed on all sides with an advanced polymer coating that helps protect the board from moisture-related problems. A topcoat 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 – such as verandas – 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.

The *What's the Cost of Your Wall?* study shows that it typically costs only about \$7 per square metre more to have peace of mind using Secura exterior flooring than it does to install the low-cost particleboard alternative. Also, the installation cost of Secura exterior flooring is only about 55% that of compressed fibre cement.

Balcony substrates

Supplied, installed and waterproofed

- Particleboard
- Compressed fibre cement sheet
- Secura exterior flooring



Architect: dKO Architecture

Above and opposite: This Orbit display home in Melbourne's Aurora estate features Scyon™ Linea™ weatherboard and HardiFlex® sheets with Scyon™ Axent™ trim.

Scyon™ is ideal for balconies

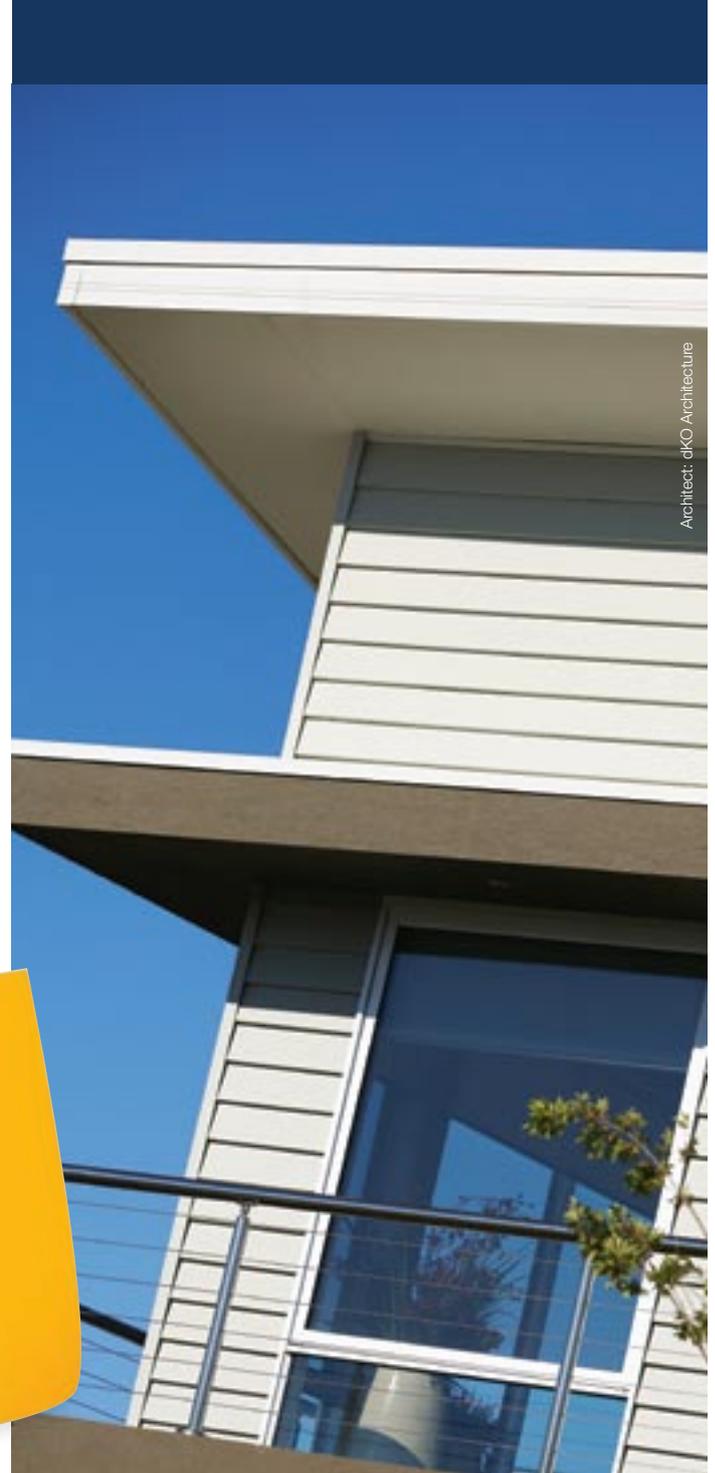
As part of the development of Secura™ exterior flooring, leading production builders Orbit Homes was asked to participate in trials of the product. Building Manager Ralph Ganino has been with Orbit Homes for eight years, but in the building game for 30. “When I first started, [the main building] failures were balcony, balcony, balcony,” says Ganino. “We used to use the chipboard flooring on balconies and because of movements and what-have-you, we had leaks and problems.”

The fact that the maintenance team report to Ganino gives him an accurate view on defects. “Previously, probably 80% of the balconies would fail,” he says. “Each fortnight we go through a workflow and the balconies were always coming up.” Defects became apparent within anything from six months to two years.

When 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.

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.”

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