

## EDITORIAL:

# BURWOOD BRICKWORKS SHOPPING CENTRE

## Aiming for Australia's Most Sustainable Shopping Centre

70 Middleborough Road, Burwood East, Victoria, Australia.

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|----------------------------|--|
| <b>Project:</b>            | Burwood Brickworks Shopping Centre   |
| <b>Project Owner:</b>      | Frasers Property Australia   |
| <b>Project Builder:</b>    | Hacer Group  |
| <b>Project Architect:</b>  | NH Architecture  |
| <b>Tiling Contractor:</b>  | Stanmor Ceramics   |
| <b>Mapei Co-Ordinator:</b> | Paul Buckley   |
| <b>Photographers:</b>      | If and When Co.<br>Griffin Simm<br>Diana Snape   |
| <b>Total Area:</b>         | Approx 13 000 m <sup>2</sup>   |
| <b>Year of Completion:</b> | 2019   |
| <b>Mapei Products:</b>     | Ultraplan Eco, Nivorapid, Ultracoat Easy Plus,<br>Keraflex, Keraflex Maxi S1, Keracolor FF,<br>Eco Prim Grip, Adesilex 9, Mapelastic Smart,<br>Ultracolor Plus, Mapesil LM, Mapesil AC,<br>Primer G, Kerapoxy, Topcem Pronto,<br>Mapecem Pronto, Planicrete SP,<br>Mapestone TFB 60, Mapestone PFS 2 Visco,<br>Ultrabond Eco 170, Ultrabond Eco Tack,<br>Ultrabond Eco S955 1K |





## PROJECT HISTORY

The former brickworks site in Melbourne's eastern suburbs has been transformed into one of Australia's most sustainable communities. Frasers Property Australia created an ambitious masterplan for over 700 homes and the world's most sustainable shopping centre.

Burwood Brickworks is 2.5 hectares of open space, parklands, an urban plaza and a new place for the people of Burwood and beyond.

Designed to be the most sustainable shopping centre in the world, the retail precinct at Burwood Brickworks offers residents the convenience of a full-line supermarket, cinema, childcare centre, medical centre, and over 40 specialty shops, right on their doorstep.

With a range of apartments, houses, and townhouses, the residences at Burwood Brickworks are an embodiment of modern living, confidently created to bring the past into the present and embed nature in an urban environment. From the inside to the outdoors, each aspect is about finding liveable luxury in the most sustainable environment.

Burwood Brickworks' major asset is the 2000 m<sup>2</sup> urban rooftop farm, where the centre's eco-conscious restaurant will source their fresh produce.





## PROJECT OVERVIEW

The innovative design aims to connect people with the environment, with an overall focus on reducing the environmental footprint. The retail centre is powered naturally by renewable sources of energy, with the intention of all organic centre waste being collected and repurposed as compost or other resources. In addition, all grey and black water will be captured, treated, and recycled on-site.

Melbourne-based Hacer Group was appointed to build the community's new shopping centre, with DA approval for the ground-breaking development received from Whitehorse City Council. The first sod for the centre was turned on-site on June 12, 2018.

This project exemplifies the commitment to healthy living by building sustainable and liveable communities that promote the long-term health and wellbeing of the residents and visitors.



### Creating a 'Living Building':

Frasers Property Australia aim was to make Burwood Brickworks shopping centre the first retail development in the world to achieve Living Building Challenge® certification, which includes targets such as generating more energy than it consumes on an annual basis. A mix of on-site rooftop solar PV and off-site renewable energy, utilising the latest in battery storage, will generate 105 per cent of the energy required for the building.



The Living Building Challenge® - or 'LBC®' for short - is the most advanced measure of sustainability in the built environment anywhere in the world. It is a framework developed by the International Living Future Institute that asks us whether a building can operate as effectively as a simple flower – getting all of its energy needs from the sun, using and circulating water, producing no waste or toxicity, and looking beautiful.

Materials conservation in construction and occupation resulted in a net positive waste outcome, with strict protocols in place to repurpose up to 99 per cent of construction waste away from landfills. The use of local, salvaged, and sustainable materials will deliver better air quality, further reducing the centre's carbon footprint.

The design includes an abundance of greenery, natural daylight, and fresh air throughout the centre via a sawtooth style roof to fulfil visitors' desire to connect with nature and create an environment that encourages longer dwell times and return visitation.





The shopping centre has been designed by Melbourne-based NH Architecture.

Frasers Property Australia were certified with a 6 Star Green Star Design and As-Built ratings for Burwood Brickworks shopping centre, which is an Australian retail first.

The Burwood Brickworks mixed-use community has been designed to achieve a 6 Star Green Star Communities rating, with approximately 500 trees dotted throughout the civic plaza, open spaces, landscaped reserves, neighbourhood parks, and pedestrian greenways.



With “sustainability” front of mind, this project not only required quality building products, but it was also essential that all supplied products required a complete ingredients list showing that they contained no ‘worst-in-class’ Red List chemicals such as formaldehyde, HFR’s and PVC.



Kevin De Almeida (Tenancies and Interiors Manager from Frasers Property Australia) and Stephen Choi (Living Building Challenge® Manager from Frasers Property Australia) contacted MAPEI's Technical Department to assist with the selection of MAPEI products to suit this brief.

It was imperative that they only specify products that contributed to the planned certification for the Living Building Challenge and the 6 Star Green Star certification. Products would only be considered if they contained very low Volatile Organic Compounds (VOC's) and didn't contain any of the "Red List" ingredients.

Other important requirements included:

- The project will account for the total embodied carbon in its construction.
- All timber will be Forest Stewardship Council (FSC) certified or salvaged.
- The material supply chain will be as local as possible.
- There will be a substantial reduction in landfill waste in construction and operation.
- The building will prominently feature many salvaged materials.
- All cleaning products must be environmentally certified.





## AWARDED PROJECT

The tiling contract was awarded to Stanmor Ceramics Contracting Pty Ltd, a local privately-owned contracting business that specialises in the supply and installation of high-quality ceramics and stone. Stanmor Ceramics focuses on providing value products installed with superior workmanship and have been partnered with MAPEI for many years.

Stanmor contractors installed 800 m<sup>2</sup> of **Brick Snap** brick tiles on the walls in the walkways. In keeping with the high importance of installing sustainable products, **Brick Snap** tiles are a wax-coated clay brick that are 15 mm thick and delivers a uniform finish with a level of tolerance unequalled by traditional bricklaying. Contractors selected MAPEI's **Keraflex Maxi S1** tile adhesive for the installation. **Keraflex Maxi S1** is a high performance, deformable, cementitious adhesive with no vertical slip and extended open time for ceramic tiles, particularly recommended for laying large porcelain and natural stone tiles for thickness of adhesive from 3 to 15 mm). **Mapesil LM** (neutral silicone, mold-resistant sealant with BioBlock<sup>®</sup> technology for use with stone for movements up to 25%) was used to completely seal all wall/floor joints.



Tilers installed ceramic tiles on the floors on the ground floor and first-floor amenities areas. These tiles were installed using MAPEI's **Keraquick S1** (fast setting, high-performance cementitious adhesive with no vertical slip for ceramic tiles and stone material stable in the presence of humidity for thickness of adhesive up to 10 mm). Tiles were grouted with MAPEI's **Keracolor FF** high performance, polymer-modified grout used for joints up to 6 mm. **Keracolor FF** grout is easy to apply and finish, smooth and compact for grouting floors and walls in both interior and exterior installations. Wall/floor joints were sealed with MAPEI's **Mapesil AC** (solvent-free, acetic-cross-linking mildew-resistant silicone sealant, available in 34 colours and transparent). **Mapesil AC** was used in the interior, exterior, ceramic tile floor, and wall sealing of expansion joints of  $\pm 25\%$  expansion of the initial size in bathrooms and showers.





Walls around the lift shafts were tiled with green ceramic tiles and installed using MAPEI's **Ultralite S1** lightweight cementitious adhesive. **Ultralite S1** is a one-component, high-performance adhesive with no vertical slip with a long open time. Tiles were grouted using MAPEI's **Keracolor FF** high-performance grout.

Engineered screeds were also installed in the bathroom areas using MAPEI's **Mapecem Pronto** (pre-blended, ready-to-use, quick-setting and drying, controlled-shrinkage mortar for screeds) and **Topcem Pronto** (ready-to-use, normal-setting, controlled-shrinkage mortar with high thermal efficiency for quick-drying screeds). **Mapelastic Smart** waterproofing membrane was applied above and below the engineered screeds to completely protect the subsequent tiling installations. **Mapelastic Smart** is used to form a highly flexible cementitious waterproofing membrane that can also be used on concrete floors that are subject to cracking if embedded with a fibreglass mesh or MAPEI's **Mapetex Sel**.





## SUCCESSFUL OUTCOME AND BENEFITS:

MAPEI supplied over thirty-four (34) sustainable building and construction products for all types of wall and floor installations on this project.

The **Living Building Challenge®** is the ultimate green **building** standard that can be applied to any **building** type around the world. The **goal** is to create **Living Buildings** that incorporate regenerative design solutions that actually improve the local environment rather than simply reducing harm.

The overall project was an immense success, and MAPEI was represented throughout the site and included in many quality product selections.

