

# SYDNEY OPERA HOUSE WESTERN FOYER

Sydney, New South Wales, Australia



SYSTEM **ARDEX**  
PREMIUM PERFORMANCE

## INSTALLER:

Better Tiles

## BUILDER:

John Holland



## ARCHITECT:

Original Architect: Jørn Utzon & son Jan Utzon

Collaborator: Johnson Pilton Walker

## CHALLENGES:

- Reproducing Jørn Utzon's original vision
- Irregular shaped glass reinforced concrete tile was produced specifically for the project the first of its kind in Australia, as Jan Utzon wanted a seamless floor finish construction while building was being used
- Floor movement from stages & loading docks underneath foyer
- Silicone used in perimeter & expansion joints needed to match the floor to create a seamless look

## PROBLEMS:

Design improvements included irregular tile shapes & glass reinforced concrete tiles with clear silicone expansion joints to create a seamless floor. Frequent floor movement was expected because of the stage & loading docks below the foyer, which could potentially cause the tiles to crack.



## SOLUTION:

To prepare the original substrate for the new tile installation, Ardex recommended **Ardex Multiprime** Water Based Primer which is designed to improve adhesion of Ardex products to various porous substrates. This primer dries fast allowing subsequent products to be installed quickly.

When applying the screed, **Ardex Abacrete** Bonding Agent was specified. It is a liquid polymer additive that greatly improves the shear & tensile bond strength of the screed.

To place the specialty tiles, **Ardex X 77** high performance, fibre reinforced polymer modified adhesive was used in addition to **Ardex E 90** Admix for Cement Based Tile Adhesives. **Ardex X 77** is reinforced with Ardex Microtec ® Technology.

The combination of these two products enhances bond strength for use in high volume foot traffic areas. When mixed with the **Ardex E 90** additive, it has water repellent qualities & improved sag resistance. By using the combination of the two products together, the specialty tiles were less likely to move while the adhesive was drying, maintaining an even surface.

**Ardex SE Coloured Silicone** for Sanitary Installations was used to fill perimeter, expansion joints and **Ardex Abapoxy** High Performance Epoxy Grout was sprinkled over the silicone for a matt finish. This enhanced the seamless look of the tile installation. To grout the rest of the area, **Ardex Abapoxy** was selected for its permanent colour capabilities. It also has a high resistance to chemicals, so commercial cleaning required for a high traffic area would not have an adverse effect on the grout.

Each of the Ardex products used were low in VOC, allowing the Sydney Opera House to remain open during the installation.

PROJECT REFERENCE - TILING

