

Roll out the barrels

Strict thermal performance requirements and the need to seamlessly complement the new building with the old made precast the natural choice for the extension of this Tassie winery and function centre.

Tasmania has become a centre for boutique wine production, with a reputation for making fine wines using time-honoured methods. Home Hill Winery is an example of that boutique tradition, a privately owned winery and function centre south of Hobart in Ranelagh, whose rammed-earth construction and old-style architectural detail has become a favourite with locals and tourists alike.

When the time came to expand the winery side with the construction of new barrel and testing rooms however, concerns relating to the durability of the rammed-earth finish arose. Maintaining strict temperature control is of paramount importance for both the successful storage and testing of the wines as they are being made. The owners and architect wanted to use the best available material – which is where precast came in.

Project Owner

Home Hill Winery

Architect and Project Superintendent

Brian Wyatt

Service Engineer

Aldanmark

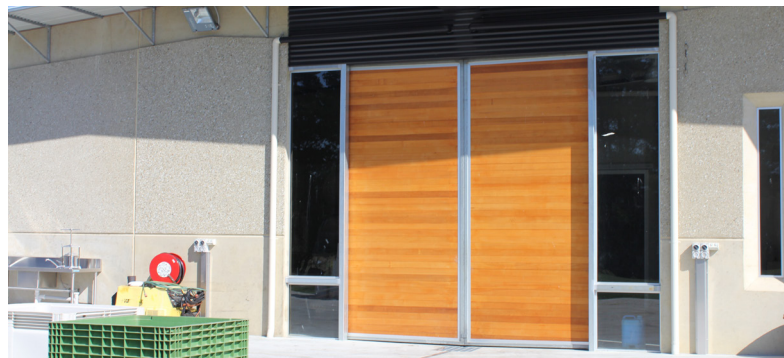
Builder

Brian Larrett Builders

Precast Manufacturer

Duggans

www.nationalprecast.com.au





Sandwich panels for thermal performance

“In Tasmania’s cool climate, precast concrete insulated sandwich panels are well recognised for their thermal qualities, and that includes in the winery sector where they have become particularly popular,” says Brent Hardy, Precast Division Manager for Duggans, which supplied the precast for the job. “The other plus for precast on this job – for which the appearance and architectural features were so important – was the design flexibility allowed in terms of finish and detailing. In addition to the thermal requirements, the brief was to not so much match, but complement, the existing building,” he explains. To that end, a series of sample finishes were created, with the architect and precast supplier working closely with the client to achieve the right result. The ultimate finish was limestone aggregate external walls featuring a 5% ‘river blend beige’ oxide in grey cement, with the aggregate exposed on certain sections to create an earthy contrast with the rest of the building.

One of the challenges of using this mix is the risk of an alkaline aggregate reaction leading to expansion and resultant cracking of the limestone finish. This was combated with precautionary use of silica fume in the mix.

In terms of the thermal performance, while standard 150mm wall panels were used elsewhere in the project, the external walls of the barrel room and testing room used sandwich panels with a 50mm extruded styrofoam layer between the two concrete layers, that gave a Mass Enhanced R-Value of 2.51 (m²K/W) for the BCA climate zone in Tasmania.

In addition to the finishes and the thermal properties, various architectural details called for special attention. In particular, the design called for replication of the existing roofline and some of the church-style window shapes, which feature angled recessed borders. To achieve the roofline, for example, sections of the exterior sandwich panels were rebated to allow installation of an outrigger frame, allowing the roof to tie seamlessly back in to the precast.

The final result? A seamless enhancement to the existing structure that meets the thermal performance requirements ensuring that fine wine making can continue – and a design result that is more than pleasing to the eye.