



Coopers Malting Facility

Coopers Brewery in South Australia is the largest privately-owned brewery in Australia and has been run by the Cooper family since 1862. Due to their ever-increasing success, the Cooper family recently invested in a \$65 million development of their existing facilities at Regency Park in Adelaide.

Overall Design Merit

The objective of the development was to construct a purpose built in-house maltings production plant. The new facility includes six barley and six malt silos measuring 25m high and 8m in diameter, each capable of holding 500 tonnes of barley or malt.

Coopers say that at full capacity, the maltings will produce around 54,000 tonnes of malt a year and give Coopers full control over an important raw material. Coopers will use approximately 17,000 tonnes of the 54,000 tonnes of malt a year in its operations, with the balance sold to a range of domestic and export customers. This includes independent brewers looking for reliable malt supplies.

The 13,000m² plant, considered the most technically advanced in the world, was officially opened in late November 2017 by His Excellency, the Honourable Hieu Van Le AC, Governor of South Australia. One of the main considerations for Coopers Brewery was the impact the new production facility would have on the immediate surrounding area.

The development of the current site, including the silos, is located on the fence line of one of Adelaide's busiest east-west transport links in a mixed residential and commercial area. Aesthetics were a major factor for the Cooper family.

Particular care and attention was given to the aesthetics of the building, which was constructed by South Australian building firm Ahrens Group.

Construction Efficiency

Ahrens' world-class plant in Kingsford, South Australia was the site for the steel fabrication, consisting of Australian BlueScope Steel. Production and delivery times were reduced thanks to custom engineered building technology, mechanical fabrication, paintline systems and state-of-the-art automated shot blast.

When designing the hoppers, the focus was on moving them in the largest sections possible to create both transit and installation efficiencies. Safety and productivity were also maximised thanks to the incorporation of support rails, mechanical equipment supports and services into the structural design.

Emergency egress staircases were also incorporated into overhead gantry support tower designs, which removed the need for excess steelwork while also allowing for work to be safely completed at ground level.

Environmental Sustainability

All material used in the design was carefully considered. Using Australian-produced steel ensured a long-lasting structure while also reducing the overall environmental footprint. The design is also future-proofed and designed to cope with increased demands. The production can be doubled with only minimal construction required.

Every structure is installed and double clad, to reduce energy requirements, enhance comfort and respect the local area. The design minimised gas usage requirements, by using the steam from the brewery's gas-fired cogeneration power plant for the pre-heating of the air used in the kilning process of the malting.

Finally, the use of stainless steel pipework and a process tank system, allows for a reticulate reverse-osmosis water process to be used on site, with water coming from the brewery's desalination plant.

Buildability

Ahrens engaged with the design team at MPH Architects through the process to create a streamlined and methodical tendering and building process. Economic project delivery was ensured by the use of Revit for the modelling, which allowed for easy integration between all key personnel.

This technology also removed any design errors, as well as issues with the erection and installation by allowing for easy communication with the European Buhler design team. The ease of construction is impressive for a project relying on companies from all over the world.

PROJECT TEAM

- **Architect:** MPH Architects
- **Structural Engineer:** Mott MacDonald and Osborn Engineering
- **Head Building Contractor:** Ahrens Group
- **Steel Fabricator:** Ahrens Steel
- **Steel Distributor and Manufacturer:** Brice Metals and Liberty Distribution
- **Steel Detailer:** EBJV
- **Coatings Supplier:** Ahrens Steel and Korvest Galvanisers
- **Metal Building Contractor:** Ahrens Steel and Able Roofing