

Corpus Christi Gymnasium, West Perth Glass

> Text by Tim Roberts, Photography by Elana Halvorson



The award-winning new Corpus Christi College Gymnasium is a strikingly innovative building, constructed to an incredibly high finish. The facility floored the judges of the WA 2016 Design Awards, who were particularly impressed with the diverse combination of glazing elements working in synergy. Tony Ansell, Director of West Perth Glass, discusses the project's standout features.

The gymnasium is packed with innovative solutions, including segmented windows, frameless pivoting doors, powered louvred walls and raking windows. 'The building is central to the school community, with the gym extensively used and widely appreciated by students,' says Tony. 'The modular upstairs classrooms feature bi-folding doors and Lotus operable walls, creating a flexible multi-purpose floorspace.'

Precise engineering and considered colour design provide Corpus Christi Gymnasium with its memorable appearance, featuring fittings and finishes of the highest quality. 'The detailing extends all the way

through to the school-themed colour scheme, with burgundy cladding forming a striking contrast with the silver frames,' Tony says. 'This distinctive palette is complemented by the segmented windows, with precise curvature artfully complementing the gymnasium's internal staircase.'

The frameless pivoting doors in the modular classrooms are engineering marvels, with all the attendant logistical challenges. 'We had to install self-mating mullions to ensure the framing was correctly rated to the wind loads and deflection,' Tony notes. 'These doors are also sandblasted with the logo of Corpus Christi College, which we had only one chance to get right.'

The interlocking componentry posed its own difficulties including 'getting the segmented windows to work in conjunction with the large spans of flexing structural steel work,' Tony recalls. 'Several of these had to be installed in conjunction with self-mating mullions to meet

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(Corpus Christi, continued)

the projected wind loads and spans; we also worked very hard to get the intricate sill detailing exactly right.'

Powered aluminium louvres are another inventive highlight. 'A lot of thought went into getting these perfectly straight, as their different frame thicknesses made them difficult to precisely align,' says Tony. 'The framing on the louvres was originally 100x44mm – but as the architect wanted these in 150mm Breezway Easy Screen, the adjacent frames initially didn't line up correctly.'

Ensuring a snug fit was thus a challenge. 'Sizing was a major issue we encountered with the louvers, as the frames turned out to be slightly too big when they arrived,' notes Tony. 'Fortunately, with some persuasion, we managed to make them all fit.'

This was just one of the many challenges encountered and solved by West Perth Glass during construction. 'We engaged with a range of design and technical issues while working on the Corpus Christi Gymnasium, to ensure we achieved the result we were seeking,' Tony reflects. 'Extensive measuring needed to be done throughout before the concrete was poured, due to the building's angular design. We had to ensure that all the mullions and transoms lined up with the different concrete levels, both vertically and horizontally.'

'Everything required a high degree of precision – if the concrete dimensions came in fractionally too high or too low, the project wouldn't have worked as planned. Many of the corners also feature mitred edge frames, which had to be screwed together before the glazing was siliconed into place.'

As expected, safety and compliance were made top priorities in this school facility. 'The building was constructed to BCA, AS 14.28, AS/NZ 1288, and AS 1170.2.2011 standards, as well as human impact codes (including disability compliance),' says Tony.

The light-filled interior space offers major benefits for students. 'The huge expanses of glazing introduce extensive natural light into the main gymnasium area, providing an ideal visual environment for sporting activities and competitions,' Tony says. 'It was gratifying to work with the builder EMCO Constructions on such a high-specification facility, which provides a dynamic learning environment for students and staff.'

The educational amenities of Corpus Christi Gymnasium are perfectly integrated with the building's structure. 'The upstairs area includes a

weight training session area with a massive mirrored wall, which we were responsible for installing in addition to the showers and mirrors for the bathrooms,' Tony says.

Glazing was selected by West Perth Glass for its high efficiency. 'We installed Low-E glass throughout, to filter out UV and minimise solar heat gain,' Tony notes. 'This worked productively in concert with the powered louvres, which can be manipulated to purge heat and allow fresh air to enter, providing a healthier environment for the students.'

The glazing specified initially was subject to some discussion. 'The architect initially specified that a lot of the glazing should be 6.38mm and 10.38mm ComfortPlus Grey,' says Tony. 'Based on our experience with materials, however, we suggested changing to EnergyTech Grey to prevent thermal cracking. They understood the benefit of our professional input, and were very accommodating.'

The tight schedule left little room for delays. 'Everything happened inside a fairly rapid six-month timeframe, which was difficult but ultimately achievable,' Tony says. 'Key to the project's success was our productive collaboration with EMCO Construction and EIW Architects, both of whom offered invaluable assistance and accommodated our requests. The running of the project was left to us; we also received valuable feedback during weekly meetings, where we discussed how our plans were unfolding.'

The level of thought that has gone into the project's design and construction led to the Corpus Christi Gymnasium being honoured twice at the 2016 WA Design Awards. 'We nominated the gymnasium for Best Commercial Project Over \$50K, which it won; the independent board also awarded it Best Project Overall, which was an amazing additional honour,' Tony remembers.

West Perth Glass is headed for further recognition. 'We've been nominated for five awards this year, including a major school (for which we contributed six buildings), a residential house, and a smaller façade, to a tilt up panel airport hangar,' says Tony.

The accolades received for Corpus Christi Gymnasium may be the first of many for this intensely future-focused company. **GA**