

# Hillary Residence

> Photography D-Max, Text by Tim Roberts

WA STATE WINNER  
Domestic Over \$20K



## CASE STUDY (HILLARY RESIDENCE)

The Hillary Residence, a striking new home on the rugged coast of Western Australia, was recently awarded the 2016 GWAWA State Winner – Domestic over \$20K category. Cris Bray, General Manager at WA Special Projects, discusses what he learned from the experience and why the Hillary Residence was such a defining project for his company.

Building the Hillary Residence took over three years, an epic timeframe by any standard, calling on the collective experience and skill of the WA Special Projects team. This extensively glazed project features the installation of high performance glazing throughout, customised double-glazed windows and doors, bi-folds, switchable glass, electric louvres, bespoke balustrades and pool fencing.

A challenging project, to say the least. 'The clients' vision of the house's liveability expectations changed over time, pushing uniqueness in all selections,' Cris notes. 'There were design elements to address given the coastal location, inspiring vistas, and extreme weather conditions, including strong winds and piercing summers. The solution called for customised performance glazing solutions to enable the homeowner to optimise their orientation, – IGUs were used extensively,' Cris says.

Environmental concerns and energy savings were also a top priority, and given the location, so were liveability and comfort. 'High-performance ETech was specified for the outer skin of the IGUs, working to reduce heat load,' says Cris. To further capitalise on the magnificent ocean view, the performance glazing also features ultra-clear low iron glass on the inner facing, providing crystal-clear vision

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without the greenish tinge of regular glass. That heightened sense of clarity created an unimpeded view of the surroundings, seeming to dissolve the boundaries between inside and out.

The project is a showcase for innovation and new technologies, incorporating high-end glazing products throughout. The fully automatic louvre banks are controlled through a CBUS system – and that's just the tip of the iceberg. 'The master bedroom features switchable glass – opaque at the flick of a switch,' Cris explains. 'The opacity is created by a layer of crystals which become clear when an electrical current passes through them, like an LCD TV. The IGUs installed in the bathroom feature ultra-clear low-iron glass on one side, and switchable glass on the other.'

The two storey home also features stackable bespoke IGU doors. 'When designing the sliding door system, we connected two tracks together to form double-glazed four-door stackers, leading to the outdoor garden area and to the upstairs balcony alfresco area,' Cris notes. (Due to the sheer weight of the IGUs in the stacker doors, the tracks had to be customised.)

WA Special Projects' mastery of glazing technology continues throughout. 'Downstairs in the "man cave", we installed a set of retractable bifold commercial-grade doors,' Cris explains. 'Leading from the garage into the house, an automatic sliding door with ultra-clear glass and security keypad provides access to the interior.'

The bespoke glazed balustrades were another engineering challenge. 'The internal glazed balustrades were all fully engineered and featured an SGP 18mm custom laminate. The seamless glass balustrade rises from the tiled floor, fitting flush against the glass – grouted into a 90mm deep channel and also secured by custom standoff fittings. They flow seamlessly, leading from the ground floor to the first floor landing,' says Cris. 'Each internal custom-laminated balustrade panel – which included cut-outs for each step of the ground floor – weighed up to 280kg. The external balcony also features 14mm SGP custom laminate low-iron glass, including custom-made standoff fittings.' Pool fencing comprised of low-iron 12mm thick glass surrounds the enclosure with custom heavy-duty gates and soft close fittings.

To meet energy building regulations, performance glazing was critical given the sheer volume of glass. The standards weren't only met, but surpassed. 'Although the volume of glass is very high throughout, the Hillary Residence boasts excellent energy efficiency,' Cris notes. 'Due to the Hillary Residence's many large-scale openings, we had to create a window and glazing system that was able to achieve optimal solar performance even in these difficult conditions. The IGUs with low-iron glass enhanced visibility to maximise the view, also working to harvest solar heat during winter months to warm the interior.'

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