CHARLESTOWN HOUSE



Architect
KGM Homes Building Design

Builder
Buildon Projects

Fabricator
Newcastle Glass & Aluminium

Capral Products
Urban Plus 390 Sliding Windows
Urban Plus 394 Sliding Doors
Urban Plus 397 Hinged Doors
with 125mm fixtures
Amplimesh® security screens

CAPRAL ALUMINIUM

MADE FOR EVERYDAY LIVING

Capral Urban Plus windows and doors bring distinctive angles, natural light and ventilation to this Charlestown home, creating comfortable spaces for everyday living.

Designed by KGM Homes Building Design, this Charlestown residence features distinctive 30-degree angled windows alongside large openings that bring natural light and ventilation into the living spaces. The angled design required precise fabrication from Newcastle Glass & Aluminium, who used Capral Urban Plus systems across the home.

Built by Buildon Projects, the home combines contemporary design with a range of window and door configurations. The systems needed to accommodate both standard and angled openings while meeting the project's N3 wind classification and energy efficiency requirements.

Newcastle Glass & Aluminium was responsible for manufacturing the windows and doors, working closely with Buildon Projects to ensure each element was produced to the required specifications. Capral Urban Plus was selected for its combination of design flexibility and performance, providing a consistent solution across the home's varied openings.



The 30-degree angled windows were one of the project's more challenging elements. The geometry required detailed measurements and precise fabrication, with each frame made to the millimetre to achieve a neat fit within the openings prepared for installation by the builder. The team also needed to consider structural support, waterproofing and thermal movement while working within the requirements of the tested system.

The project incorporated Urban Plus 390 Sliding Windows, Urban Plus 394 Sliding Doors and Urban Plus 397 Hinged Doors with 125mm fixtures, with 6mm toughened Soltec glass used throughout.

Thermal and acoustic performance were also important considerations across the home. The Urban Plus systems provided energy-efficient solutions across the windows and doors, while the sliding windows achieved acoustic performance of up to Rw (C;Ctr) -1;-2, helping to reduce external noise and contribute to indoor comfort.

Amplimesh® security screens were also installed across the windows and doors, allowing the home to be naturally ventilated while maintaining security. The screens were rated to BAL 40 and integrated with the Urban Plus systems.

The project also provided an opportunity for a new employee at Newcastle Glass & Aluminium to gain hands-on experience in window fabrication, including working through some of the more challenging elements of the project.

Wayne Kerin, Director at Newcastle Glass & Aluminium, said the project was a valuable learning opportunity for the team.

"There were some challenging elements to this project, particularly with the angled windows, so it was a good opportunity for our new employee to get hands-on experience and learn from the team. We worked closely with Buildon Projects throughout the project, which helped us work through the different requirements and get everything fabricated properly."

Capral's lower-carbon aluminium LocAl® was used across the Urban Plus systems and Amplimesh®



security screen frames. The energy-efficient windows and doors, combined with natural ventilation, contribute to a comfortable and functional home.

The completed residence brings together distinctive angled windows, large openings and aluminium framing across the home. The project highlights Newcastle Glass & Aluminium's experience in delivering tailored window and door solutions, from standard openings through to more complex fabrication requirements.

