

Case study

Australian Framing Solutions

October 2021



Truecore®

Australian Framing Solutions: VUE Terrace Homes



Project Details:

Sector: Medium Density Residential

Project: VUE Terrace Homes

Location: Robina, QLD

Project Total Cost: \$105 million

Client: Robina Group

Architects:

- TVS Architects
- Andrew Halstead Architect

Builder: Hutchinson Builders Coolangatta

Steel Fabricator: Australian Framing Solutions
framingsolutions.com.au

Roofing Contractor: Urmi Enterprises

Principal Steel Products: Wall framing, floor joists, structural framing, roof trusses, ceiling panels all made from TRUECORE® steel, and other structural steel beams. Upper roof, gutters and fascia made from COLORBOND® steel in the colour Surfmist®, and lower roof made from COLORBOND® steel in the colour Monument®.

THE
INNER
STRENGTH

The use of light gauge steel (LGS) framing contributed to a two-month reduction in the build program for this ambitious townhouse project

Project Goal:

To construct 263 townhouses with carparks and other recreational facilities within 18 months.

Key Benefits Delivered:

The key parties involved in delivering this project, Australian Framing Solutions (AFS), Hutchinson Builders, TVS Architects and Andrew Halstead Architect, highlighted the following benefits in utilising LGS framing made from TRUECORE® steel:

Time Savings:

- This four-stage development, originally expected to take 18-months to complete, was delivered in only 16-months, thanks in part to the decision to use LGS framing made from TRUECORE® steel instead of traditional timber framing, and lightweight party walls over block party walls.

Cost Savings:

- Hutchinson Builders estimated a material cost saving of approximately 8% (equivalent to \$495k) on the steel framing supply and installation component of the project by selectively replacing structural steel with LGS framing made from TRUECORE® steel.

Straight and True, and Efficient to Install:

- By using lightweight and prefabricated framing made from TRUECORE® steel, the installation was one week faster for each dwelling than it would have been using traditional timber framing.

Build Efficiency:

- TVS Architects and Andrew Halstead Architect observed that the use of 3D CAD-based frame modelling software introduced the ability to detect clashes at the design stage, avoiding costly and time-consuming changes during construction. Off site prefabrication allowed the frames to be manufactured to more accurate tolerances than would otherwise have been possible, further improving installation efficiency on site.



Design Versatility:

- Frames made from TRUECORE® steel have an impressive strength-to-weight ratio which allows for the strategic minimisation of structural steel elements without compromising the design vision.

Safety Management:

- With prefabrication of the frames, waste, and the associated safety issues that this can cause at site, was minimised.

100% Borer Proof:

- Knowing that framing made from TRUECORE® steel was resistant to termites and borers gave the Robina Group added peace of mind.

Summary:

Spanning over 5.6 hectares, the VUE Terrace Homes development was an ambitious undertaking by the Robina Group. At completion, this development is the largest in the southern hemisphere to utilise suspended concrete slab construction which is elevated up to 6m above the swampy ground below.

Appointed as the principal builders, Hutchinson considered using block party walls and timber framing for this project but dismissed this option in favour of LGS framing made from TRUECORE® steel.

“The sheer volume of work and construction speed required to complete the works, meant that the LGS framing and lightweight party walls were a far superior solution,” said Murray Emmerson, Project Manager at Hutchinson Builders.

Having partnered with Hutchinson previously, AFS re-worked the plans to replace structural steel with LGS framing made from TRUECORE® steel.

The result was a cost saving of approximately 8% (equivalent to \$495k) on the steel framing supply and installation component of the project.

While maintaining the integrity of the design, TVS Architects and Andrew Halstead Architect worked collaboratively with AFS to refine the shop drawings and incorporate LGS framing where possible. TVS Architects noted that reviewing the LGS frames within their 3D modelling software during the design stage, allowed them to identify and resolve potential clashes in this phase thereby reducing the risk of construction delays and cost overruns.

To help compress the 18-month build program to 16 months, the AFS design team expanded its detailing and manufacturing capacity. At site, AFS also appointed a full-time manager to oversee the complexity of site deliveries. This resulted in a seamless coordination of deliveries ahead of the need by trades. The net effect of these resource changes was the critical compression of Hutchinson Builders' construction timeline.

The VUE Terrace Homes gated community was completed in 2020. Each of the 263 homes include three bedrooms, two multi-use living areas, two covered outdoor spaces and parking for two cars. The community boasts uninterrupted views of the newly upgraded Robina City Parklands and is now home to more than 500 residents.

Sources:

- Murray Emmerson, Project Manager, Hutchinson Builders
- Brett Harbourne, Director, TVS Architects
- Ross Manning, Senior Detailer/Project Manager, Australian Framing Solutions
- Rick Rowntree, Site Manager, Hutchinson Builders

truecore.com.au

To learn more about TRUECORE® steel

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