The PwC Centre is a mixed-use development located on Cashel Street and Cambridge Terrace in Christchurch. It is significant for its use of buckling restrained brace seismic technology, which allows for enhanced seismic performance. The building is clad with a striking frontage that creates a landmark for Christchurch, both day and night.

The architectural brief called for modern, flexible workspace configurations and an open-plan layout, comprising a series of steel columns that allow for a relatively open-plan interior. The structure is characterised by tall, slender columns and is supported by steel beams and columns filled with self-compacting concrete.

The steelwork is one of the critical paths of the project, and by being involved early on, any clash or buildability issues can be identified. Fabrication techniques applied to the building resulted in considerable economies and allowed for parts of the steelwork to be fabricated and installed easily, while achieving the high performance required by the code.

State-of-the-art workshop technology was used to achieve the high levels of accuracy required. Innovation was integral to the project, and Pegasus worked particularly closely with Beca to refine some of the welded connections, which was an architecturally pleasing yet structurally effective approach.

Steelwork's inherent design flexibility allowed the team to adapt the concept to meet the new environment for tenants and visitors. The $30 million, five-storey office building is primarily a structural steel exoskeleton structure, allowing a relatively open-plan layout.

"Considering the logistics involved, including the sequencing of steelwork production, truck movements and the building process from the raft to the complete building skeleton in less than three months, it was remarkably fast." - Samir Govind, Technical Director, Beca

"Steel is one of the critical paths of the project; by being involved early on, any clash or buildability issues can be identified. Fabrication techniques applied to the building resulted in considerable economies and allowed for parts of the steelwork to be fabricated and installed easily, while achieving the high performance required by the code." - Warren and Mahoney, Builder Armitage Williams and Structural Steel Fabricator Pegasus Engineering.

Innovative elements of the structural design include:
- Buoyancy effects provided through bracing
- Welds on column undersides were ground and polished to a perfect finish, leaving no visible welds
- Structural steel shear studs, which enabled part of the steelwork to be erected early with minimal construction tolerances
- A novel bracing arrangement, which was architecturally pleasing yet structurally effective
- "It's coming out of the ground very quickly. The project leapt from the raft to the complete building skeleton in less than three months. It was remarkably fast." - Samir Govind, Technical Director, Beca

"After the earthquake it made good sense to use steel. It is fairly cost-effective, and easy and fast to build with." - Warren and Mahoney, Builder Armitage Williams and Structural Steel Fabricator Pegasus Engineering.

"There are real advantages to working with a local fabricator. Working closely with them, we were able to resolve issues as they arose. Along the way, we got on to problems and fixed them." - Wellington-based Warren and Mahoney's Sean Mahoney.

"We were introduced to the project at an early stage, which helped to open economic doors for the design using different welding and fabrication techniques. Being local, we were allowed to collaborate with the design team and buildability team and during this fabrication and erection." - Samir Govind, Technical Director, Beca.

"There was a need to support the steel beam and concrete slab floor structure. The exposed BRB structure works aesthetically as well as functionally, blending seamlessly with the architectural brief." - Samir Govind, Technical Director, Beca.

"As the building moves during an earthquake, it yields the piece of flat steel inside the brace, and the collector beams and column elements. Arranged in simple lines on each building elevation, the BRBs reduce the overall demand on the structural system." - Samir Govind, Technical Director, Beca.

"The architectural brief also called for modern, flexible workspace configurations. The steel exoskeleton allows a relatively open plan layout, comprising a series of steel columns that support the steel beam and concrete slab floor structure. This allows for a relatively open plan interior." - Samir Govind, Technical Director, Beca.

"The exposed BRB structure works aesthetically as well as functionally. It blends seamlessly with the architectural brief." - Samir Govind, Technical Director, Beca.