



Call Centre – Bunbury, WA

STRUCTURAL STEEL – SPEED AND ECONOMY

A combination of a structural steel frame with a composite floor was the early choice for this three-storey office building. Located in Bunbury, Western Australia, it houses a purpose built call centre and boasts large column free work areas.

The client's brief was for 3200 square metres of floor space and parking over the full area of the basement of the building.

Rob Skipworth of Horizon Design, designers on the project, said: "we wanted to keep the building light – not just in weight but in look and the penetration of light to the interiors.

Our objective with the foyer was to create an interesting focal point for the building."

Workers and visitors enter the building through a foyer void at street level. This glass void rises to the full height of the building. Curved balconies on each floor overlook the void and allow views out over the town to the ocean.

"To create interest in the void, and facilitate the views from each level the curved balconies within the lobby have been set back and staged and rotate from the lift area," Mr Skipworth said.

"Two feature curved roofs have been constructed over the steel and glass three storey façade." Mr Skipworth said that: "The curved roof was created to simulate the natural arch motion of the waves from the nearby Indian Ocean."





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Sean Gavin of Gavin Construction described the structural steelwork saying: “The 51 secondary beams, which are OneSteel 300PLUS® 360UB51 spanning 11 metres, were given a minor pre-camber and support the composite floor, utilising a trapezoidal profiled steel deck, a previously unusual flooring method for Western Australia.”

“The main floor beams are OneSteel 300PLUS® 530UB82 standard beams.

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“The roof structure is supported by the perimeter walls and two internal steel columns only. Primary and secondary steel trusses carry standard purlins and roof sheeting with the in-plane design to carry wind loads over the entire height of the building until the floor slabs were installed.”

All the structural steel above the basement is within the glazed area of the building and has been left untreated.

The surface of the steel inside the undercroft carpark has been especially treated (galvanized and painted) to protect it from the nearby harsh ocean environment.

The building was fire safety engineered which enabled the use of bare steel construction utilising the inherent fire resistance of 300PLUS® steel, another economical outcome from the use of structural steel.

An undercroft carpark has been excavated into the ground behind the foyer and supports the two levels of office space above.

Additional parking has been provided to the east of building while on the west a stand of heritage Norfolk pines has been retained and provides protection from the harsh western sun.

Phil Scott of Scott & Associates, Structural Engineers on the project said that:

“We decided early in the design process that the most economical form of construction would be a combination of a steel framed building with a composite floor, and load bearing concrete tilt panels perimeter walls.”

“In the initial discussions with the builder and designer it was established that the client wanted an office with minimal columns so we adopted a structural grid of 11 metres by 8.5 metres giving the required column-free floor space and conforming to a logical car parking layout below. The square footprint was chosen to maximise the floor space while minimizing the perimeter wall cost.”

“The three storey concrete panel walls are repeated around the perimeter of the building. The structural grid lines coincide with panel joints to minimise connection costs.

So the building is simple in its repetition of structural elements and erection process, allowing the required economy goal to be achieved.”

DESIGN

Horizon Design

ENGINEER

Scott & Associates

BUILDER

Gavin Construction

STEEL FABRICATOR

Fabricon Steel Fabrications

STEEL DETAILING

Universal Drafting

FIRE SAFETY ENGINEERING

C A & M J Lommers Pty Ltd

PHOTOGRAPHY

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