

Rhodes Waterside Shopping Complex

Parramatta River, Sydney



STRUCTURAL STEEL delivered:

- Significant Speed of Construction Advantages
- Competitive Cost
- Greater On Site Safety
- Reduced On Site Disruption
- A Future Proofed Investment



AUSTRALIAN STEEL INSTITUTE



www.beyond2.com.au

CSML002

Rhodes Waterside Shopping Complex

Parramatta River, Sydney

Client:**Architect:** The Buchan Group**Structural Engineer:** Van der Meer Bonser**Project Manager:** Walker Corporation**Builder:** Walker Group Constructions**Steel Fabricator:** National Engineering, ProFab Industries, Torresan Engineering**Steel Detailer:** Cad Tech SA

Rhodes Waterside is the latest model of the creative and cost efficient steel solution. Located on the banks of the scenic Parramatta River, Rhodes Waterside has fast become the new business and entertainment hub for Western Sydney.

Rhodes Waterside was established at a cost of \$150 million and covers an area of 50 000 square metres, dwarfing many other shopping complexes. The shopping centre is part of a large complex that provides the usual retail amenities but also the services which sustain growth, such as medical services, business offices, restaurants and a cinema complex.

Just over 8000 tonnes of structural steel went into the project which was constructed over 15 months from September 2003 opening on 2 December 2004.

Time, cost and flexibility were the drivers to build in steel and supplying a major \$150 million shopping centre in 15 months is a significant accomplishment. "We could never have done it using other materials. It would have added another six months," said David Gallant, Walker Corporation's Project Director of Rhodes.

Steel's flexibility made it possible to accommodate changes late into the project's construction phase without significant cost or time penalties. One substantial change was made only a month prior to opening when the position of an escalator penetration was relocated without delaying the project or compromising on aesthetics.

Paul Malone, the principal architect with The Buchan Group who executed the

master plan said "you can get interesting shapes in steel and it's attractive as people are looking for lighter, slender looks."

"The principles for a good retail environment are that it should be friendly, well anchored, have good lines of sight, be well lit by natural light, have excitement, and achieved a measure of scale. All of these principles can be realised in steel," he concluded.

Designed as a braced frame with composite floor slabs, the structure has vertical bracing for stability, wind and earthquake loads. The bracing is in the form of inverted V braces from OneSteel 300PLUS® universal column sections which range from 150UC to 310UC.

The composite floor slabs were formed with Fielders Kingflor decking. Trapezoidal decking, 1.00 millimetre, KF70, was used in the carpark and retail areas which allowed secondary beams to be spaced up to 3.4 metres apart. In areas of high shear load, such as the warehouse, loading docks and roadways the decking was 1.00 millimetre KF57.

The use of steel in the Rhodes project ensured a successful outcome. Steel can be integrated into any building project to see a benefit return. Key benefits of steel include greater architectural freedom, lower comparative cost, significantly faster and more efficient construction, design flexibility, greater site safety and administration and a future-proofed investment.

The achievement of Rhodes was that steel delivered a cost competitive solution while allowing the Walker Corporation to accommodate the varying needs of a diverse group of stakeholders.

For a full project article please refer to: Steel Australia Volume Number 1, June 2005
Also available at:
www.beyond2.com.au



AUSTRALIAN STEEL INSTITUTE

