



*The biggest challenge for this project were the complex geometric dimensions through three different levels. Using the 3D laser scanner with the RTS total station we were able to produce an accurate existing model to overcome this challenge. The result being that the project was delivered a week ahead the construction schedule with zero rectification works.*

**Ben Yu, BIM Manager/Project Manager, Watkins Steel**

*Working with Watkins Steel, I could be rest assured knowing that all structural steel would be delivered and installed within the construction time-frame. Watkins steel have always exceeded my expectations and are always proactive in design issues and problem solving to ensure the desired outcome is achieved. I would definitely recommend Watkins Steel in the future because I know they have the best people to take care of the job.*

**Michael Dykes, Project Manager, Shape Group**

Watkins Steel was contracted by Shape Group to supply and install steelwork as part of the refurbishment of the Qantas Premium Lounge at Brisbane International Airport. The job required structural steel for lift shaft support, stairs, landings and support beams.



## QANTAS PREMIUM LOUNGE SUCCESS STORY

### Challenges

- The project consisted of complex geometric dimensions across three levels, making it difficult to access all areas to take measurements.
- Access was very restricted, with only one set of double doors providing entry to the site.
- With no cranes on site, all steel supports and equipment had to be manhandled through the limited access and beams were welded on site, providing for a difficult installation process.
- Given the tight construction time-frame, Watkins Steel needed to ensure accuracy in fabrication to minimise rectification works that would hold up other trades.

### Solution

- Site measurement was completed using the **Faro Focus 3D X 130 Laser Scanner**. These scans were loaded into software to digitally re-create a '3D point cloud' model with exact measurements.
- The in-house drafting team used **Telka Structures 3D Modeling Software** to detail the structural steelwork needed for the project. Once these drawings were done, the completed Telka models were imported into the '3D point cloud model' to check for any clashes and verify that the steelwork was in the right position. This avoided clashes with ducting during the project and ensured the lift shaft hole in conjunction with the steel were in the correct position.
- From there, the construction drawings and model were taken to the in-house production team to handle the processing and fabrication of the steelworks using the **Voortman V808 Coping Machine**. Approximately 10 tonnes of steel was processed by the Voortman, saving 80 hours in fabrication time.
- Using the **Trimble RTS773 Total Station** all mark-out points for the steel beams were set out on site. This was beneficial to the tight construction time-frame, saving two days on installation.
- The total **4 Stage Linked Process** (4SLP) allowed the project to be completed ahead of schedule.

### Benefits



**Guaranteed 100% accuracy of site measurements** using the laser scanner. All measurements were exact and could be linked to the drawings



**Site measurement took 1 day-** Saving 3 days and multiple visits.



**Reduced fabrication time.** Using the Voortman V808 machine, 10 tonnes of steel was processed - saving 80 hours.



**Guaranteed 100% accuracy of site markouts with the Total Station.** Saved 2 days on installation with no rectification required.



**4 Stage Linked Process** allowed the project to be completed 1.5 weeks ahead of schedule

**Make your project a success with the Watkins Steel difference. Contact the Watkins team today.**