

Downer & BIM

BIM – Contractor Perspective

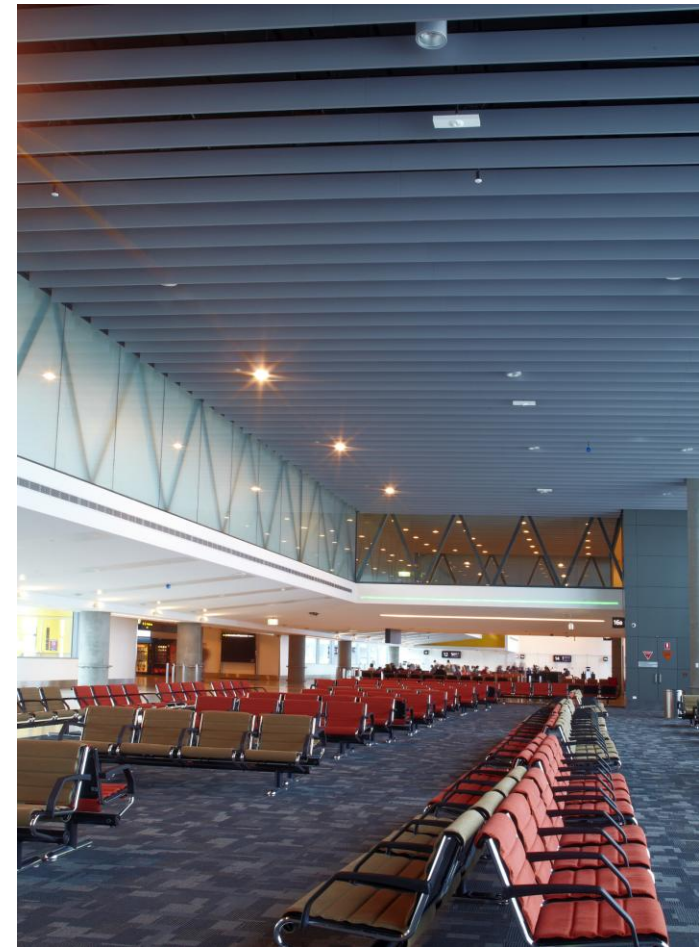
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Benefits of BIM

Downer has a long history of innovation and leadership across a number of sectors within the building and engineering industry.

Downer is already seeing the benefits of a BIM project:

- Accuracy in design and subsequent services drawings
- Improved coordination
- Reduction in on site clashes and disputation
- Ability to easily link the site to the field
- Efficient site set out
- Efficient installation
- Ability to fabricate more components offsite
- Ease of gathering *as installed* information
- Safer installation techniques



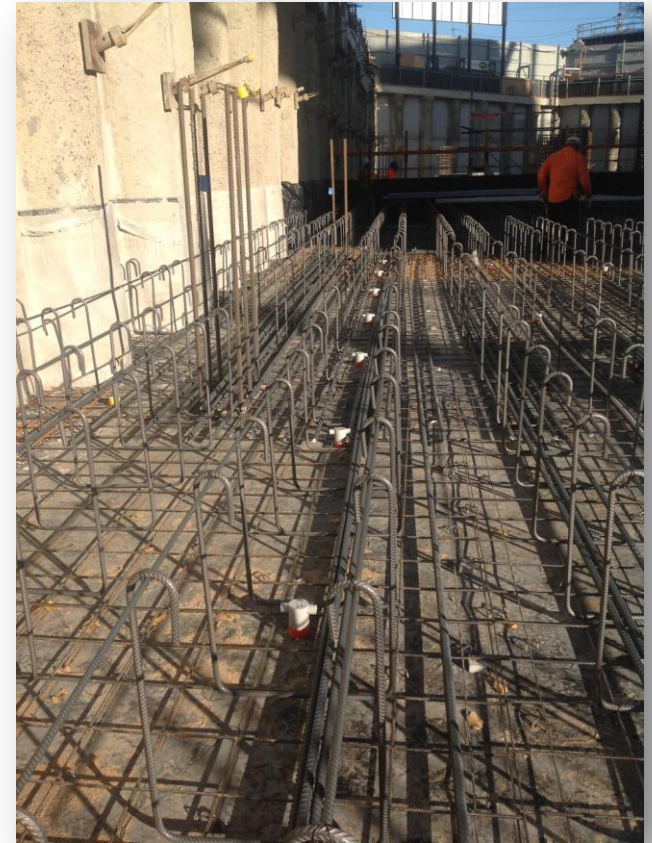
Collaboration Reduces Cost

Modeling of these projects requires:

- Collaborative and disciplined approach, led by the client and supported by all parties
- Strong BIM Implementation Plan and Project BIM Management
- Disciplined uploads by all parties
- Embracing new technologies

This has led to:

- Reduced site meetings
- Reduction in on site “collisions and clashes”
- Reduction in re-works and material wastage
- Scheduling and planning accuracy



BIM in the Field

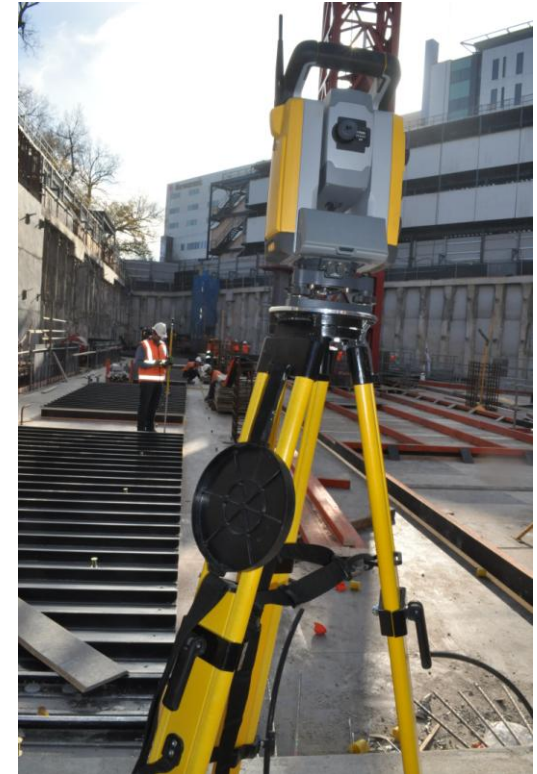
Adopting BIM in the field has reduced the need for us to use grid lines or tape measures – last thing anyone needs on a busy deck.

BIM has seamlessly enabled the transfer of information from the office to the field to enable set out by one person.

Currently we are utilising a “Trimble RTS” and “Trimble Hand Held Controller” to set out our in pour conduits and cable tray hangers with increased efficiency and accuracy.

The utilisation of in pour fixings has reduced our set out and installation time. We are doing more of our work on the slab rather than under the slab.

On site information is easily gathered and uploaded from the field back to the office to create accurate as built information.

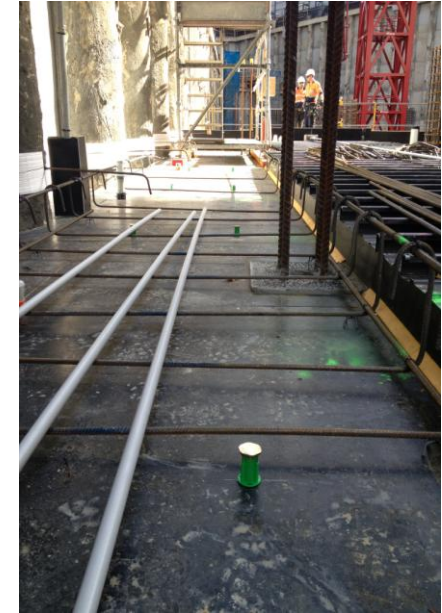


Safety

Downer has a very strong commitment to safety and continues to seek safer ways to execute our works.

Wherever possible we look at ways to reduce our exposure to:

- Working at heights
- Drilling into concrete
- Working above our head



“Trimble” products have enabled Downer to mitigate exposure for our employees, whilst working efficiently.

Additionally the utilisation of BIM has assisted with safety in design by allowing Downer to verify and prove, during the shop drawing process.

Learning's and Moving Forward

Learning's

- A positive shift in the way a project is executed
- Greater accuracy with material quantification, especially during revisions
- Greater accuracy with site measurements
- Accuracy with shop drawings leading to clashes and coordination being resolved in the virtual world.

Moving Forward – what do we want to start doing in the short term

- Need for suppliers to establish BIM data
- Establishment of operation and maintenance manuals within BIM
- More off site fabrication
- Better utilisation of 4D

