



# Erection, Transport & Safety Made Easy



## CRISP BROS HAYWARDS

“Tekla was also a benefit in obtaining weights for each truss section assembly, for transportation and crane purpose.”

- Jon Edmunds, Draftsman, Crisp Bros Haywards

### Solutions



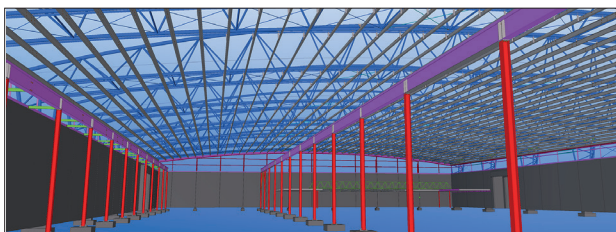
► Tekla Structures





# Erection, transport & safety MADE EASY WITH BIM

The Transend Primary Equipment Store has an area of 5,100m<sup>2</sup>, and is specially designed to provide an internal space free of support structures. To accommodate this, the roof is supported from above by external triangular pipe trusses and columns. This is a simple, yet innovative, design which allows for future extension. Crisp Bros Haywards worked as the steel detailer and steel fabricator on this job. Work began in January 2009. Steelwork was on site in April 2009 and the project was complete in September 2009. The job involved a total of 103 drafting hours for one draftsman. The unusual roof structure created three challenges for the project: erection sequencing, truss length, and how to clad the roof.



## ERECTION SEQUENCING

The use of 3D building information modelling allowed Crisp Bros Haywards to consider the erection sequence before reaching the construction stage. Erection holes were included with connection data in the modelling stage to assist in the erection. Then, the team used the Tekla 3D model to liaise with the site erection manager, allowing an efficient exchange of information.

## TRUSS LENGTH

The main curved trusses are 58m long and had to be split due to pipe material lengths and transportation requirements. To combat this, splice locations were positioned to suit steel lengths available during the modelling phase.

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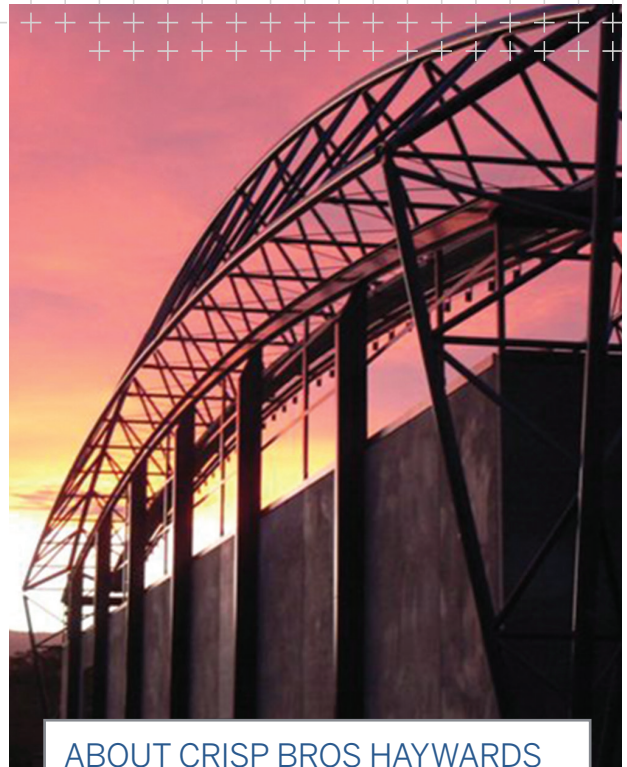
## CLADDING THE ROOF

The roof being supported by external triangular pipe trusses and columns required creative thinking, as the roof purlins are supported from above - outside the roof. Exports from Tekla made the consultation process with the roofing contractors easy.

“Being able to send 3D views and snapshots to the roofing contractors, we were able to help them in coming up with a solution for the roof cladding issues.

The roof was actually clad, under the trusses, while they were still on the ground. This made the job a lot safer.”

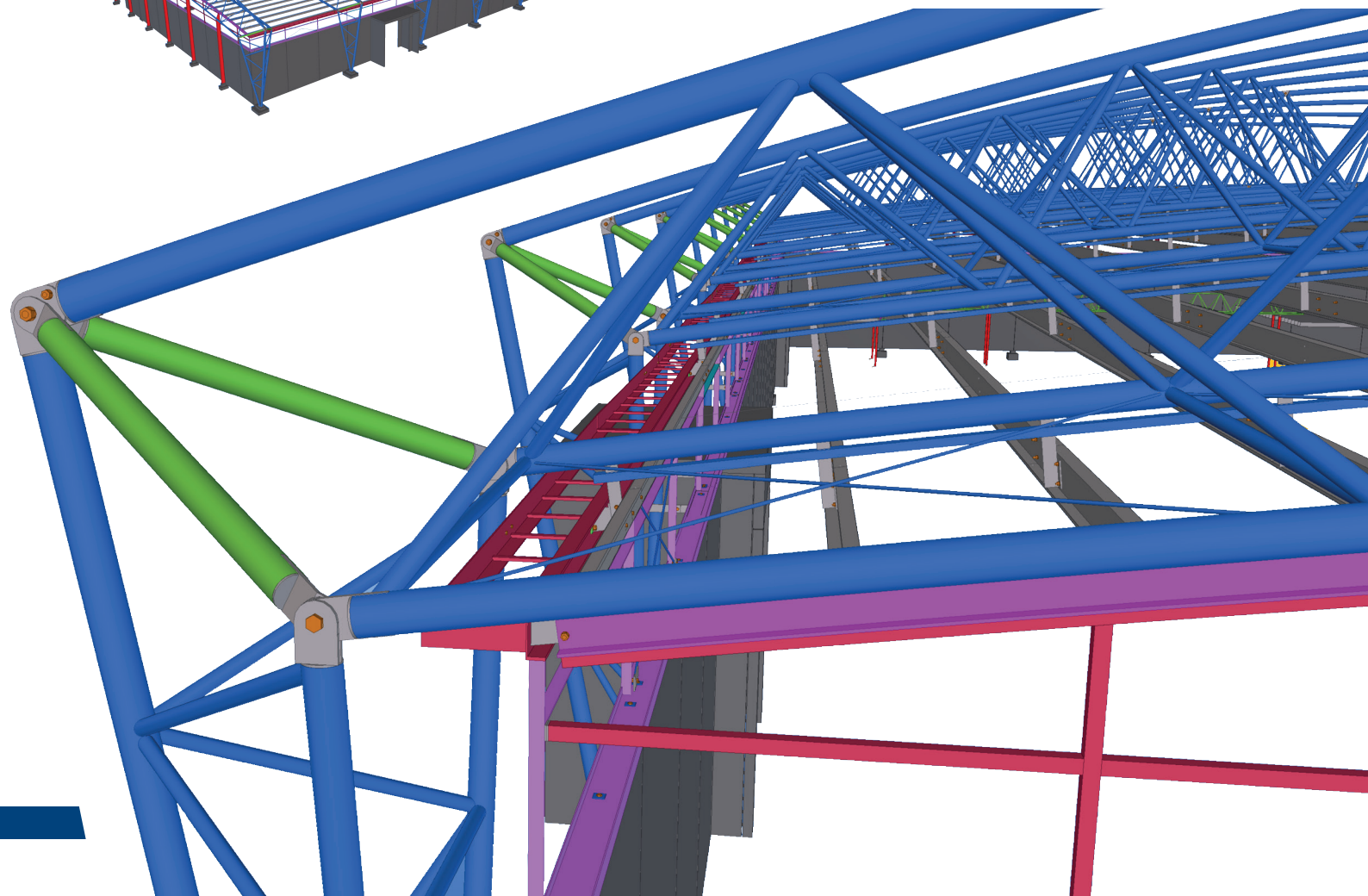
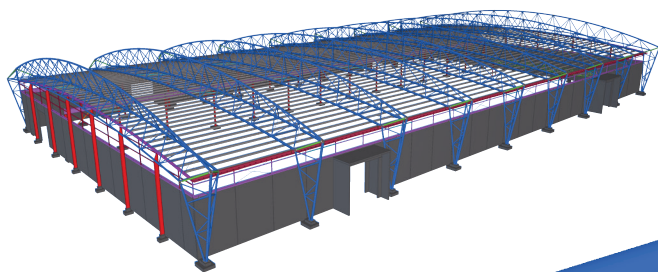
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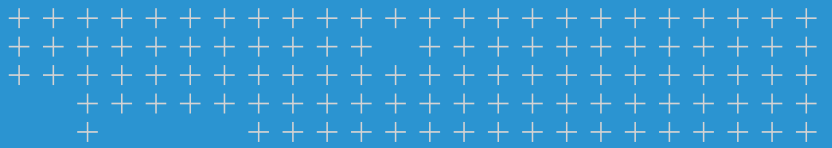


### ABOUT CRISP BROS HAYWARDS

Crisp Bros Haywards is a premier steel fabrication and engineering company, based in Tasmania.

[www.haywards-steel.com](http://www.haywards-steel.com)





# Together we are shaping a smarter future for construction

## TEKLA SOFTWARE BY TRIMBLE

Trimble is a technology company with a vision of transforming the way the world works. Trimble's construction offering ranges from total stations to advanced software, giving the industry tools to transform planning, design, construction and operation of buildings. The company also has products for trades like logistics and agriculture.

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In addition to Tekla, Trimble Buildings brands include names like SketchUp and Manhattan Software, targeting architects, engineers, fabricators, MEP contractors, general contractors and construction managers, and building owners. The software solutions promote constructible models and collaboration. Trimble Buildings offering blend groundbreaking innovations and practical features, helping the industry achieve transformative results.



## TEKLA SOLUTIONS

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- ▶ **Tekla Structures** is the most developed Building Information Modelling software on the market. It makes accurate, constructible modelling of any structure possible.
- ▶ **Tekla Structural Designer** gives engineers the power to analyse and design buildings efficiently and profitably.
- ▶ **Tekla Tedds** automates repetitive structural calculations.
- ▶ **Tekla BIMsight** is a free professional tool for construction project collaboration allowing anyone combine models, check for clashes and share information.
- ▶ **Tekla Field3D** is an easy-to-use 3D tool for utilising Building Information Models on mobile devices.



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