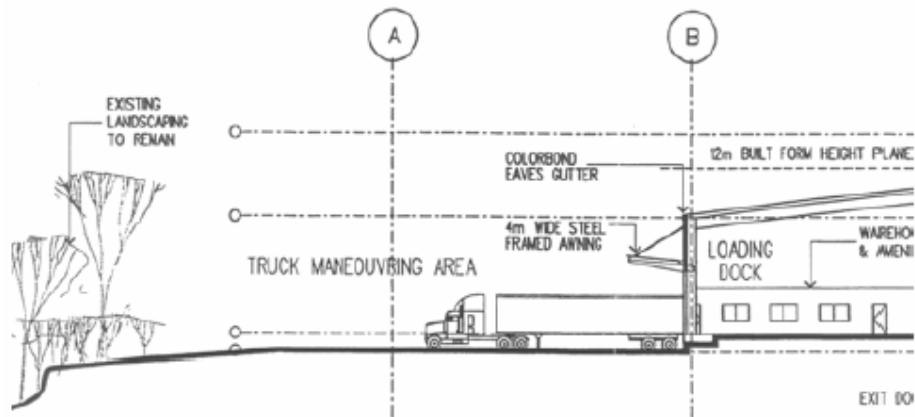




Environmental  
ESD  
Air  
Power  
Noise  
Structure

Making the difficult, simple

Project: Pharmaceutical Warehouse



Description:

Construction of this project was completed in 2002 and comprises a purpose built warehouse to store pharmaceutical products. Given the sensitivity of the products and minimum industry standards on product storage this project called for stable internal conditions throughout the warehouse. In particular the vertical temperature gradients needed to be maintained.

Tools and Methodology:

The success of this project relied upon exhaustive evaluation of building construction techniques and fabric analysis to minimise internal room, temperatures and gradients. This analysis resulted in various fabric selections, construction sealing requirements and minimisation of thermal bridging. Computational Fluid Dynamics (CFD) and thermal analysis software were utilised for the above.

Air Conditioning:

The air conditioning design utilised CFD as a validation tool for this project.

Multiple options which were reviewed with various layouts and air flow rates until the optimum design was achieved. The final solution allowed for multiple roof top packaged air conditioning units supplying air via Trox Jet Diffusers.

Summary of Deliverables:

- Even air temperature distribution throughout warehouse
- Energy efficient design
- Construction advice

Diagram: Sample Results of CFD

