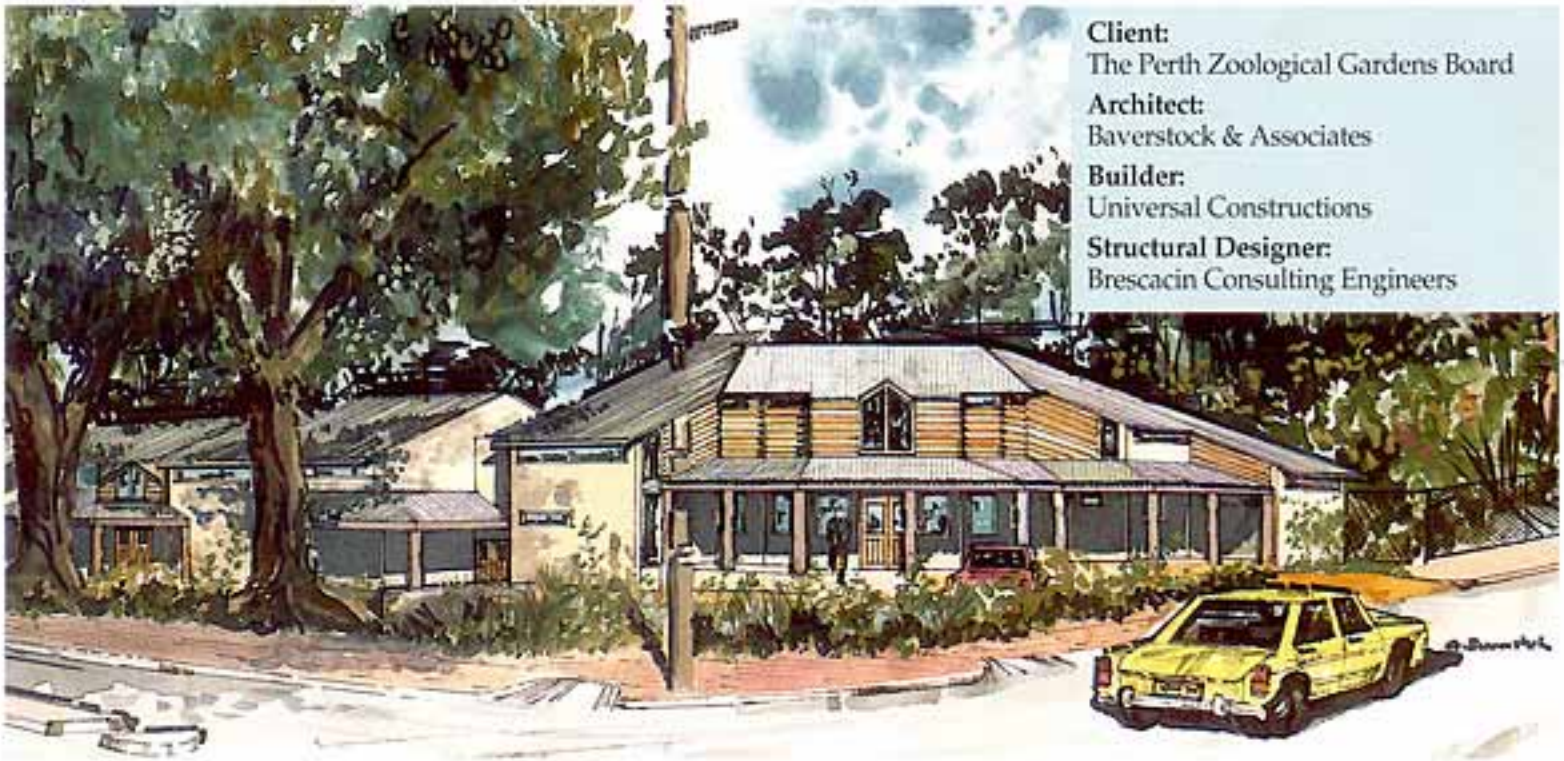
ENERGY EFFICIENT TILT-UP



Client:
The Perth Zoological Gardens Board

Architect:
Baverstock & Associates

Builder:
Universal Constructions

Structural Designer:
Brescacin Consulting Engineers

An energy efficient design incorporating the cost savings of tilt-up construction is a major feature of the new Perth Zoo Operations Building, incorporating offices, staff amenities and workshops. The building is now nearing completion at the corner of Angelo and Onslow Streets, South Perth. The client, The Perth Zoological Gardens Board was keen to restrict the recurrent energy costs involved in maintaining the building such as air conditioning, lighting and heating requirements. They were therefore looking at an energy efficient design. Architects Baverstock & Associates were awarded the commission to design, document and construct the building based on a track record of similar commissions for numerous public and private clients.

The design by Baverstock & Associates highlights the versatility of concrete. The thermal mass properties of concrete are utilised to store up to 2000 KJ/m^3/°C of energy. This achieves a significant reduction in projected long term energy demand. The projected reduction in energy costs are from an estimated high of \$30/m^2 pa. for a normal commercial building down to a low of \$8-\$10/m^2 pa in this design.

In addition the tilt up construction was used to achieve significant short-term benefits including cost savings and speed-up in the construction program. This highlights that where energy efficient design is incorporated with the flexibility of tilt-up construction, concrete provides the compound benefits of short and long term cost savings – a win-win situation for builder and owner. For further information, please contact the C&CAA WA on 321 5102.