



# A unique centre for automotive learning

The Kangan Institute Automotive Centre of Excellence (ACE) is being constructed in four stages.

The ACE will consolidate all of Kangan Institute's automotive training on one site which, together with new state-of-the-art technology and equipment, will ensure that it is a unique centre of automotive learning, research and development.

The first stage of the new multi-million dollar ACE commenced on September 13, 2006.

Stage One houses the Automotive Body Trades training group: panel beating, vehicle bodymaking, spray painting, automotive detailing, Certificate II pre-apprenticeship programme and components of the automotive diploma programme. It also contains staff and student amenities, a café, customer service centre and a separate workshop for the Fox Group. The building has achieved a 5-star energy rating and includes major innovative sustainable and environmental design

principles and components, including some elements have been used for the first time in Australia.

## Stage Two

The ACE Stage 2 project has been an architecturally challenging project. The design team has taken into account the existence of the ACE Stage 1, which is why the façade has been re-clad with a more durable and aesthetically pleasing surface to reduce maintenance.

The new cladding is identical to that chosen for ACE Stage 2 so when complete, both stages will appear as one.

The ACE Stage 2 building has been uniquely designed to enable the remainder of group programmes such as heavy and light vehicle, marine, outdoor power equipment and auto electrical to be delivered in 2011 from the state-of-the-art facility.

The building comprises four levels:

### Ground floor

Truck and coach chassis active dynamometer, an all-wheel-drive active chassis dynamometer, a brake test stand, a motorcycle dynamometer and an engine test cell. Provision has also been made for emission testing of all vehicle types which will complement the normal dynamometer tests.

Along with this specialist equipment, the ground floor will provide workshop space for training in steering, suspension, wheels, brakes, hydraulics, pneumatics, auto parts, light engines and heavy vehicles. An additional stand-alone workshop is also being provided for use by any interested industry partner.

### First Floor

Provides seven general purpose classrooms, a quiet study area/library, student lounge, security office, trimming workshop, toilets, showers and lockers.

### Second Floor

Comprises various mechanical workshops dedicated principally to auto electrical, air conditioning, engines, transmissions and fuels, with all of these areas having access to adjacent classrooms. To service the needs of the automotive industry, approximately 800m<sup>2</sup> of workshop/open space will be established for either casual or permanent use by industry partners.

### Third Floor

Offers accommodation and amenities for some 130 staff and includes an external 'green roof' which will comprise timber decking and drought-tolerant plants. This external area will also be made available for industry partners for functions or to complement workshop activities being held on the second-floor workshops.

The key activity on site is the erection of the top floor structural steel framework, which will enable the builder to install the roofing and thereby provide waterproofing to all floors. Periods of heavy rain over recent weeks have been disruptive, but every effort is being made to make up time to allow the expected completion date to remain as September 2011.

Over the last few months work commenced on a number of installations including passenger and goods lifts, fire sprinkler systems, air conditioning, ventilation duct work, electrical and communication cable trays, supports for acoustic ceiling panels, some glazing and numerous internal block work walls.

Heavy mechanical plant items such as air-cooled chiller units, air handling units, boilers, pumps and exhaust emission associated fan units are also in place.

The project was a great opportunity for Nordic Elevators Pty Ltd to



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work with a well known and respected builder such as Probuild. The project also provided an opportunity to show the all-round capability of Nordic Elevators, and the ability to provide standard and non-standard packages.

The lift package consisted of a 1.6m/s MRL gearless traction lift, a large hydraulic lift and a service lift for transportation of materials only. Nordic Elevators has the ability to provide a solution for all three types of lifts through quality European suppliers.

Instead of Probuild possibly engaging two or possibly three lift firms to complete this project, Nordic Elevators provided the complete solution for Probuild and thus, a more efficient lift package and service long term.

Stage 2 has been designed to embody the same ecologically-sustainable design initiatives as Stage 1.

Over the next few months, the builder's main focus is the installation of all roofing materials in conjunction with the building's complex façade framework and cladding.

The excavation and construction of the fifth underground water tank will complete the rainwater harvesting system, which will provide storage for 300,000 litres of rainwater.

This water will be used to flush toilets, operate a carwash and provide the source of cooling and heating of ceiling and floor slabs via a complex hydronic pipe system embedded within most slabs.

#### **Stages Three and Four**

Kangan Institute has completed a preferred developer selection process for the delivery of the ACE Stage 3 development and it is projected that upon the completion of the ACE Stage 2 project, work on Stage 3 will be imminent.

ACE Stage Four involves development of the narrow wedge of land north of the extension of Collins Street and extending to Bourke Street.

**Developer:** Kangan Institute

**Builder:** Probuild

**Architect:** Gray Puksand