

Waiariki's School of Forestry

## Wood testing laboratory – Waipa campus

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**W**aiariki Institute of Technology proudly unveiled three new significant investments at its Waipa campus sawmill and training facilities.

In the last year, \$2.2 million has been spent on development and new equipment, the first significant reinvestment there since the sawmill was built in 1995.

The new Engineered Wood Products Laboratory was opened on September 5 by the Honourable Todd McClay, Minister of Parliament for Rotorua. Also opened was the Wood Waste Gasification unit, and the John Deere E-Series harvester and forwarder simulator was unveiled.

For many years Waipa, formerly the Timber Industry Training Centre, has been the home of timber machining and saw doctoring training in New Zealand. This development is a major milestone for Waiariki, the Waipa site, and the wood processing industry as the new lab will extend the teaching capabilities and the hands-on training possibilities available to students.

This site is located just outside Rotorua's city limits, a five-minute drive from the institute's main campus, Mokoia, where the National Centre of Excellence for the Forest and Wood Industry is located.

Sustainability and flexibility were foremost in the minds of the architects when designing the building which is an entirely wooden structure, and takes advantage of passive solar heating and the use of sustainable materials.

The building will be used for teaching and developing skills in relation to the manufacturing of LVL timber and other engineered wood products. Students will now be able to undertake training in finger jointing, timber optimisation, production of laminated timbers and beams and quality manufacturing processes.

The building features three distinct areas. The teaching and administration is the formal area of the building. The classrooms are wide, spacious and versatile, and feature large windows to capture all-day sun. A computer suite for student use will be completed in early 2012.

The second and most significant area of the



building is the engineered wood product workshop or lab. After extensive stakeholder engagement and feedback, Waiariki's School of Forestry and Primary Industries sourced and purchased industry standard equipment to fit out the workshop. Such equipment includes a Weinig Dimter Opticut S50, a machine that allows operators to cut out the defects from timber and maximise the recovery and value of each piece during processing, as well as supply a range of graded blocks to the finger jointer. A new six-metre laminating press allows for the production of small amounts of glulam beams for research and teaching critical skills to students.

Another significant addition to the workshop is an automated STFE wood strength tester from Calibre Equipment. The machine will provide the ultimate test of the students' work.

The timber and glue testing laboratory is the final significant aspect of the building. Students will be able to test various types and mixes of glue and timber bond properties, assess the relevant applications and suitability of different products, and understand the impact of drying times, glue handling, timber suitability and the effect on final product performance.