TIMBER Technology

Forest Products Commission WESTERN AUSTRALIA

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Coming up rosy with E.saligna

What species would make your top ten plantation hardwoods for south-west WA? Very few people would leave Sydney blue gum (*Eucalyptus saligna*) off the list and for many it would be in the top three. The trees grow straight and fast on a wide range of sites and rainfall zones and produce attractive pink heartwood.

So the opportunity to mill fifteen high-pruned trees was too good to pass up. The trees were only twenty years old, but were grown widely spaced on a good site south-east of Collie, and had reached an average diameter of 43 cm. Due to early pruning of branches below 6 metres, the trees had grown a lot of clear wood around a small knotty core.

Each bole was cut into three 2.2 metre lengths - suitable for most furniture and joinery uses - and each log was sawn to maximise the yield of 40 mm thick boards 150 mm or wider.

Saligna boards after milling.

The timber was dried and skip-dressed and will be graded before being made into fine furniture.

Contact Ian Rotheram or Steve Davis on (08) 9729 1913 or email timbtech@fpc.wa.gov.au if you want to be kept advised on the results of the trial.

Growing trees for profit

Commercial trees have a crucial role in more productive and sustainable farming. The New Eucalypt Sawlog Industry (NESI) is looking for landowners to provide land in exchange for up-front incentive payments and a share of the timber crop at harvest time.

In the early stages, the scheme will be centred on the lower rainfall areas of the water resource recovery catchments the Collie, Warren/Tone and Kent River catchments. For further information or a free appraisal of growing eucalypt sawlogs on your land, please contact Mike Buckton on (08) 9725 5248 or email michaelb@fpc.wa.gov.au.

Sheep grazing beneath saligna trees grown for sawlogs.

Inside this issue

Cooperative Research Centre project leader visits Perth

David Gardner from State Forests NSW is leader of the Life Cycle Analysis project to determine the amount of carbon stored in timber buildings in comparison to other buildings. He visited WA in late November to meet with Martin Beel (our research scientist), who is working with him on the project.

A life cycle analysis (LCA) typically assesses the environmental impact of something over its entire life. In the case of a building product this includes production, fabrication, use and disposal impacts. LCAs are being increasingly used as a design tool in the building industry and examples can be seen at www.athenasmi.ca and other web sites.

During the visit David took the opportunity to present early findings from the study to managers and staff at the Department of Conservation and Land Management and the Forest Products Commission. He also presented the findings to members of the Leschenault Timber Industry Club (Hoo Hoo) in Bunbury.

David surprised his audiences with photographs of newspaper and magazine sheets in good condition that were excavated from rubbish dumps 30 years after burial. Timber products that were excavated were in equally good condition. Past assumptions that wood products deteriorate rapidly upon burial and carbon is returned to the biosphere fairly quickly are now being reconsidered and the project has caught the attention of waste managers.

David and Martin also met with local brick and cement manufacturers during the visit to discuss sharing life cycle data.

For more information contact Martin Beel on (08) 9729 1913 or email martinb@fpc.wa.gov.au.

Rubbish tip excavation.

Drilling for moisture

A resistance meter attached to a hammer probe is a quick, reliable method for measuring the moisture content of timber. However, commercial WA hardwood species are dense in comparison to many other species, and substantial effort is required to drive the pins on a hammer probe into these timbers.

Pin damage is common and replacements are expensive, while the probe itself requires regular servicing and repair.

To address these issues, Timber Technology has developed a twin drill moisture probe. Operation of the device is quick and simple, pin damage is minimal and servicing and repairs are significantly reduced. The drill is currently being trialled at Harvey and two sawmills in the south-west. If you're interested in knowing more contact Martin Beel on (08) 9729 1913 or email martinb@fpc.wa.gov.au.

New timber flooring Standard

Two new Standards Australia drafts (DR99463 and DR99464) were released for public comment. The first draft will become AS4876.1 *Timber Flooring. Part 1. Installation*, and supersedes the already withdrawn AS1262-1972 and AS CA31-1960. It proposes methods for installation of timber floors, including strip or overlay flooring and parquet.

Requirements are given for preparing substrates and flooring bases, and for installing floating floors. Methods for determining moisture levels in concrete slabs are given in an Appendix. Information is included on specification, acclimatising and conditioning the timber, choice of moisture barriers, and laying parquet on heated concrete slabs.

The second draft will become AS4876.2. *Timber flooring. Part 2. Sanding and finishing*, and supersedes part of AS CA39-1963 and AS CA39 Supp 1-1974. It discusses requirements for sanding and finishing timber floors.
Information is included for specifiers on problems of assessing equilibrium moisture content, on assessing the quality of the work, and on types of coating systems available.

For more information contact Graeme Siemon on (08) 9475 8810 or email graemes@fpc.wa.gov.au.

Did you know?

Draft Australian/New Zealand Standard 'Timber-Assessment of drying quality' is now officially AS/NZS 4787:2001.

The purpose of the Standard is to enable producers, suppliers and purchasers of dried timber products to assess the drying quality of their dry timber.

It describes drying quality classes and details sampling methods for testing products to establish compliance. The web site address for standards is **www.standards.com.au.**

Steve Dawis and Justine Murphy in the Wood Properties Lab

Comparison of backsawn and quartersawn karri

Backsawn timber has an attractive figure, bows rather than springs (which can often can be straightened in service), and dries more quickly than quartersawn timber. Unfortunately back sawn timber is prone to face checking, which causes significant downgrade in value added use.

Quartersawn timber, on the other hand, has a less attractive figure, springs rather than bows (which usually cannot be straightened in service), dries more slowly than backsawn timber, but suffers less face checking (and width shrinkage) than its backsawn equivalent, and therefore dry recovery is improved.

As a basis for evaluating whether the benefit of quartersawing karri may outweigh the drawbacks, a mixed bundle of 150 x 38 mm back and quartersawn timber was dried at Timber Technology and the drying characteristics of shrinkage, spring, bow, cupping and surface checking were quantified.

The trial confirmed that the backsawn timber shrank, checked and cupped more on the face than did the quartersawn timber. On a more positive note it also confirmed that the backsawn timber sprang and shrank less in thickness than the quartersawn timber.

The results showed no differences in dried dressed recoveries between the different sawing patterns, presumably because of the combined effects of the above factors.

Surprisingly, the trial showed that timber from both sawing patterns dried at the same rate, when backsawn timber would be expected to dry faster than quartersawn timber.

For more information contact Martin Beel on (08) 9729 1913 or email martinb@fpc.wa.gov.au

Promoting value adding through technical consultancy

Some of our time at Timber Technology is used to conduct research for customers who are developing new forest products.

The research is varied and has recently included assessing the value adding potential of native hybrids and exotic plantation species, assessing the stability of plantation softwood and hardwood structural timber products, chipping timber for pulp assessments and assessing the performance of timber flooring products both in the laboratory and in-service.

We have a reticulated log yard, reticulated sheds for holding green timber, log sawing and chipping facilities, kilns, humidity chambers, wood machining and finishing facilities and a wood properties laboratory.

Our staff are competent in their respective roles and between them have a long history in the timber industry. We have access to international wood science databases and we are networked locally and nationally.

For commercial customers we can negotiate confidentiality terms dependent on the customers needs on a case by case basis.

Please contact Martin Beel on (08) 9729 1913 or email martinb@fpc.wa.go.au if you have a project we can assist you with.

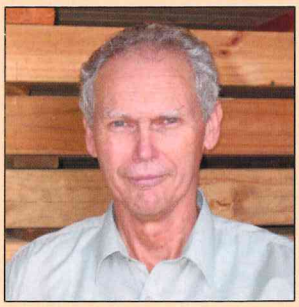
Interesting web sites

When you're surfing the Net, you might like to check out this site.

Learn about the process of extracting Sandalwood oil and the manufacture of body care products, therapeutics and perfumes when you visit their site. **http://www.mtromance.com.au**

Trees working for farmers, community and catchment. Updates on the 2002 Agroforestry Expo **http://agroforestry.progressrural.wa.gov.au**

Staff Profiles



Dr Graeme Siemon

Graeme is our Timber Scientist who has worked for the Forests Dept., the Department of Conservation and Land Management and now FPC for 21 years. Originally from Queensland, Graeme brought his family to Busselton where he managed the research centre working in pine silviculture and timber utilisation.

Eventually he moved to Perth where he has specialised in wood properties, identification and timber utilisation. Graeme is a bundle of knowledge and regularly advises senior FPC staff, other government departments, industry and the general public. His considerable experience in research & development is a valuable asset to us all.

Brian servicing Timber Technology's boiler.

Brian Haines

A qualified carpenter and welder, Brian can put his hand to a wide variety of tasks. He is the overseer at Timber Technology where he has worked for nine years.

Brian maintains and fixes all our machinery, he has built many of our structures and plays a leading role in our commercial activities.

Bluegum gets a hammering

In conjunction with Auswest Timbers a trial was established to test 50 x 25 mm freshly sawn bluegum tile battens supplied from their Busselton mill.

A small tiled roof was erected (see photograph) and the battens secured in the same manner as they would be in a conventional building. After eight months the bluegum battens have come through with flying colours. Very little movement has occurred and the structure has remained stable.

For more information contact Steve Davis on (08) 9729 1913 or email stevenda@fpc.wa.gov.au.

Blue gum batten trial at Timber Technology.

Agroforestry Expo

Jot down Sunday 13th October in your diary for your attendance at the 2002 Agroforestry Expo at Mt Barker. There will be a range of guest speakers, field tours and demonstrations as well as information on tree farming and value adding.

Please contact FPC Timber Technology on (08) 9729 1913 or email timbertech@fpc.wa.gov.au

Field Day

Timber Technology will be running a field day on Friday 1st November at their Harvey facilities. All those interested in value adding, drying and processing farm trees are invited to attend.

For more information contact Ian Rotheram on (08) 9729 1913 or email ianr@fpc.wa.gov.au

If you have any queries regarding our newsletter please contact FPC Timber Technology Centre.
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