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TIMBER Technology



FOREST PRODUCTS DIVISION

Issue 1 Spring/Summer 2000

Welcome from the Minister

Welcome to the first issue of the Forest Products Division's Timber Technology newsletter. Our aim is to keep interested groups informed on the Centre's activities with the hope of improving communication and co-operation. We hope to promote the collaboration of efficient, sustainable and competitive forest based industries that add increased value to timber resources in Western Australia. The newsletter will be published twice a year.



Who are we, what do we do and where can you find us?

Timber Technology is funded and directed by Government to 'support the development of products and processes that motivate the industry to use WA timbers in higher value products' (from our Strategic Plan).

Every project we undertake is chosen in light of this strategy. Currently, our focus is to help industry adapt to the requirements of the Regional Forest Agreement. Particularly, on adding value to WA's plantation, regrowth and arid timber resources, as well as to wood from mature native hardwood forests.

Timber Technology carries out research in the fields of sawing, drying, manufacturing and marketing wood products. Our research findings are published (a full

list is available), and we answer enquiries and conduct training to spread our knowledge within industry.

We network and share information with other R&D organisations, and from time to time conduct research on a collaborative basis. We endeavour to work closely with industry and encourage industry research partners.

You'll find us by turning off the South Western Highway into Weir Road, Harvey (the eastern side of the Highway, towards the hills), and travelling approximately 1km before turning right at our Timber Technology signs.

There are 12 staff at Timber Technology and in each issue we'll gradually introduce ourselves. Turn to the back page for the first of our introductions.



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New contact numbers for the Forest

Products Division

Rivervale	(08) 9475 8888
Bunbury	(08) 9725 5288
Harvey	(08) 9729 2888
Nannup	(08) 9756 1888
Manjimup	(08) 9777 0988

PAM00916

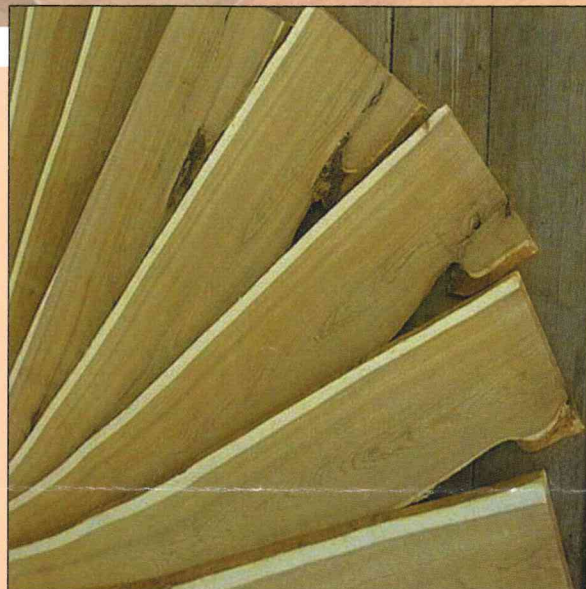
Aromatic sensation

Sandalwood is renowned for its fragrant timber. As a key ingredient in the manufacture of incense WA sandalwood (*Santalum spicatum*) has been exported for more than 150 years. While the sandalwood industry provides approximately \$10 million of export revenue, the Forest Products Division is actively researching alternative uses for sandalwood which will provide value-adding opportunities within WA.

Trials have been undertaken at Timber Technology to investigate the production of seasoned sandalwood blanks for use in the furniture and craft industries. To date, a proved seasoning regime has been developed in conjunction with sawmilling techniques that provide the optimum recovery from this valuable timber.

Finished blanks have been supplied to furniture manufacturers and crafts people to gather feedback and further information on uses and machining properties.

Indications are that sandalwood is suitable for smaller items and as an inlay, to complement or contrast other feature timbers. It is ideal for



incorporation into small boxes and as a lining or insert in drawers where its fragrant aroma provides an additional sensation along with the tactile and visual properties of the piece.

Further work will be carried out on the gluing properties of sandalwood, which may allow the development of larger 'panels' of sandalwood for use in larger items.

Timber drying courses

Timber Technology has educated approximately 150 people in a wide range of timber drying techniques. Topics include the theory of why timber is kiln-dried, kiln operation, drying schedules, instruments and the relationship between moisture content of timber and the surrounding atmosphere.

The course is very 'hands-on' and several site visits are included. We have recently completed the sixteenth drying course at Harvey. Course attendance is required for one day a week for seven weeks.

Contact Harvey TAFE on 9729 1403 to register your interest for the next available course.

Did you know?

The moisture content of glued components should be allowed to come to equilibrium, allowing more efficient gluing.

A machined surface will deteriorate with age, especially with hardwoods, so it is critical that gluing is carried out as soon after machining as possible.

Bole harvesting and utilisation project

CALM is promoting the sale of whole tree boles as a means of increasing the utilisation of wood from the native hardwood forest. Timber Technology has a prominent role in ongoing harvesting and utilisation trials to measure the quantity and quality of sawn products that can be cut from bole logs.

Can the current system of log sales be improved? Sawmillers now buy hardwood logs for the value-added products they can cut from them. The current log grades do not reflect the shorter lengths, the smaller cross sections and the greater use of feature in these value-added products. One solution is to sell the whole bole and let the buyer decide where best to cut the log.

A major bole harvesting and utilisation trial was carried out with CALM and the Forest Industries Federation WA Inc. Five sawmills participated in the trial which involved delivering 667 m³ of jarrah bole logs in ten parcels which were milled separately.

Readers interested in more details about the trial and ongoing research in the bole harvesting area can contact Mike Buckton at Forest Products Division, Rivervale on 9475 8888 or Ian Rotheram at Timber Technology on 9729 1913.

Interesting Web sites

When you're surfing the Net, you might like to check out these sites.

For information on various CALM activities try:
<http://calmweb.calm.wa.gov.au>

Timber Advisory Notes describing the wood properties of 17 species of Australian timbers:
<http://www.agric.wa.gov.au/programs/srd/farmforestry/TREENOTE7.HTM>

For a comprehensive outline of the Forest Heritage Centre at Dwellingup, their activities, a schedule of weekend workshops and fabulous examples of fine wood craftsmanship: <http://www.iinet.net.au/~fhc>

Thanks to Timber Technology

In 1933, the legendary cricketer Don Bradman planted two trees at Stirling House in North Fremantle: a tuart and a tuart hybrid. Originally a school site, it is now occupied by the Ministry of Justice.

When the tuart died last year, the North Fremantle Community Association contacted Timber Technology who milled, dried and dressed the timber ready for use in a memorable piece of fine furniture.

Machining properties

'Machining properties of jarrah, karri, marri and Tasmanian bluegum' is the first of a series of value-adding projects undertaken by Timber Technology. Using jarrah as a control, the aim was to determine whether traditional machining methods were adequate to machine karri, marri and bluegum.

Results of the project, which is nearing completion, will be presented in a written report. Other projects, using WA's native and plantation based resources, will include; sawing, drying, gluing and finishing.

If you're interested in the outcome of this project, feel free to phone or visit us at the Centre and talk to our helpful staff. Panels produced will also be on display.



Goldfields timber research

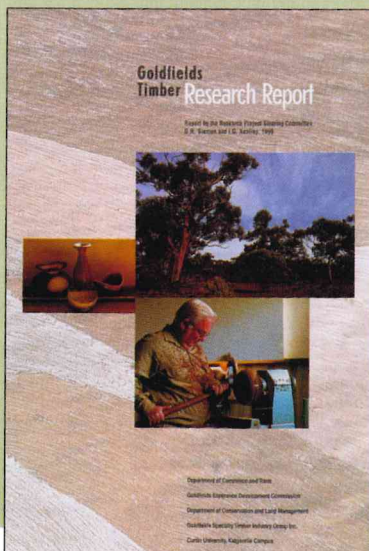
Due to the considerable economic potential in using Goldfields timbers for a range of specialty purposes and craftwood and very little available information, a Goldfields Timber Research Steering Committee was established in 1994 to oversee research and development projects.

The research projects included logging, sawmilling, drying, wood properties, general utilisation and processing, and marketing. Most of the woodland and forest species have an attractive colour, grain and figure, although they have very high densities and the timber is difficult to mill and dry.

The product is expensive because of the scattered nature of the resource and low yields per hectare make logging very specialised. Sawmilling and drying costs are also high because of the small sized logs and very high density timbers.

The unique features of these timbers should enable a range of small niche markets to be found, and encourage development of a Goldfields timber industry.

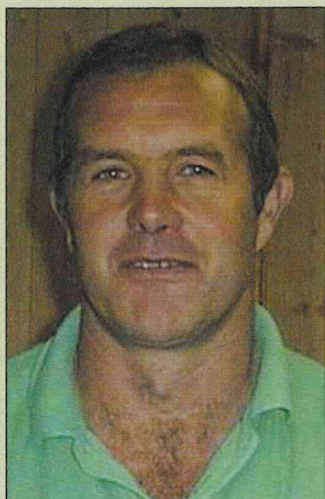
During the research project a variety of articles, newspaper reports and magazine stories were written for information, reporting and promotional purposes. A comprehensive 'Goldfields Timber Research Report' was published recently and is available from the Timber Technology Centre for \$20 including postage.



Staff profiles

Ian Rotheram

Ian is a professional forester who has worked for CALM and its predecessor the Forests Department since graduating in 1979. Ian explains, "Working in forest inventory and day to day harvesting operations has been helpful with some of the projects we get involved in at Timber Technology, but I've been on a steep learning curve since coming to Harvey in 1996."



Ian manages the Timber Technology Centre—a task made easier he says by his great team of staff. One of the many projects he has been involved in is the harvesting and utilising of bole logs. Another area that Ian enjoys is lecturing at Timber Technology's training courses (see page 2).



Emily Humble and Karen Carter

When you call or drop into the Timber Technology Centre, the first point of contact will be with either Emily or Karen. They job-share the Admin Officer's position and are only too willing to help with any enquiries you may have. They play a vital role in the every day running of the Centre and are valued members of our team.

Emily has been at the Centre for seven years. She is responsible for our invoices and account payments. Earlier in the year, Emily and her family spent two months visiting family and friends in South Africa.

Karen has been with us for three years and is taking a year off for the birth of her first child. She keeps us on our toes and has been instrumental in computerising our office systems. We wish her all the very best in her new role as Mum and hope that she survives the sleepless nights.

Having problems milling high density timbers?

When milling very hard timbers it's not unusual to see the tips of a circular saw bend or a band saw wandering shortly after sawing begins.

In fact, on species such as mulga, a fresh band could wander within 100 mm of cutting.

Here at Timber Technology, we have been experimenting with different blade settings on a portable Woodmizer bandsaw. If the hook angle is taken back to nine degrees and set to 24 degrees, a much better result is possible.

Mulga veneers were cut at 5 mm, with accuracy of cutting along the board of ± 0.5 mm and a smooth finished surface achieved. Expected cutting life of the band was approximately 30 minutes or 40 lm/band.

Interested in a range of different timbers?

Grant Pronk and Timber Technology have successfully run three timber auctions in the past 12 months. Species are variable and range from the south-west, wheatbelt, mid-west and arid timbers. Up to 25 species have been available including burls. Most supplies are obtained from salvage operations such as minesites, road verge clearings, etc.

The auction allows timber craftsmen to obtain small quantities of logs without the need for a contract of sale. It also enables larger sawmills to sample different species from other supply areas.

Our aim is to hold three advertised auctions per year. For more information, phone Grant Pronk in Harvey on 9729 2888.

If you have any queries regarding our newsletter please contact Judi Pitcher at the Timber Technology Centre.
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or Email calmtimb@calm.wa.gov.au