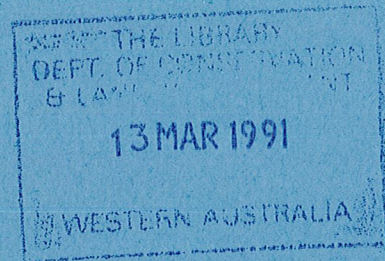




Department of Conservation  
and Land Management



## Wood Utilisation Research Centre

### **AN OVERVIEW OF THE CENTRAL GIPPSLAND SAWMILLING INDUSTRY**

**K.J. White**

**May 1990**

**W.U.R.C. Technical Report No. 18.**

THE LIBRARY  
DEPARTMENT OF CONSERVATION  
& LAND MANAGEMENT  
WESTERN AUSTRALIA

011477

**AN OVERVIEW OF THE CENTRAL  
GIPPSLAND SAWMILLING INDUSTRY**

**K.J. White**

**May 1990**

**W.U.R.C. Technical Report No. 18.**

# AN OVERVIEW OF THE CENTRAL GIPPSLAND SAWMILLING INDUSTRY

K.J. White

## SUMMARY

This report was prepared following a visit to several sawmilling operations in the central Gippsland area, after the author attended a comprehensive course at the Victorian Timber Industry Training Committee sawmill at Creswick. The topics discussed in the report are log extraction and haulage, sawmilling, value-adding, and marketing.

The industry in this area is well aware of the advantages of stockpiling logs under watersprays to reduce degrade, and the smaller operations in particular are using modern equipment and techniques to handle regrowth eucalypts. There is an increasing tendency to value-adding by drying timber, and providing a range of products, as the markets for green scantling decline.

## INTRODUCTION

The Central Gippsland timber industry has milled regrowth eucalypt (*Eucalyptus* spp.) logs from a second generation forest since the 1970s. Many of the regrowth stands logged now are the result of devastating fires in 1926 and in 1939, and stands generated by the latter fire now supply most of the sawlog resource requirements in central Victoria.

Most timber companies operate on mixed species consisting of messmate (*E. obliqua*), mountain ash (*E. regnans*) and peppermint (*E. radiata*). The annual log intake varies from several sawmills taking 18 000m<sup>3</sup> per annum each, down to a single sawmill operating on 2 500 m<sup>3</sup>.

This report was written after a visit to central Gippsland, following the author's attendance at a comprehensive course held at the Victorian Timber Industry Training Committee sawmill at Creswick. The topics discussed in the report include extraction and haulage of logs, sawmilling, value-adding and marketing, in relation to sawmilling practices in central Gippsland.

## EXTRACTION AND HAULAGE

Mill logs are produced by clear felling 1939 regrowth eucalypts, because thinning operations to remove these large trees would cause unacceptable levels of damage to the remaining stands. Logs produced from these operations are fast grown, with high levels of growth stress and with a large knotty core, particularly in the ash-type species. The Victorian Department of Conservation, Forests and Lands has introduced new log grades, enabling four classes of mill log

to be produced, with royalty rates depending on quality. Most mill logs produced from these areas are longer than the minimum length of 2.5 m set by grades, but about 10 per cent have the minimum acceptable crown diameter of 250 mm. Logging is by full length whenever possible, and any docking to length is carried out at the mill immediately before the logs are to be sawn. This reduces the risk of excessive end split development. A delivery schedule of four days from harvesting to stockpiling reduces the risk of end splitting by drying-out on bush landings.

Unfortunately, some haulage contractors in Victoria have practices which adversely affect log quality for the sawmiller. For example, on arrival at the mill landing full trips of logs could be dropped from the transporter onto the hard surfaced landings, and the combination of impact and the high growth stresses within some logs results in major splitting. It is the responsibility of mill managers to control unloading methods to prevent this type of damage to the logs.

## SAWMILLING

All sawmills stockpile up to 25 per cent of their annual intake. Almost all operations, regardless of their size, have some form of watering available for stored logs. Although climatic conditions make it unnecessary to water stockpile continuously, most sawmillers do so by choice. When logs will be stored under water, all debarking is done in the bush as part of the initial preparation, and the cost of this operation is included in the price to the sawmiller.

Logs are available in four grades which are segregated on arrival at the mill yard, and some diameter sorting is also done. Although the system uses full length logging methods, no docking actually takes place until logs are required for milling. When preparing logs for milling, efficient separation into length and diameter class is an important aspect in maintaining a high percentage of saw cutting time in relation to total running time. Sawmillers have found that their costs to run a non-producing saw are similar to those while the saw is actually cutting timber, and sawyers must achieve a minimum of 70 per cent production time. Several mills visited have achieved higher percentages.

The breakdown units favoured are bandsaws, but a number of twin circular saws are in operation. Some band mills have the advantage of a line bar carriage. Most sawmillers use circular saws for resaw operations, and keep the diameter down to a minimum while running nine gauge and finer saws. All the operations visited which used circular saws use 54 teeth, spring-set and roll-tensioned plate. These units operate at a cutting speed of between 55 and 75 m/min.

Most operators used breakdown patterns which would enable resaw operators to produce material according to the mill's order-board, rather than producing unbalanced cants and slabs sized to maximise width or thickness. The exception was when a one-man resaw such as a 'Gray' unit was used for the resawing, and then preparation of the centre cant was much more uniform. Most sawmill production was sized to grade, with a tendency to cut oversize. The large amount of shrinkage found in the ash-type eucalypts is presumably the main reason for this

practice, but sawmills which produce material for kiln seasoning cut oversize as a standard practice.

Care of fresh sawn material prior to seasoning consists mainly of plastic wrapping to prevent drying, or storage in a shaded environment. All production which is to be sold green is graded on a green chain, and either separated out for resawing or grade marked if the piece is the final product.

## VALUE-ADDING

Investment in efficient high production equipment is found in smaller sawmills as well as in larger operations, and a similar situation occurs in seasoning practices. Smaller operations are more inclined to value-add in numerous forms with seasoned products, while larger mills continue marketing green scantling from their operation to maintain a cash flow.

The timber industry has taken differing approaches to value-added marketing, and most companies have been successful in their particular choice of products. For example housing in Victoria has a far greater timber content than is found in Western Australian housing. Brick veneer construction and under-floor heating require substantially greater volumes of timber than are used in Western Australia, particularly in the Perth metropolitan region where double brick housing with concrete floors dominates the market. The volume of timber used in roof construction is similar in both states.

This situation has enabled Victorian sawmillers to sell structural grade production timber almost as rapidly as bundles have been completed. The green framing market is under increasing pressure from competition from seasoned softwood and sized seasoned hardwood, and as a result this market is extremely competitive. Sawmillers who remain suppliers of green scantling will continue to have little profit margin above production costs.

The Victorian Government has contributed to the value-added concept by actively encouraging smaller operations to get involved in this area. Larger operations have tended to delay large investment in new equipment and techniques until concepts have been proven by smaller holdings.

Companies that have undertaken value-adding have used a number of different processes to achieve this aim. For example Drouin West sawmills season any product exceeding the green order board requirements, but this timber is of varied quality. The exception is when the mill foreman observes a baulk or flitch from a high quality log entering the resaw, and directs this material to be cut oversize to allow for shrinkage during seasoning. The low grade material when seasoned is dressed to size, then docked in the company truss plant to make up roof trusses with lengths down to 600 mm utilised. Material seasoned from high quality logs is machined into mouldings or skirtings.

Goulds of Alexandra have a similar system to upgrade low grade structural material to produce finger-jointed studs, plates, and load-carrying beams not designed for exposed use. They also produce a large range of seasoned wide sections from quality logs which they strip out and air dry. Production of this material occurs only in winter.

Lemesseur sawmills, which have an annual round log intake of 10 000 m<sup>3</sup>, produce quality material from their logs exclusively to produce lattice and trellis frames from 40 x 20 mm material. The operation is very labour intensive, requiring thirty-five people to operate the dressing and component assembly section alone. The volume required by Australia-wide markets for this product far exceeds production capacity, and at present extended hours are worked in an attempt to meet demand.

Sawmills without facilities to value-add, produce select timber from the high grade logs received, and sell to an agent who in turn sells to firms with facilities to season and upgrade this material.

## MARKETING

At present the market for green structural timber has slowed considerably because of a downturn in the home building section of the construction industry, but other seasoned product markets continue to be buoyant. The production of high quality seasoned products is unable to meet the demand, particularly for wide sections. Most sawmillers are marketing directly from their areas of production, while only a few use agents or specific retail centres.

If green hardwood production is to remain a force in marketing and offer strong competition to alternatives (e.g. softwood, steel, and cement products), a more aggressive and uniform marketing approach is essential to retain markets.

## CONCLUSION

The timber industry in Victoria is aware of the need to protect mill logs, particularly the fast grown logs which are prone to degrade if not stored under watersprays while in stockpile. A number of mills are testing various protection systems for their sawn products where its future use is high value seasoned products. It is essential that the Government continues to demonstrate the benefits to be gained from expenditure in this area of their operation to more mill managers.

The real future of the timber industry lies in the acceptance by management of the need to spend capital in the area of value-adding. Many imaginative and innovative ideas have already proven worthwhile, and as the market share for green framing reduces, more companies will be forced to diversify into value-adding.

The visit to central Gippsland sawmills was most worthwhile. Research at Harvey on low pressure spray stockpiling, which is widely used in Gippsland, subsequently showed that this method is a suitable alternative to high pressure methods currently used in Western Australia, particularly if water supplies are limited and log supplies restricted. Other research on sawmilling based on information gained from the visit is planned.

## **ACKNOWLEDGMENTS**

The author attended a comprehensive course on sawmilling at the Victorian Timber Industry Training Committee sawmill at Creswick. A subsequent visit to Gippsland provided information on timber utilisation which would be useful to the Department of Conservation and Land Management for its Small Eucalypt Processing Study at the W.U.R.C. in Harvey.

The Division of Forestry and Forest Products of CSIRO, and in particular Mr Gary Waugh, are thanked sincerely for providing considerable assistance.