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# Researching high-value markets for eucalypt timber from oldgrowth forests in Tasmania

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## **Researching High-Value Markets for Eucalypt Timber from Oldgrowth Forests in Tasmania.**

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This report refers to eucalypt sawlog supply from State forests in Tasmania. Forecast supply includes an ongoing, relatively low, supply of large-dimension logs (i.e. >85 cm mid diameter). The premise that high value markets exist for these logs was tested, using a literature search, data analysis and interviews. The 26 interviewees included sawmillers, architects, timber engineers, builders, boat builders, furniture makers and special timbers advocates. Questions related to current use, distinctive properties and potential markets.

Large-dimension logs represent about twenty per cent of current supply. Pricing for timber from these logs is not substantially differentiated from pricing for timber from smaller logs. Properties of timber from large-dimension logs can not be distinguished clearly from those of timber from other logs. However, they are purported to include improved stability, hardness, appearance and overall recovery and a higher percentage of wide, thick and long boards.

Future supply will include a decreasing volume of large-dimension logs (assumed to reduce to 10,000 cubic metres per year). The value of timber from these logs may increase in these circumstances.

Some similarities between Tasmania and the Pacific North West of North America were identified, eg. the transition to smaller logs over the past decade. The Pacific North West has experienced decreases in prices for large-dimension logs, because modern sawmills can not handle the large logs. A useful initiative in the Pacific North West has been the development of a “buyers and sellers database” for large-dimension logs.

Some higher value markets for timber from large-dimension logs are identified, in Australia and overseas. Success in these markets will require product differentiation, quality control, innovation in marketing, brand management, customer management and environmental credentials (eg. chain of custody).

**Key Words** Oldgrowth forests, large-dimension eucalypt, special timber, high value.

## Introduction

Tasmania has experienced a decrease in the area of native forest available for commercial forest management. The requirement for balanced conservation outcomes has changed the land tenure and reduced the area available for wood production. The 2005 Tasmanian Community Forest Agreement (TCFA) increased the protection of oldgrowth forests to some 973,000 ha, which is 79% of Tasmania's oldgrowth forest (Forest Practices Authority, 2007). The TCFA also required a change in oldgrowth forest management on State forest to achieve non-clearfell silviculture in a minimum of 80% of the annual oldgrowth harvest area by 2010. The Agreement also recognised the particular value of special species timbers for Tasmanian craft and design industries and noted that selected areas of State forest will continue to be managed for the long-term production of such timbers.

The Tasmanian Regional Forest Agreement 1997 and the TCFA have provided secure conservation outcomes and limited sovereign risk for the forest industry. The Tasmanian hardwood sawmilling industry has retained access to some very productive tall eucalypt forests, which have provided much of the high quality sawlog resource for the past 200 years.

Historically the timber resource has been dominated by larger diameter mature and overmature trees, which provided the sawmilling industry with high quality feedstock (Photo 1). The industry was primarily focussed on producing construction grade material for the local and national building market. Competition from framing grade *Pinus radiata* kiln-dried timber from mainland Australia has seen a refocus of the sawn eucalypt output to kiln-dried appearance grade products.

Wood supply has traditionally come from both State forests and privately owned native forest. While the private forest estate remains a significant contributor to the State's forest industry, it is a rapidly declining source of eucalypt sawlogs. This project focuses on large-dimension sawlogs, which are defined here as those >85 cm mid-diameter derived from State forests.

Large trees, providing high quality sawlogs, can be processed into large-dimension timber, the subject of this paper. Large diameter trees would typically come from mature and oldgrowth forests. These forests include partially-harvested high quality highland forests dominated by *Eucalyptus delegatensis* and clearfelled wet forest dominated by *Eucalyptus obliqua* or *Eucalyptus regnans*.

The demand and future use of slow-grown, large-dimension eucalypt timber, from trees greater than 110 years old (defined as mature eucalypt forest, but not necessarily oldgrowth) or about 1 m in diameter at breast height, is uncertain.

As forest harvesting has moved to regrowth and plantations the diameters of eucalypt logs from native forest harvesting have continually decreased. While the total supply of high quality eucalypt sawlogs from State forests has been fairly constant over the last decade and is intended to remain at around 300,000 m<sup>3</sup>/year for the next 90 years (Forestry Tasmania 2007), the distribution within log diameter classes has changed significantly. Forestry Tasmania's Review No 3 of the *Sustainable High Quality Eucalypt Sawlog Supply* shows that the supply of high quality eucalypt sawlogs from mature native forest will reduce from almost 100,000 m<sup>3</sup>/year currently to about 10,000 m<sup>3</sup>/year by 2030.

Photo 1: Garden Is. Creek, very large high quality large log



Source: State Archives

This project assumed a perpetual supply of about 10,000 m<sup>3</sup>/year of high quality large-dimension eucalypt sawlogs (at least >85 cm mid diameter) that could be used by existing industry players, or possibly new industry entrants, for processing and marketing as a premium product.

Given known intrinsic wood qualities of large eucalypts, the project sought to identify markets that demand properties beyond the technical, possibly related to age and place (van Ittersum 2003) as well as size to deliver returns greater than currently returned to processors and growers. The elevation of oldgrowth timber to the status of a special timber through its reduced availability, inherent timber qualities and brand image and may also ensure continued access to the resource.

While specialised mills processing smaller diameter logs will increasingly supply most hardwood markets, this project seeks to identify market niches for an ongoing low-volume supply of large-dimension eucalypts to supply specialised high value markets. The aim of this initial research is to identify potential markets that provide premiums beyond what can currently be achieved.

## **Methods**

The research was lead by Mark Leech, an independent forestry consultant with more than 20 years experience in special timber processing and marketing. The project was overseen by a steering committee consisting of forest industry representatives, Forestry Tasmania staff and a timber researcher. The research process consisted of a series of interviews with Tasmanian players including large-scale sawmillers, small-scale sawmillers, industry associations, timber users (designer makers; construction and fitout), staff from furniture design schools, boat builders, researchers, a merchant, industry consultant, architects and an engineer. Contact was also made nationally and internationally with merchants, forest economists, silviculturists and extension specialists.

Extensive internet searching and direct contact with local and international specialists provided a broad literature base. Market opportunities have been identified through personal communication and internet searching.

## **Interviews**

It was considered most appropriate to gain an understanding and insight from the existing players within the timber industries. The approach used has been termed purposeful sampling (Grushecky *et al.* 2006). The interview sample was chosen to reflect the supply chain from processors through to merchants, users, specifiers and academics. While a series of questions guided the author, the process often became conversational, to avoid incorporating *a priori* directions. Some 26 interviews were undertaken in Tasmania and contacts made in Western Australia, Germany and the U.S. A background paper was provided to the interviewees and a discussion was held relating to wood properties, use, availability and desirability of large-dimension eucalypt timber as well as current and potential markets. The questions and discussion varied considerably depending on the interviewee's involvement and use of large logs from mature and oldgrowth forest and/or large-dimension solid eucalypt timber. The results of the interview process have been tabularised by industry grouping to maintain confidentiality.

## Results

The literature search allowed a comparison to be drawn between the Tasmanian forest industry and that of the Pacific North West of the United States, which has also experienced a marked reduction in the availability of large-dimension sawlogs. Similarly comment is made on Western Australian oldgrowth forest availability and the affect it has had on its industry.

### Current Industry Position in Tasmania

The forest industry in Tasmania operates within the framework of the Regional Forest Agreement and State and Commonwealth legislation governing forest practices, environmental management, threatened species and communities (Australian Government and Tasmanian Government 2007). The State Government has maintained its commitment to supply the hardwood sawmilling and veneer industry with 300,000 m<sup>3</sup>/year of eucalypt sawlog and veneer log as required by Section 22AA of the *Forestry Act 1920*.

With increased reservation has come a shift in the available forest age structure. This has caused a downward shift in sawlog diameter distribution. Figure 1 compares the size class distribution, based on mid-diameter, of the annual high quality sawlog supplied from State forest in 1996/97 and 2006/07. The total sawlog supply for these years was 251,000 m<sup>3</sup> and 301,000 m<sup>3</sup> respectively, which reflects variation in supply due to fluctuations in demand. Over a decade, the contribution of large logs (diameter class >85 cm) to the supply has decreased from 30% to 19%, the 65-85 cm class has not significantly changed, the 45-65 cm class has increased from 37% to 43% and the <45 cm class has increased from 11%-14%.

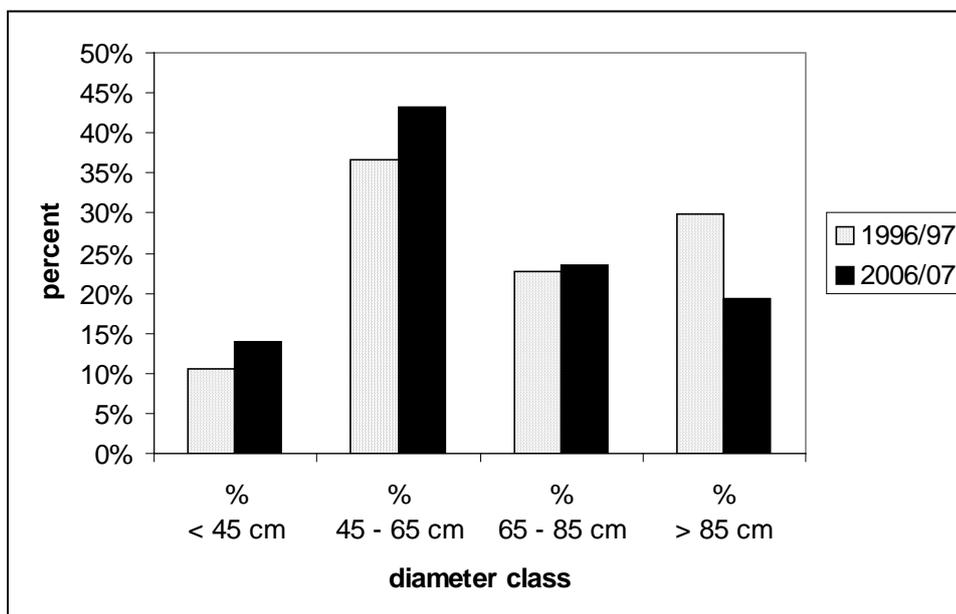
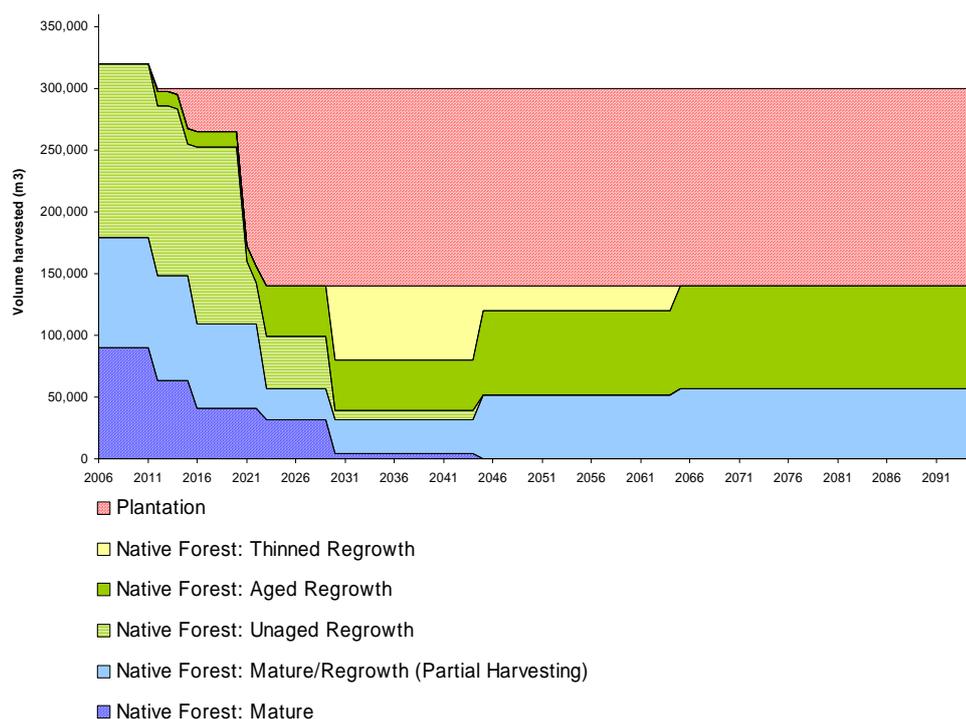


Figure 1. The size class distribution of the annual high quality sawlog supplied from State forest. Source: Michael Wood FT pers. comm. 2008.

Forestry Tasmania charges higher prices for larger log classes. Logs >85 cm attract about a: 12% stumpage price premium per cubic metre over logs 65-85 cm; 30% stumpage price premium per cubic metre over logs 45-65 cm; and, 60% stumpage price premium per cubic metre over logs 30-45 cm (Michael Wood pers. comm. 2008)

The hardwood sawmilling industry as it currently exists is largely dependent on continuing access to a native forest resource on State forest. Forestry Tasmania's sawlog supply review (Forestry Tasmania 2007) projects an ongoing supply of high quality eucalypt sawlogs from native forest and plantations over 90 years (Figure 2).

Figure 2: 90-year view of high quality eucalypt sawlog sustainable yield from State forest (from Forestry Tasmania 2007).



This graph indicates that access to mature and oldgrowth forests is crucial in the short and medium term to maintain the high quality eucalypt sawlog supply. Mature native forests currently supply nearly 100,000 m<sup>3</sup>/year of high quality eucalypt sawlogs, progressively decreasing to about 40,000 m<sup>3</sup>/year over the next two decades, with a small ongoing supply of about 10,000 m<sup>3</sup>/year after 2030. Although Figure 2 shows the mature eucalypt supply ending in 2045 it is probable that a supply of 10,000 m<sup>3</sup>/year could continue in perpetuity from a range of sources. These could include multi-aged partially harvested forests, Special Timbers Management Units that are not included in Figure 2 and from some areas of regrowth forest that could be managed on longer rotations to grow large-dimension sawlogs.

The current log mix contains 20%, by volume, of logs greater than 85 cm mid-diameter, including approximately 13% greater than 100 cm. This percentage will continue to decrease as the median diameter of 54 cm from the current native forest mix is influenced by an increasing volume of younger regrowth and smaller diameter sawlogs from *E. nitens* and *E. globulus* plantations.



Photo 2: Large high value log Source: State of the Forests 2006

Industry argues that maintenance of the log size mix is critical to its viability, particularly the proportion of high quality large diameter logs that potentially produce larger dimension appearance grade timber (Photo 2, 3). This is substantiated by economic analysis (Symetrics 2004) that emphasised the most productive components of the sawlog mix are the largest diameter logs, which enable the industry to provide an efficiently produced, differentiated product to the market place. This effectively provides a premium priced product and leverages the sale of lower quality products not otherwise readily sold. Symetrics (2004) stress that loss of this opportunity will reduce the industry's ability to achieve viable market prices.

Photo 3: A large eucalypt at McKays mill Glenorchy Tasmania



Currently, the larger sawmillers are cutting for value, size and production efficiency in an appearance grade market. There is a tendency by sawmillers to secrecy to protect their market share, which meant no current pricing of sawn timber was provided. Nolan *et al.* (2004) reported a price differential between board grades and sizes, but this was not necessarily related to oldgrowth nor large logs. Select grade timber had almost double the value of feature grade timber, with a further 20% in price for boards > 125mm wide and more than 30% for boards thicker than 25 mm. There are premium prices paid now for select grade (minimal defect, straight grained timber) large-dimension old wood (at least 250 mm by 38 mm) as it is denser, more stable and less prone to checking than timber from regrowth. A phone inquiry to a major retail timber merchant indicated that a significant price premium is gained for wide thick timber sold as joined and single piece timber in the local Tasmanian market (Table 1).

Size (mm) Kiln dried and planed	\$/lineal metre	\$/m <sup>3</sup>	% difference using 90 by 19 mm as the base width
90x19	\$6.75	\$3947	
235x42	\$74.74	\$7573	191%
285x42	\$97.50	\$8145	206%

Table 1: A comparison of retail prices using 90x19 mm Select grade as a standard

While markets for large-dimension timber currently exist, they can't be fully supplied due to sawmillers preferred product mix and their need to maintain production efficiency based on scale. This project attempts to further differentiate product/market opportunities in the national and global market, particularly for low volume sales of a high value product.

## **The Pacific North West**

Significant work has been done relating to the forest industry in the Pacific North West particularly since access to the traditional and highly productive oldgrowth forests was greatly reduced by the Federal conservation measures in the 1990's (Briggs & Mason 2006, Hansen *et al.* 2004, Wagner *et al.* 2003). This required the sawmilling sector to restructure to handle smaller logs more efficiently, (Briggs and Mason 2006), with the consequence that most millers couldn't handle and didn't want large logs. Oregon State University's Big Log Project (Wagner *et al.* 2003) was undertaken to identify proactive strategies to overcome the "perverse" large log price outcomes that were occurring. Forest land owners have seen the price for their once preferred, large logs plunge with many private owners opting to liquidate their older forests and replace them with shorter rotation forest that produce smaller logs.

An outcome of the Big Log Project has been the development of a large-log buyers/sellers database. While not directly relevant in Tasmania's much smaller industry, it may provide some ideas for specific product marketing where processors can not supply enough product or do not want to specifically supply a particular market. Considerable work has also been done in researching brand concepts with respect to forest and secondary wood products. Hansen (2004) reported that some researchers suggest effective marketing and branding of commodities is more important to the success of commodity producers than producers of highly differentiated consumer brands. Tokarczyk and Hansen (2006) found that the main goal of branding in the forest products industry is to develop customer relationships that can serve as a basis for building and maintaining business growth.

The changes in the Pacific North West, where access to oldgrowth forest was reduced and the log mix changed from predominantly large diameter to a much smaller diameter mix resulting in dramatic industry restructure, are relevant for the Tasmanian sawmilling industry. The Tasmanian forest industry still depends on an oldgrowth component in its log mix and has seen a large reduction in the available State forest estate, a decrease in the log diameter distribution as well as increased use of engineered wood products and globalisation. However, the Pacific North West outcomes with respect to decreased large log prices are not expected in the short to medium term, given the forward projections of Tasmanian log availability and the maintenance of a significant large log component for the next two decades (Forestry Tasmania 2007). Recent sawmill restructures in Tasmania have maintained input log size flexibility and the industry is still motivated to process high quality large logs.

## **Western Australia**

The Western Australian Government's policy, which took effect in 2001, ended timber harvesting in oldgrowth forests. This contributed to a reduction in supply of first and second-grade logs from 457,000 m<sup>3</sup>/year to 185,000 m<sup>3</sup>/year (Montreal Process Implementation Group for Australia 2008). This also resulted in a dramatic reduction in average log size and quality. Most regrowth from previously selection cut areas is still too small and poor quality for good sawlogs. Regrowth tends to be thinned from below, not from dominants (Jack Bradshaw 2008 pers. comm.). As oldgrowth logging ceased, the market for scantling reduced and the government banned sleeper production but has the expectation that all the output would go into high value added material - an impossible ask even in oldgrowth.

With a couple of exceptions most mills are still capable of taking a wide range of log sizes but operate best on larger logs with higher recovery. Large logs are still preferred as they have a higher recovery of good wood, rather than any inherent special quality. Old jarrah has a darker colour than younger regrowth but that is not universally preferred. When the mills finally do convert to taking mainly regrowth the Pacific North West problem of reduced prices for large logs will emerge. Large logs may be just too hard to handle if there are too few of them (Jack Bradshaw 2008 pers. comm.).

## World Wood Market Trends

In reviewing global trends in the trade in wood products and particularly wooden furniture, it became very clear that China is becoming increasingly dominant globally (White *et al.* 2006). The following focuses on China and Australia's market position.

The China phenomenon in the wood and furniture industry has dramatically grown in the past decade to a place of international prominence (FAO 2007, Nair 2007, Zakreski 2004, UNECE 2006). China's furniture industry has experienced dramatic growth since the mid 1990's with a 15% average annual growth in gross production and a 30% increase in exports annually (Cao & Hansen 2003). The scale of its success can be measured by its displacement of Italy as the world's largest exporter of wooden furniture (FAO 2007). However, this trend for emerging developing countries as significant global players in secondary wooden products, particularly furniture is not limited to China. Of particular relevance to Australia are Vietnam, Malaysia, Thailand, Indonesia and India.

At the same time while there have been significant changes in the Australian furniture industry, the Australian Bureau of Statistics reports that employment in the wooden furniture manufacturing in the 10 years from 1995-96 to 2005-06 has increased from 26,300 to 31,300 a 19% increase (ABS 1997, 2007). Although the Australian wooden furniture industry has maintained a valuable contribution to the Australian economy in the face of a dramatic shift in the global wood furniture industry, the pressure from globalisation is enormous. The wooden furniture manufacturing sector is a traditional and significant market for select and standard grade eucalypt timber from Tasmania. However, the annual use of Australian hardwood in furniture manufacture has declined from a peak use of 120,000 cubic metres in 2000 to less than 100,000 cubic metres, mainly due to more restricted availability (FIAA 2004). The Furnishing Industry Association of Australia (FIAA) has been proactive in assisting their constituents in this demanding time.

Global players are the new force in the furnishings industry with sophisticated supply chains, efficient business practices and aggressive marketing. In addition to low cost imports, there has been a significant increase in copying of design by Chinese furniture manufacturers and use and promotion of niche Australian timbers (FIAA 2004).

## Brand

The globalisation of the wooden furniture market has led to large efficient corporations harnessing suppliers from sources with low cost inputs, efficient manufacturing, sophisticated logistics and supply chains. Often products are well designed and come with some form of environmental claim, viz IKEA. This furniture, while not at the bottom of the market, ultimately provides for less differentiation. The more affluent section of the community, now represented by the baby boomers, provide a discerning market, both within Australia and internationally. Schuler & Buehlmann (2003) propose that in the U.S. there is



Fig 3: FIAA Australian Made swing tickets

an opportunity for supplying unique, quality furniture to a large, affluent segment of the population. The FIAA in their Furniture Industry Awareness Campaign (FIAC) have sought the survival of the Australian furniture industry through a buy local campaign, creating consumer demand for “Australian Made” products (Fig 3).

**Certification and Chain of Custody.** Manufacturers using wood sourced from forests certified to the AS4708 the Australian Forestry Standard (AFS) internationally recognised by the Program for Endorsement of Forest Certification (PEFC) are globally positioned to ensure entry in a market place where environmental credentials are increasingly required for market access. Tasmania’s State forests have achieved certification to the Australian Forestry Certification Standard and some companies have certified chains of custody to AS4707. In Tasmania, Fine Timber Tasmania Inc. a not-for profit association has developed a chain of custody for special timber soon to be certified to AS4707, the Australian chain of custody standard. Oldgrowth eucalypt wood could have the attributes of a special timber either through brand values, non wood values of age and place or through decorative appeal in figured wood. A pilot project is currently developing AFS certification for private native forests, giving processors and manufacturers broad access to forests globally recognised as being sustainably managed.

Environmental credentials and eco-labelling are essential for market entry in some countries and have been used in product marketing to a more discerning sector. However, it has been established that price and quality remain the most important purchase decision making attributes for the majority, while environment attributes must be additional, not substitutional (Hansen and Juslin, 2006).

**Carbon: Big Wood Cool World (Cool Wood).** Increasing climate change concern is becoming a determinant in the use of materials based on their life cycle analysis and carbon balance. Hansen and Juslin (2006) note that the forest industry has been through a series of changes based on societal demands and has implemented significant systematic change. While sound forest management, sustainability and certification are here to stay they point out that we are now in a period where global climate change and the role of forests will take pre-eminence.

Wood from slow-grown old forests may have appeal on the basis of its significant carbon store, decreasing the use of fire for regeneration will benefit the equation and the life cycle analysis of old wood. Stored carbon in old wood is a real net benefit and when the wood is used in high end, well designed, quality furniture, its life is potentially intergenerational (Australian Greenhouse Office 1999).

## Interviews

The results of the interviews have been summarised as group outcomes. Anonymity of participants has been maintained for confidentiality. The comments relate to large-dimension slow-grown eucalypts, that could include large older regrowth and mature wood, ie >110 years old as well as logs from oldgrowth forests.

There was some initial concern amongst industry players and advocates that the dominant grower/supplier was becoming further involved in the market place. This was generally followed by increased acceptance that this research project was about gaining information that would be for the mutual benefit of those involved.

Table 1 provides a summary of the interviews held with the different sectors. The following comments attempt to capture the key agreements and differences.

### General Agreement:

- Sawmillers agreed that they needed high quality large logs in the diameter mix to remain profitable.
- All sawmillers agreed that diameter alone was not a good indicator of quality.
- All users acknowledged that timber from high quality large-dimension slow-grown eucalypt has excellent woodworking properties, dries readily with limited degrade, machines and works well.
- The notion of *Care, Respect and Value* was consistent when it came to handling large logs, with most processors and users agreeing that the logs should be cut into their highest value product output.
- Most potential users found it difficult to readily source large-dimension timber.

### Key Differences:

- Sawmillers tend to cut for the highest value return to them, whereas the concept of value from some other sectors related to the large size of the trees and the time it has taken to grow.
- There were differences of opinion as to what constituted highest value. Small volume designer makers argued that large-dimension timber that could only be produced from slow-grown large trees had a higher inherent value that translated to the price of the finished product.

Grouping	No	Wood Properties	Existing Markets	Potential Markets	Comments
<b>Sawmillers &gt;10,000m<sup>3</sup>/yr</b>	<b>3</b>	Stable wood, higher density, lower moisture. High drying recovery. Overmature wood with incipient decay is impossible to dry & market.	Cutting strategy for max width. Max size 300x50 mm as stair treads. Majority as flooring and appearance	Confidential	Diameter alone is not a good indicator of quality. Premium large logs harvested by specialist forest contractors. Premium markets for wide, thick select boards currently exist.
<b>Sawmillers &lt;10,000m<sup>3</sup>/yr</b>	<b>2</b>	Quality logs >100 cm mid-diameter are desirable, min sapwood, no spring, stable, high recovery	Stair treads as 300x38 mm and 300x50 mm current premium products. Large bridge timber (green) provides high recovery.	Confidential	Diameter not a good indicator of quality. Large logs must be handled with care.
<b>Boat Builders</b>	<b>4</b>	Hard & durable when kept coated. In order of preference: 1. <i>E. globulus</i> , 2. <i>E. obliqua</i> , 3. <i>E. regnans</i>	Keels, planking, deck beams, ribs, stem & stern construction. Large pieces require long lead time. Best kept underwater.	Limited in Aus. One small miller sends wood to Qld. for classic ship repair. Potential international market.	Species need to be identified in the forest. Trend to solid wood composites, easier handling, known properties.
<b>Designer Makers</b>	<b>4</b>	Tight grain & stability. Large impressive size tells a story.	Large impressive pieces of solid wood in high value products.	Overseas with congruent brand management.	Old large eucalypt should take on a special timber value. Huge grand trees shouldn't be reduced to strip flooring. Wide sawn veneers over a plantation wood base, can give traditional look using contemporary technology. Combine plain and decorative timbers. Support Care, Respect, Value paradigm
<b>Construction</b>	<b>1</b>	N/A	N/A	N/A	Use mostly engineered wood products.
<b>Furniture &amp; Design Schools</b>	<b>2</b>	N/A	N/A	N/A	Genuine brand management is key.
<b>Research: Timber</b>	<b>1</b>	N/A	Structural is a recovery product, no profit. Millers rely on highest return from large-dimension appearance grade.		Most millers cut for value rather than volume.
<b>Research: Harvest</b>	<b>1</b>				Real opportunity to link appropriate harvesting systems to improve product outcomes by reducing log damage due to high production demands.
<b>Industry Consultant</b>	<b>1</b>	The full spectrum of log intake translates to a known product mix.		May be a premium for material that consistently meets drying and size standards.	Recent mill upgrades have maintained diameter cutting flexibility, ie can still process big and small logs.
<b>Merchant</b>	<b>1</b>	Tas Oak is preferred, less kino and internal check than mainland species. Globally considered very high grade, straight grain, dressed & stable.	Bulk use in furniture industry in smaller sizes. Most manufacturers needing 300 mm will join 2x150 mm	No significant Australian markets for wide material.	A very acceptable product in all markets. Not well marketed internationally and undervalued.
<b>Architects &amp; Engineers</b>	<b>4</b>	F17 strength grade is a known standard in construction and is used in design of solid wood structures.	Always specify F17 standard but unable to get sizes and lengths. Revert to engineered wood.	Architectural uses of large solid sections. Weatherboards and timber cladding re-emerging.	Only specifies F17, refuses to use pine. Difficult to get any sort of matching for larger projects. Assume its is unavailable and do not plan for it.

Table 1. Summary of interviews, sample size, identified sawn timber markets for wide boards from large logs.

## Discussion

### Lessons for Tasmania and Potential Markets

Based on discussions through the interview process and internet research, higher value markets for wide, thick sections of timber from slow-grown old eucalypts may exist in national and international markets. While industry may be aware of them, they are understandably guarded in their comments, to protect their commercial interest. A very relevant comment came from a German forestry professor, 'Clearly, growing trees to large dimensions will only work, if you can produce a high quality in high demand product, as is the case with oak in Europe' (Bauhus 2008). This is echoed by the millers who emphasised that diameter alone is a poor indicator of quality, the logs must not only be big but of high quality.

**Lessons from Oregon's Big Log Project.** Awareness of Oregon's Big Log Project has provided a number of outcomes that can further potentially assist Tasmania in the development of market based systems; a processor/buyers listing and targeted market research. While the Tasmanian sawmilling industry is much smaller than Oregon, the concept of a processor/buyers data base or product list may have merit, not so much in identifying who can do what but as an opportunity to flag the availability of large-dimension timber across processors.

**Wooden Boats.** The construction of medium to large wooden boats using traditional construction methods and timbers provides a potential market opportunity that requires development. As noted in the interviews, often large section members are laminated from smaller section timber, providing ease of handling and stability. It is estimated that at any one time in Australia there could be at least 50 medium to larger wooden boats under construction, (Dean Marks 2007 pers. comm).



Photo 4: Tall ship *Defender* on the Whitsundays Source: Internet

An industry that has grown dramatically in the past 20 years has been the luxury and backpacker sailing adventure market in the Whitsundays of North Queensland (Photo 4). It has been noted that the repairers of these vessels are finding it increasing difficult to buy large section, air-dried planking for repair work.

A market initiative, similar to the Oregon Big Log data base would be the development of a wooden boat wood supply listing or "notice board" providing a potential link between sawmillers, boat builders and repairers. This could provide an opportunity for a processor to specialise if the market size was proven economic and complement the already existing wooden boat board bank, that ensures a supply of the legendary boat building wood, Huon Pine, *Lagarostrobus franklinii*.

**High-end Furniture.** The targeting or promotion of the best material for fine furniture is not new and has been a traditional market for select grade Tasmanian ash group eucalypts marketed as Tas Oak. However, as increasing pressure comes from imports the need for differentiation increases. The production of design-led, high quality solid wood furniture using "credentialed" wood, from old trees may have market niches, particularly wherever a large affluent sector exists (Kaplinsky *et al*, 2003; Schuler and Buehlman 2003).

A recent quote taken from a local furniture maker's web site provides a positive statement. 'Design and build furniture to last and if repairs need to be done in 100 years make sure they can be done to give the piece another life. -Use local resources to maximise the benefits of production locally. -

Encourage the highest skilled base in making the process that can show how special we are' (Rex Heathcote 2008).

**Wide Plank Flooring.** Wooden flooring comes in many configurations from a traditional tongue and groove 'strip flooring', through overlay flooring to parquet and wide plank flooring. The advent of commodified DIY flooring systems has increased the popularity of wooden floors. However, there is traditional market differentiation based on craftsmanship and sophistication, parquet and increasing differentiation in the market based on a sense of "uniqueness" or perhaps one-upmanship provided by very wide planks (Photo 5). Traditional solid wood tongue and groove strip flooring, parquet and wide plank flooring require expert installation that adds to the cost.

Although wide floor boards are prone to movement, most web sites viewed did provide a cautionary note that increased board width is usually associated with increased movement. There appears to be a trend in the U.S. market for big impressive floor boards (Azobuild.com 2006)



Photo 5: Wide plank flooring is a trend in the U.S.

**Restoration.** The use of large-dimension timber in building restoration may provide some further opportunity for large section material. However, the very large sections required mean that the material would be green or at the best partially air-dried. Restorers would usually seek out recycled timbers or *faux* construction to give the appearance without the instability.

**Big Wood Cool World.** the notion of *Cool Wood* and especially large pieces from slow-grown old trees containing a secure store of carbon for many generations may have some future market appeal and even a potential tax incentive to purchase. A carbon or energy rating based on a full life cycle analysis could further enhance old wood's credentials. Alternatively the association of large pieces with oldgrowth forests, which are known to be significant carbon stores, may provide a market disincentive for wood from this source.

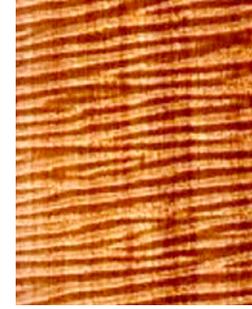
**High Value Decorative Eucalypts: An Opportunity.** Figured grains are found in virtually every tree species, thus increasing the potential for other high value-niche markets (Bragg 2006). There are many grain variations or distortions in eucalypt that have various local and internationally accepted names, from just figured wood, being a catch all phrase to fiddleback (Photo 6) through to "birdseye" and pomelle with many variations.

Doubtful logs and possible all tree length logs may in the future go through a merchandising process in a sorting yard. However, as Bragg (2006) points out, merchandising fails to capture the highest value products possible from trees being harvested. Often figured wood has not been considered merchantable in the solid wood market unless extreme in figure which probably has gone to veneer. These woods are becoming more sought after and with the right market and product identification can achieve very high values. For example, the "birdseye" figured grain in sugar maple (*Acer saccharum*) has a well developed specialty market and quality birdseye maple often fetches 10-50 times the price of similar but unfigured logs (Bragg 2006).

Island Specialty Timbers Tasmania, a Forestry Tasmania business unit has reported recent tender prices for figured eucalypt logs of up to \$593/m<sup>3</sup>, (Island Specialty Timbers 2008), or more than seven times the delivered price of a “plain” high quality sawlog. Markets that demand such highly figured material as solids and veneer include:

- Super yachts and luxury vessel fitouts.
- Hotel foyers and reception, executive and board room fitouts.
- Modern apartments as features and kitchens.
- Musical instruments, particularly acoustic and solid body guitars.
- Design-led high quality furniture.

Photo 6: Highly figured Tasmanian *Eucalypt* sp.  
Source: M. Leech



The market for large-dimension solid wood from oldgrowth forest will become increasingly challenging. However, this research indicates a potential for continued and increasing value in a discerning market given appropriate market research, brand management, maintenance of quality through the entire supply chain and a focus on relationship. Environmental credentials may become essential to market entry but may not be the main determinants in purchase decision making. Given the enormous global pressure from imports and particularly China, the Australian sawmilling and wooden furniture industry has done well to maintain its position. However, this will not go unchallenged as China and other Asian producers are not just producing the low to medium priced products, but have made large investments in producing the highest quality furniture.

Within the context of the suite of products currently produced by Tasmanian hardwood sawmillers it is evident that they receive premium prices for large wide, thick boards compared to their standard or feature grade products. It has emerged from interviews that some sectors may be interested in purchasing ongoing volume if the supply and quality was known.

A view has been expressed by many participants directly involved in milling, or using and specifying eucalypt timber, that large-dimension timber especially from old trees should be made into products that reflects the age of the trees that the wood came from, supporting the paradigm of *Care, Respect & Value* (Whiteley 2006 pers comm). These products should be well designed and made and be “intergenerational”- effectively modern heirlooms. The market and commercial reality will dictate where and for what purpose wood is used, but with well designed congruent brand management and higher valued markets, the wood will be made into quality lasting products as the material investment is high.

The high price achieved by Island Specialty Timbers Tasmania of \$593/m<sup>3</sup> on site, paid at tender for a highly figured eucalypt log demonstrates that with appropriate marketing and increase in brand development that the market is willing to pay high prices for small volumes of what it considers to be very good material. There is no doubt that the wood from this log will be used to produce well designed products of lasting quality and value. While most of the large logs in question are not figured, figured wood has been overlooked in the past or only picked up occasionally. More recently it has become sought after and while the high price may only be for one log of less than 2m<sup>3</sup> it demonstrates a market based appreciation beyond what was previously considered possible.

The innovative use of the internet to have a live tender where individual logs may be viewed has added value. While it will be argued that single log sales is no way to operate an industry, it is the way most higher value logs are sold globally, albeit not yet via the internet. It has provided the opportunity for an exponential increase in the number of buyers. The internet also is a powerful

medium for the delivery of brand messages and value adding systems such as a certified chain of custody.

Given the predicted increase in global demand for hardwood, the fact that Tasmania's State forest are certified to the globally recognised Australian Forestry Standard, large-dimension slow-grown timber should achieve increased premiums. The Big Wood Cool World concept of stored carbon in wooden products and a longer, possibly intergenerational store in high quality solid products may provide a further marketing advantage.

## **Conclusions**

The following conclusions are drawn in answering the question, "Is there a potential to increase high value markets for eucalypt timber from oldgrowth forests?". This is all about marketing, any increase in realisable value above current premium product returns will only come about through appropriate brand image management for specialised niche markets. Some premium markets have been identified nationally and there appears to be some potential for international markets, particularly where pedigree is considered part of the product. The decorative component of large diameter logs may have very high value as demonstrated through internet based log tenders. Uptake or further exploration remains a business decision for the industry.

In summary, the outlook is challenging, the sawmillers have succeeded in maintaining premiums for their large-dimension high quality sawn timber and to date, have largely retained the capacity to process both large and small logs. With a commitment to brand management and marketing some higher value markets nationally and internationally may be achievable.

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- Forest & Forest Industry Council Executive, May 08.

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