Tasmanian Government
Department of State Growth

Market Demand Analysis for
Tasmania’s Special Species Timbers

Project Report

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Melbourne

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PREFACE

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EXECUTIVE SUMMARY

This report for the Tasmanian Government presents a market demand analysis for Tasmania’s special species timbers (‘special timbers’); comprising specifically, blackwood, Huon pine, myrtle, celery-top pine, sassafras and silver wattle.

This analysis incorporated the following:

1. A review of relevant studies and reports, including published and unpublished works;
2. Conducting a market demand survey of value chain participants across the range of sub-sectors, from sawmillers through to retailers;
3. Conducting interviews with representatives of industry associations, university faculty, the woodcraft guild and other stakeholders with a broad viewpoint of the structure of the sector and market demand trends over time; and
4. Application of economic principles to the assessment of market demand, based on the data available from previous studies and the survey findings.

The findings are intended to describe and assess levels of demand for the special timbers species and inform further development of a Special Species Management Plan for Tasmania.

Sector profile

The Tasmanian special timbers sector is complex, and made up of a number of different sub-sectors. Key groupings include the milling and processing sub-sector (including timber distributors); the design and production sub-sector; and the retail sub-sector.

To support the analysis of market demand, Indufor’s survey sought to obtain a range of informative data on the socio-economic contribution and trends across the industry value chain. Based on 55 responses from a total of 84 organisations and individuals contacted, including 16 semi-structured interviews, the survey encompassed:

- Approximately 3,600 m³ per annum of sawn timber produced by sawmillers and sold to downstream customers via direct sales, distributors and producers (estimated to be over 90% of total sawn timber throughput);
- Approximately 160 full time equivalent (FTE) people employed directly in working with special timbers, across sawmills, distributors, producers and retailers;
- Approximately $20 million in turnover (gross revenue) from special timbers production and sales (encompassing sawn timber, semi-processed and end-use special timbers products);
- Over $12 million in capital investment in special timbers over the past five years, predominantly in the milling and processing sector; and
- Over $5 million of planned capital investment over the next five years, largely subject to confidence in the availability of special timbers supply over this time horizon.

As an indication of the viability of the supply chain, the Indufor survey asked respondents to indicate employee status between current day and five years ago. In total, employee numbers have been maintained at a similar level. Sawmillers and retailer respondents have lower employee numbers now (both down by 12%), while producers showed an increase in employee numbers (+13%); although this producer result was influenced by a couple of particular responses. Consideration of employee numbers by sub-sector and overall should take into account the lower overall throughput of the special timbers supply chain. The survey results infer that in broad terms, sector participants have maintained but not expanded their enterprises.

Indufor’s market demand survey also explored the proportion of sales of special timber products to customers in Tasmania, interstate and international markets. This survey found that sawmillers and distributors sell the majority of their special timbers interstate (around 55% for sawmillers and almost 100% for distributors), and sawmillers currently sell over 20% of their sawn timber internationally. This means the majority of special timbers are now processed outside Tasmania.
Timber supply

Over the past 10 years, the supply of special timber logs to the sector has declined appreciably across all of the selected special timber species (down 55% to around 10 000 m$^3$ of total logs).

With the varying levels of reduction in supply of each timber species, the proportions of supply have changed such that blackwood now accounts for more than 85% of special timbers available to the sector (up to around 90% in 2014/15).

After blackwood, the next largest volumes of supply are now celery-top pine and Huon pine — both account for up to 5% of total special timbers supply. However, the supply levels vary annually. Huon pine supply, for example, is dependent on recovery of fallen trees and seasonal access to recovery areas.

For myrtle, the log supply from public native forests has declined to the extent that a range of timber distributors and producers now refer to myrtle as "irrelevant" in relation to use in larger commercial projects. Re-establishing market demand for myrtle would require considerable marketing effort and a renewed sense of market confidence that consistency of some substantive supply could be provided.

Price trends

Publicly available price trend data for Tasmania’s special timbers sector is limited.

In relation to logs, Forestry Tasmania provides annual reporting on the Mill Door Log Value (MDLV) for aggregate sales of ‘special species log’. This data indicates that special timbers log prices overall (with strong weighting towards blackwood volumes) have remained relatively flat in real terms over the past decade. Most millable log volume is sold under long-term log supply contracts, and log prices are set through periodic negotiations with sawmillers. In this context, log price movements are not directly reflective of variations in annual market demand for finished timber products.

The other source of publicly reported price data is Island Specialty Timbers’ (IST) tender prices. While useful for providing current market signals, the scope to establish a price trend over time based on IST data is limited by the variability in tender lots. The lots offered up for sale comprise one or multiple logs, and the dimensions or grade of each of the logs may vary considerably from previous lots of the same species.

In relation to sawn timber, IST sells small quantities of sawn timber through tender lots and direct sales; however, there has been insufficient trade of comparable timber grades to construct a meaningful price trend series for a range of sawn timber products.

Indufor’s market demand survey and qualitative interviews sought further information on price trends and willingness to pay for special species timber in sawn form. The survey asked participants about price increases in the past five years and how their customers had responded to any substantive increases. The survey found a range of industry observations on price trends for timber products. In many cases across the sub-sectors, price increases for sawn timber and finished product prices had been limited to 3-5% per year in nominal terms — that is, generally flat in real terms. Most sawmillers, distributors and retailers have applied this level of price increase each year and it has generally been accepted downstream by their customers. Among producer responses, there were examples of customers having dropped special timbers products when prices were increased by 5-10%.

In contrast, some producers cited examples of substantial increases in buying prices over the past five years, for particular species and grades. Examples include boat builders observing annualised price increases for boat grade celery top-pine of more than 7-10% in real terms. Examples of this nature reflect to a large extent the high demand for premium grades of timber.

Overall, it can be concluded that price trends for special species timbers vary considerably by species and grade, and they largely reflect the extent to which those species and grade compete in a range of markets with other Australian timbers and imported timbers.
Demand drivers and constraints

Indufor’s market demand survey results indicate the most prominent *drivers of demand* comprise: the unique characteristics of the timbers; the Tasmanian ‘brand’; marketing programs; and the design of the timber products, but with variations by sub-sector.

**Figure ES1 Survey respondent views on key drivers of demand for special timbers**

While sawmillers identified the unique characteristics of the timbers as being the most important demand driver, producers proposed the Tasmanian brand as being the most important, and retailers noted Tasmanian tourism and consumer trends as the most important.

The survey results indicate the most prominent *constraints on demand* comprise: resource availability; wood costs, or maintaining an “affordable” supply of special timbers; the controversial media image of the forestry industry in Tasmania; and the ageing demographic of suppliers with woodcraft skills to produce fine timber products.

Concerns about the ongoing availability of special timbers were prominent in survey feedback across all sub-sectors. In some cases, these concerns were linked to concerns expressed about the costs of acquiring the timber, more so than other production costs. Beyond resource availability, sawmillers and producers considered wood costs to be a notable constraint on demand.

Retailers indicated more concern in respect to the supply of their product from ageing suppliers, and the longevity of these business relationships. Retailers have observed a large majority of these suppliers are in the later stages of their working careers, and there is a lack of younger people entering the sector and picking up the craftsmanship skills.
Figure ES2 Survey respondent views on key constraints on demand for special timbers

Demand profiles for sawn timber products

Market demand varies across the selected special timbers and their various grades.

There are high value markets in which the willingness to pay for premium grades of special timber can be relatively high. These markets include high end furniture, some boat building projects and also musical instruments. However, the current level of sales into these high value markets is generally small or otherwise modest compared with total volumes of supply.

Premium grades of special timbers include blackwood with tonal qualities, birds eye feature and fiddleback grain; Huon pine with birds eye feature; blackheart sassafras; and long clear sections of celery-top pine. These premium grades can command relatively high prices – indicatively, $5 000/m³, and up to $15 000/m³ in exceptional cases. However, these grades generally constitute a small proportion of the total supply available for each of the special timbers.

Blackwood timber accounts for the large majority of special timbers volume available for commercial applications. It competes in various markets (including furniture manufacturing, cabinetry and joinery, and flooring) with other Australian hardwood timbers and a range of imported timbers. In this context, the willingness to pay for blackwood high grade timber is moderated by competitive markets for larger commercial projects.

Huon pine is also seen in a separate category from other species, on account of its iconic status among Tasmania’s special timbers, and the nature of its supply.

For species other than blackwood and Huon pine, there are distinct grade features that are recognised as having more value and commensurate with higher prices. These include blackheart sassafras, celery-top pine in long clear lengths, and myrtle with tiger feature.

Lower grades of timber are sold for significantly lower prices – indicatively, between $1 000/m³ and $1 500/m³ which approximates pricing for a wide range of hardwood species timbers. In the case of blackwood, the survey results indicate that demand is relatively soft for lower grade timber, with sawmillers reporting a lack of demand in Australia. This is largely due to low grade blackwood lacking distinctive features, e.g. pale colour and lacking figure, for which various substitute options exist. As a result, most of this low grade is sold to export markets, notably China, where it is understood to be processed into wooden furniture and other products.
Inferred mill door log values

The capacity for sawmills and veneer mills to pay for logs is dependent on a range of variables. Key variables include mill recovery rates, capacity to optimise grade recovery, operational efficiency and, of particular note, sawn timber sales prices. In addition, some of the larger mills are processing Category 1 and 3 (eucalypt) sawlogs as well as Category 4 special timbers and their capacity to pay for additional volume may be based on marginal costs of production. A number of variables will depend in turn on the main species supplied, the quality and uniformity of log supply, and the investment of processing operations (capital expenditure) over time.

While recognising this range of variables at play, the demand profiles for special timbers can be used to derive an indicative, inferred capacity to pay for logs. For this particular purpose, Indufor has developed a set of basic models of sawmilling operations. In general terms, the mill door log values can be inferred, based on the output prices for sawn timber (sales revenue) minus the average sawmill production costs and the operating margin or profit. The basic models are set out in an appendix to this report.

A summary of the findings from this derivation of inferred log values is set out below.

### Table ES1 Inferred mill door log values derived from sawmill processing models

<table>
<thead>
<tr>
<th>Indicative MDLV estimates</th>
<th>FT 2014/15 log supply* (m³):</th>
<th>Lower end estimates ($/m³)</th>
<th>Higher end estimates ($/m³)</th>
<th>Average estimates ($/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Category 4 sawlogs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackwood</td>
<td>3 147</td>
<td>$60</td>
<td>$400</td>
<td>$230</td>
</tr>
<tr>
<td>Celery-top pine</td>
<td>154</td>
<td>$0</td>
<td>$590</td>
<td>$300</td>
</tr>
<tr>
<td>Huon pine</td>
<td>204</td>
<td>$250</td>
<td>$810</td>
<td>$530</td>
</tr>
<tr>
<td>Sassafras</td>
<td>39</td>
<td>$180</td>
<td>$670</td>
<td>$430</td>
</tr>
<tr>
<td><strong>Utility/ Outspec logs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackwood</td>
<td>5 581</td>
<td>-$60</td>
<td>$240</td>
<td>$90</td>
</tr>
<tr>
<td>Celery-top pine</td>
<td>441</td>
<td>-$120</td>
<td>$370</td>
<td>$130</td>
</tr>
<tr>
<td>Huon pine</td>
<td>104</td>
<td>$230</td>
<td>$760</td>
<td>$500</td>
</tr>
<tr>
<td>Sassafras</td>
<td>217</td>
<td>$150</td>
<td>$600</td>
<td>$370</td>
</tr>
<tr>
<td><strong>All grades</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackwood</td>
<td>8 728</td>
<td>-$20</td>
<td>$290</td>
<td>$140</td>
</tr>
<tr>
<td>Celery-top pine</td>
<td>595</td>
<td>-$90</td>
<td>$430</td>
<td>$170</td>
</tr>
<tr>
<td>Huon pine</td>
<td>308</td>
<td>$240</td>
<td>$790</td>
<td>$520</td>
</tr>
<tr>
<td>Sassafras</td>
<td>255</td>
<td>$150</td>
<td>$610</td>
<td>$380</td>
</tr>
</tbody>
</table>

Source: FT log production data, *YTD June 2015; Indufor derivations of MDLV, based on sawmill processing models developed for this analysis. Note average estimates of MDLV have been rounded.

The range of inferred log prices set out above reflects the sensitivity of sawmill profitability to changes in key variables, notably recovery assumptions and sawn timber prices for high volume categories. Similarly, the assumptions relating to the mix of log grades (i.e. Category 4 and Utility and Outspec log grades) can have a considerable impact on inferred capacity to pay.

**Willingness to pay for special timbers**

Key factors that impact on producers’ willingness to pay for special timbers are their respective input costs, and the extent to which cost-competitive substitutes are available.

This analysis observed that timber input costs as a proportion of total input costs are generally lowest for sub-sectors that include boat builders and musical instrument makers, as their products generally incorporate relatively high labour costs (on a per cubic metre of special timbers basis) and also other non-timber input costs. While boat builders generally seek celery-
top pine, Huon pine and King Billy pine, musical instrument makers have expressed demand for blackwood and other species with tonal qualities and attractive aesthetic features.

In relation to substitutes, this analysis observed the extent to which cost-competitive substitutes are available varies across the range of species and grades. In some cases, the scope for direct substitution is considered relatively low, e.g. finding other products that match the multi-dimensional attributes of Huon pine; whereas in other cases the scope is considered relatively high, e.g. lower grades of blackwood and silver wattle.

The survey also captured anecdotal qualitative information about private timber sales being a feature of the industry. Quantitative data on these private sales was not available, but informal information indicates a wide range of enterprises and individuals had set aside stockpiles of logs and sawn timber over time, and as a result there has been a substantive additional supply of particular species and grades of special timbers to meet the demand of both sawmillers and producers. This private sales resource base is expected to diminish over time as stockpiles are used and not replenished. This will reduce the secondary supply options for sawmillers and producers to obtain particular species and grades of timber, with implications for prices and timber utilisation.

The survey also explored the likely consequence for value chain participants if their preferred special timbers products became less readily available, or more expensive – and whether they were more likely to shift to using alternative special timbers; other timber products; or non-timber products. A summary of the combined responses is set out below.

**Figure ES3 Likely responses to preferred special timbers becoming less available**

These survey responses indicate that overall, across the sub-sectors:

- The sawmillers are dependent on the supply of special timbers and have established markets based on their capacity to process and deliver preferred species. Most sawmillers (around 80%) said that at a level, a substantial reduction in availability would lead to them ceasing operations.
- Most timber distributors are less dependent on particular species. Their business model is based on selling the most cost competitive timber products available to them matched with their customer’s needs; hence distributors expect to be able to switch to alternative special timbers or imported timbers.
Producer responses were mixed and relatively even across the potential consequences. This reflects varying degrees of dependency on preferred timber species, and apparent potential across most producers (over 60%) to be able to shift to alternative timber products, or to a lesser extent, non-timber products.

Retailer responses were also mixed and reflect the spread of retailers who were engaged in the survey. Some retail businesses are based on selling exclusively Tasmanian products, and these businesses constitute most of the respondents who indicated the business would cease working. Other retailers are less dependent on Tasmania’s special timbers – notably larger chains in Tasmania and in mainland states. These businesses are expected to shift to the most cost-competitive alternatives, comprising a range of timber and non-timber products.

Based on the market demand survey results and analysis of key factors impacting demand, Indufor has rated the willingness to pay for the six main special timbers, by timber grade. These ratings are set out below.

Table ES2 Inferred willingness to pay for Tasmania’s special timbers

<table>
<thead>
<tr>
<th>Species</th>
<th>Timber grades</th>
<th>Scope for substitution (rating)</th>
<th>Proportion of product input costs (rating)</th>
<th>Inferred willingness to pay (rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackwood</td>
<td>Premium grade</td>
<td>Low-Medium</td>
<td>Low</td>
<td>Medium-High</td>
</tr>
<tr>
<td></td>
<td>High quality grade</td>
<td>Low-Medium</td>
<td>Medium-High</td>
<td>Medium-High</td>
</tr>
<tr>
<td></td>
<td>Lower quality grade</td>
<td>High</td>
<td>Medium-High</td>
<td>Low</td>
</tr>
<tr>
<td>Huon pine</td>
<td>Boat grade</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>High quality grade</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Lower quality grade</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Celery-top pine</td>
<td>Boat grade</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>High quality grade</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Non-boat grade</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Sassafras</td>
<td>Blackheart</td>
<td>Low</td>
<td>Medium</td>
<td>Medium-High</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>High</td>
<td>Medium-High</td>
<td>Low</td>
</tr>
<tr>
<td>Myrtle</td>
<td>Tiger myrtle</td>
<td>Low</td>
<td>Medium</td>
<td>Medium-High</td>
</tr>
<tr>
<td></td>
<td>Red myrtle</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>White myrtle</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Silver wattle</td>
<td>All grades</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
</tbody>
</table>

Source: Indufor market demand survey 2015

This assessment indicates inferred willingness to pay is highest for: high quality grade blackwood; Huon pine; high quality grade celery-top pine; blackheart sassafras; and tiger myrtle. The demand for these specialist timber products realises markedly higher timber prices compared with lower quality special timber products.
Conclusions

Overall, this analysis has found that market demand is strong for some particular special timber species and grades, and the market is willing to pay relatively high prices for generally modest volumes of timber.

For some other species and grades, there is evidence of competitive markets and increasing potential for product substitution that collectively constrain market demand and prices. The market demand survey conducted for this analysis has found the majority of special timbers (by volume) is processed outside Tasmania, which has implications for the requirements for special timbers to compete with an increasing array of alternative timber and non-timber products.

Against the backdrop of a substantial reduction in special timbers log supply over the past 10 years, prices have increased to varying extents in nominal terms – but for most of the volume, there is limited time series data or other evidence to indicate real price increases over this time.

In this context, market demand for Tasmania’s special timbers is exposed to a complex range of supply and demand side factors. Interventions arising from public policy or commercial investments in special timbers will need to be cognizant of international competition in markets.
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1. INTRODUCTION

This report presents a market demand analysis for Tasmania’s special species timbers (hereafter, ‘special timbers’); comprising specifically, blackwood, Huon pine, myrtle, celery-top pine, sassafras and silver wattle.

As noted in Forestry Tasmania’s Special Timbers Strategy of 2010, these species are part of Tasmania’s brand and are highly regarded both within Australia and throughout the world for their decorative and other specialised applications\(^1\) (Figure 1-1). Their social and economic significance is based on a range of economic activity throughout the state.

Figure 1-1 Tasmania’s special timbers in application

- Blackwood interiors
- Functional furniture and furniture art
- Commercial projects and fit-outs
- Traditional sailing boats and watercraft
- High end musical instruments
- Market woodcraft

Photo credits (top left to bottom right): Britton Timbers; Graham Hyland; Britton Timbers; Denman Marine; Mark Gilbert Guitars; George Harris

This report on market demand for Tasmania’s special timbers comprises: an overview of the main value chains; an analysis of current levels of demand; a review of demand drivers and emerging trends; a review of market structures; and observations on these market trends for the future of the sector. These components are intended to provide an evidence base to assess the level of demand for each special timber species and inform development of the Special Species Management Plan.

1.1 Policy context

Under the Forestry (Rebuilding the Forest Industry) Act 2014, the Tasmanian Government has undertaken to develop a Special Species Management Plan by October 2017 – i.e. three years after this legislation came into force. Amongst other elements, the Special Species Management Plan must specify the special species to which the plan applies, and the established supply level of each species of special timber. The legislation refers to six species specifically: Tasmanian blackwood, Huon pine, myrtle, celery-top pine, sassafras and silver wattle.

There are other ‘special timbers’ produced in Tasmania and traded in relatively small volumes compared with the long-term contract allocations of eucalypt species. However, the primary focus for the Management Plan is on the six selected species listed above.

To establish the supply level of these special timbers, the Tasmanian Government engaged Indufor to analyse and estimate market demand, and provide an in-depth understanding of the factors that influence demand and supply chains for special timber products.

1.2 Project methodology
The methodology for this market demand analysis comprised three main research activities:
1. A review of relevant studies and reports, including published and unpublished works;
2. Conducting a survey of value chain participants across the range of sub-sectors from sawmillers through to retailers (referred to as the ‘market demand’ survey); and
3. Conducting interviews with representatives of industry associations, State government departments, university faculties, the woodcraft guild and other stakeholders with a broad viewpoint of the structure of the sector and market demand trends over time.

Relevant publications
A comprehensive review of Tasmania's special timber and woodcraft sector was prepared for the Woodcraft Guild and Forestry Tasmania in 2009.² This review incorporated an extensive survey comprising detailed operator questionnaires (109 respondents) and in-depth interviews (35 completed) across the sub-sectors, which provided a basis for estimating the full extent of production and the socio-economic characteristics of the industry. The report described the processing and use of Tasmania’s special timbers in high-value products such as fine furniture, panelling, cabinet work, cupboards and kitchens, floors and walls, doors and windows, feature beams, boardwalks, saunas, craft items, boat building, musical instruments and joinery.

The 2009 review did not focus on market demand or demand drivers specifically. It was more focused on describing the range of end use markets; characterising the profiles of value chain participants from sawmilling through to the retail sector; and providing estimates of turnover of products at different stages of the value chain. In this context, it provides a valuable reference for the status of the sector at that time.

Following this work, Forestry Tasmania prepared its Special Species Strategy in 2010, which encompassed a range of strategic objectives and initiatives relating to: (i) sustaining the forest resources to provide an ongoing long-term supply of special timbers; (ii) maximizing value recovery; and (iii) promoting Tasmania’s special timbers more broadly.³ The 2010 strategy provided the basis for industry planning, prior to the subsequent development of the Tasmanian Forests Agreement, and more recently, new legislation intended to rebuild the forest industry.

Another publication of particular relevance to this market demand study is the review of Tasmanian forest industry employment and production, 2012-13, conducted by the University of Canberra and published in 2014. This study did not focus specifically on the special timbers sector; however, it does clearly reflect the substantial change in the forest industry since 2008.

The University of Canberra study has implications for business confidence in the special timbers sector, which has been largely dependent on industrial harvesting and sawmill processing operations across the state. The study noted that business confidence in 2014 was generally fragile, and substantial investment in the industry was unlikely unless key issues were resolved. The key issues described in the report related particularly to security of contracts for harvest and haulage contractors; the security of supply for processors; and having access to stable markets that enable a profitable return across the industry.⁴

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These three publications, among others, were reviewed and relevant data on markets and market structures were extracted to form a baseline for this study on market demand.

**Surveys across value chain**

A central component of this market demand analysis was a targeted survey of industry participants across the value chain, from growers and sawmillers to producers and retailers.

The survey sampled a significant portion of the throughput of the special timbers sectors; given its targeted approach it was less extensive than the Farley et al. review of the special timbers and woodcraft sector in 2009. The survey results should not be considered to be reflective of the entire extent of the industry. However, the survey for this market demand analysis was designed with input from the special timbers sub-committee to provide specific data and current information relating to industry preferences; demand for particular special timbers; drivers of demand; and the sensitivity of customers to market changes, such as changes to supply volumes and prices.

Survey forms were tailored for five distinct sub-sectors comprising: growers (log suppliers); sawmillers; distributors; designers and producers; and retailers. An overview description of these sub-sectors is provided in Appendix 1.

A separate survey form was tailored for architects, specifiers and builders; recognizing that they directly influence market demand for special timbers, but generally they do not purchase or sell special timbers, and therefore do not form part of the supply chain.

Surveys were conducted between April and May 2015, through a combination of face-to-face meetings and telephone interviews. Key features of the survey include:

- In total, 84 organisations and individuals were contacted, and 55 surveys were completed – a response rate of around 64%.
- The survey incorporated meetings with Forestry Tasmania and its subsidiary Island Specialty Timbers (IST); which together, account for most of the special timbers log supply to the sector. The supply of special timbers from private forests is relatively small in total.
- The survey encompassed over 90% of the sawmilling production base for special timbers;
- The survey comprised 14 producers, including representatives of furniture makers, cabinetry and joinery shops, boat builders, instrument makers and woodcraft makers.
- The survey comprised 15 retailers, including representatives of leading Tasmanian retailers specializing in special timbers as well as interstate retailers.
- The survey included interviews with three architects and specifiers using special timbers, to obtain their perspectives and qualitative view of market trends.

Summary data on the survey results are presented in Appendix 2. Relevant data and observations from the survey are drawn on throughout the following sections.

**Qualitative interviews**

In addition to the survey of value chain participants, Indufor conducted a series of semi-structured interviews with a range of representatives of industry associations, government agencies, university faculties and organisations with a direct linkage or a significant interest in the special timbers sector. A total of eight interviews were conducted, with representatives of the Forest Industries Association of Tasmania; the Tasmanian Special Timbers Alliance; the Woodcraft Guild of Tasmania Inc.; Fine Timber Tasmania; the Deloraine Stringfest; the University of Tasmania’s (UTAS) School of Sustainable Architecture for Wood; the UTAS School of Design; and Swinburne University’s Faculty of Design.

These semi-structured interviews provided qualitative input, guidance and perspectives on market demand for Tasmania’s special timbers, to complement the survey outcomes.
2. SPECIAL TIMBERS SECTOR

An overview of the special timbers sector is required to provide the context for consideration of market demand. The resource supply to the sector and the composition of the various sub-sectors are outlined below.

2.1 Resource supply

A detailed description of the special timbers resource base is beyond the scope of this report, and will be addressed directly by a separate study underway for the Tasmanian Government. However, for the purpose of this market demand assessment, it is important to recognise the resource base can be characterised as significantly constrained by scale, access, and the sustainable forest management objectives and prescriptions for slow growing species with special qualities.

The special timbers sector is based predominantly on the log harvest by Forestry Tasmania from public native forests. While private native forest generate some resource, it accounts for a relatively small proportion of total supply. Based on Indufor’s market demand survey, private native forest is estimated to provide less than 5% of overall supply.

Blackwood, the dominant species by volume, is harvested from both the blackwood swamp forests (located primarily in the northwest of the state) and as an arising from integrated operations in eucalypt forests.

Most other special timbers occur predominantly in older stands of wet eucalypt forests. Forestry Tasmania manages production forests with the objective of producing a sustainable supply of timbers such as myrtle, sassafras and celery-top pine as well as large-dimension eucalypt timber for special purposes.5

In the case of Huon pine forest, small areas occur within the predominantly-rainforest management zone. More than 85% of Tasmania’s Huon pine is contained within the state wide reserve system. The main area for production is the Teepookana Plateau, near Strahan.6

Forestry Tasmania’s special timbers log production over the past decade, for all species and log grades, is shown in Figure 2-1. The proportions of supply for the six selected species of special timbers (excluding eucalypts and other mixed species) are shown in Figure 2-2. Key features of these trends are:

- Blackwood is by far the dominant species, accounting for over 85% of total supply in recent years, and therefore the dominant component of special species timbers in the market;
- The supply of special timbers has declined progressively over time, with the total supply in 2014/15 less than 50% of the total supply in 2003/04;
- As the total harvest has declined, the proportion of blackwood harvested has increased, to the situation where it now constitutes 90%+ of total production of special timbers (excluding “other/eucalypt mixed species” in the mix);
- The decline in myrtle log supply is notable - declining from over 3 000 m³ per year in 2003/04 to around 500 m³ in 2012/2013, and less than 50 m³ in 2014/15;
- The decline in celery-top pine is similar, particularly over the past three years; and
- The supply of “other / eucalypt mixed species” has moved up and down over time, reflecting the nature of ‘arisings’ – i.e. the recovery of ‘special timbers’ as part of routine harvesting operations for Category 1 & 3 sawlogs and peeler logs.

6 Forestry Tasmania (2010), ibid.
Figure 2-1 Forestry Tasmania special species log production, all log grades, 2003/04 to 2014/15

Source: Forestry Tasmania, Sustainable Forest Management Data Tables

Figure 2-2 Forestry Tasmania special species log supply, selected species only, all log grades, 2003/04 to 2014/15

Source: Forestry Tasmania, Sustainable Forest Management Data Tables
The summary above relates to all log grades. The profile of Forestry Tasmania’s production of millable logs\(^7\) (Category 4 logs and utility logs) over the past five years is shown in Figure 2-3.

**Figure 2-3 Forestry Tasmania’s special species production, millable logs only, 2010/11 to 2014/15**

![Graph showing production of blackwood millable logs has continued at relatively stable level over this period, with production in 2014/15 (4 350 m\(^3\)) exceeding production in 2010/11 (3 880 m\(^3\)). However, the supply of millable logs for the other selected species has generally declined – and in some cases, there has been a considerable decline. For example, production of myrtle millable logs has dropped by over 90% over this period; and for celery-top pine, the reduction has been around 70%. This indicates the varying level of impact the declining supply of special timbers has had on particular sub-sectors that are dependent on particular species and grades. The main sub-sectors using special species timbers are outlined in section 2.2.]

In 2010, Forestry Tasmania prepared a Special Timbers Strategy that set out its annual supply targets for special timbers ‘millable logs’ for the ten-year period to 2019. These supply targets, set out below, provided guidance to the forward projections for supply of the six primary special timbers. However, the Tasmanian Forests Agreement process superseded the Special Timbers Strategy, and Forestry Tasmania is looking to revise these projections as part of further work on the Special Species Management Plan.

A comparison of actual annual supply volumes with the targets is set out in Table 2-1. This shows the actual average supply of millable logs over recent years has fallen well short, for all species. The actual average annual supply of blackwood millable logs has been less than 50% of the supply target; for celery-top pine, actual supply has been around 63%; for Huon pine, around 43%; for sassafras (blackheart and white), around 29%; for myrtle, around 16%; and for silver wattle, around 11%. This clearly reflects the substantial reduction in the supply of primary log grades for special species timbers.

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\(^7\) Millable logs comprise Category 4 logs (first grade special timbers sawlogs as set out by Forestry Tasmania) and Utility logs. Refer Forestry Tasmania’s Special Timbers Strategy, 2010.
Table 2-1 Annual supply targets for Forestry Tasmania’s millable logs, 2010-2019

<table>
<thead>
<tr>
<th>Species</th>
<th>Annual supply target volume (m$^3$/year)</th>
<th>Actual average supply over past five years (m$^3$/year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackwood</td>
<td>10,000</td>
<td>4,009</td>
</tr>
<tr>
<td>Celery-top pine</td>
<td>500</td>
<td>317</td>
</tr>
<tr>
<td>Huon pine</td>
<td>500</td>
<td>216</td>
</tr>
<tr>
<td>Sassafras</td>
<td>500</td>
<td>145</td>
</tr>
<tr>
<td>Myrtle</td>
<td>500</td>
<td>78</td>
</tr>
<tr>
<td>Silver wattle</td>
<td>500</td>
<td>53</td>
</tr>
<tr>
<td>King Billy pine</td>
<td>Arising only</td>
<td>-</td>
</tr>
<tr>
<td>Other species</td>
<td>Arising only</td>
<td>45</td>
</tr>
</tbody>
</table>

Source: Forestry Tasmania (2010); Forestry Tasmania (2015) - data provided for project purposes.

Log supply arrangements are further discussed with respect to each of the special timbers in section 3. In broad terms, Forestry Tasmania supplies most of the millable logs through long-term (10+ year) log supply contracts with a few, relatively large customers, and a number of shorter term (e.g. one to three year) sales contracts with smaller customers.

The quantities of each species and grade of logs supplied under sales contracts are determined by negotiation, based on forecast availability over the period of the contract and past performance. The prices for logs supplied under each form of sales contract are also determined by negotiation.²

Forestry Tasmania’s non-millable logs are generally sold through its IST division, with wood yards at Geeveston, Strahan and Smithton. IST Geeveston is the only facility to have milling capacity, with local processing intended to realise higher returns from the resource. IST sells logs and timber primarily through yard sales (spot sales), and also through regular tenders of small parcels. Tenders constituted less than 10% of sales volumes in 2013/14, but closer to 30% in the current year to date.

2.2 Sub-sectors

The Tasmanian special timbers sector is complex, and made up of a number of different sub-sectors. There is a broad range of producers that have their own unique characteristics in terms of the nature and configuration of timbers used, products produced, and the markets sold to. There are also major differences in business structures from large companies to sole traders, and in employment from full time employees to ‘hobbyists’.

For these reasons it is not possible to model the special timbers sector as one sector; nor assess market demand for the sector as a whole. Therefore, this assessment of market demand has considered the market dynamics for each of the separate sub-sectors.

The main sub-sectors identified for the purpose of this study are listed in Figure 2-4.

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² Forestry Tasmania (2010 Special Timbers Strategy.)
A brief introduction to these sub-sectors is set out below. An overview description of each of the sub-sectors is set out in Appendix 1.

2.2.1 Milling and processing

The milling and processing sub-sector comprises sawmillers and timber distributors.

Sawmillers

There is a broad range of sawmills processing special timbers across Tasmania. The largest of these mills is Britton Timbers (Smithton), which is set up at an industrial scale based on long-term log supply contracts for Category 1 and 3 Tasmanian oak (generally the majority of supply volumes) sawlogs as well as receiving a long-term supply of special timbers.

Smaller-scale mills include Corinna Timbers (Burnie) and Specialty Veneers (Somerset), which mainly process special timbers based on a long-term supply of a range of species; and the Huon pine millers, Western Softwoods (Strahan) and Tasmanian Special Timbers (Queenstown).

In addition, there is a relatively large number of smaller part-time sawmilling operations. These mills are predominately of the portable/relocatable type, which can be used as an on-farm mill and primarily by part-time millers who cut for themselves or small scale timbers operations.

Indufor’s survey work in 2015 focussed primarily on the large-scale mills and smaller scale specialist mills; and market demand surveys were conducted with most of these operations.

Sawn timber and veneer recovery rates for special timbers vary across milling operations; but in broad terms, tend to be in the order of 35-40% (higher for some veneer operations). The remainder becomes fall down material which may be directed to wood turning projects, or to lower value end uses.
Timber distributors

Timber distributors play an important role in the special timbers sector, particularly the access to interstate markets. Distributors generally supply timber boards and veneers, which are targeted to end use markets comprising flooring, panelling, commercial fit-outs and also some high end furniture manufacturers.

Indufor's market demand survey work found a large proportion of special timbers sawn timber is directed interstate via distributors – indicatively 50% across the range of species and grades. The supply of sawn timber to markets in Tasmania via distributors is negligible - less than 2%, as sawmills generally sell directly to producers and commercial fit-out projects within the state.

2.2.2 Design and production

The design and production sub-sector comprises a diverse array of producers, including skilled artisans and craftspersons as well as long established businesses based on furniture production and cabinetry and joinery.

Furniture manufacturers

A substantial proportion of Tasmania’s special timbers are directed to wooden furniture markets; estimated to be around 50% of the total supply, based on Indufor's survey work in 2015.

The larger manufacturers are proprietary businesses that employ tradespeople and manufacture in-house designs in close association with specific retailers, including leading furniture retailers in Tasmania, furniture chain stores on the mainland and numerous similar niche retailers. In addition to furniture manufacturing companies, there are high end furniture designer/makers that operate as sole traders, selling direct to end users or through retail.

While blackwood has been the mainstay of Tasmania's high end furniture, a number of producers and retailers noted the market has sought a broader range of special timbers – and in more recent years, there has been a distinct shift to lighter coloured timbers in the range.

Cabinetry and joinery

Cabinetry and joinery shops are significant users of special timbers, although it is often a relatively small portion of their overall materials inputs. They generally require premium quality sawn material and veneers. While these may be able to be substituted with other materials, there are clients that seek an iconic Tasmanian theme, or seek to match an existing heritage style in extensions or restorations. In these circumstances special timbers cannot be readily substituted.

Based on Indufor’s survey results, cabinetry and joinery shops use a broad range of special timbers, notably blackwood, myrtle and celery-top pine.

Wooden boat builders

Tasmania has a long tradition of wooden boat building. To a large extent, the heritage of this sub-sector is based on having access to three special timber species with ideal qualities for boat building. Celery-top pine, Huon pine and King Billy pine are strong, light and naturally durable, with excellent woodworking qualities.

Boat builders generally have the highest specification of timber quality requirements, being long, wide, defect-free boards. This limits the proportion of timber that is suitable for boat building. As a general guide, typically less than 5% of the celery-top pine, Huon pine and King Billy pine harvested and milled by the large sawmillers is considered ‘boat grade’.

Musical instrument makers

Musical instrument makers comprise a category of designers and producers using special timbers, generally to produce high value products. Examples include guitars, drums, harps, violins and woodwind instruments. Some of the finished products are sold for between $5 000
and $15,000 as individual items; incorporating high quality pieces of timber with tonal properties and attractive aesthetic features.

Indufor’s market demand survey recorded guitar makers in particular. In this context, it was noted that Tasmanian blackwood is becoming internationally recognized as an attractive tonewood, and an alternative to other timbers that are becoming more scarce and expensive.9

Musical instrument makers have very specific requirements for material suppliers. These requirements generally equate to the highest quality grades of timber, i.e. based on tonal qualities and attractive figure, which represent a relatively small proportion of the total supply.

Woodcraft makers
Tasmania’s woodcraft sub-sector incorporates wood turners, giftware makers and box makers, and accounts for a large number of full time and part-time workers, as well as hobbyists, who transform special timbers into products for sale in galleries, retail shops and market stalls.

The timber sought by this sub-sector of makers is generally quite different to that sought by furniture manufacturers, boat builders and musical instrument makers. Generally they seek the more complex grain patterns. Wood turners can often prefer particular features that are considered defects by other sectors. Small pieces and short sections are also generally acceptable for wood turners.

Value adding in this sector is often obscured by the minimal recognition of labour costs in the woodcraft activity. The transformation value of converting a small offcut of wood into a high value pepper mill or some other object can be substantial; but may not factor in the labour costs that would be attributed to commercial businesses. In large part this relates to a portion of the labour force being part-time workers, or semi-retired people who are transforming special timbers as a hobby or to supplement other sources of income or a superannuation pension.

2.2.3 Retailers
Retailers provide important outlets for special timber products. There is a significant number of enterprises in this sub-sector, and they include retail shops and galleries, accommodation based outlets, tourism attraction outlets, and market stallholders – and many have online sales channels also.

Most of the enterprises in this sub-sector are focussed on the tourism visitor market, notably interstate and international visitors. In addition, the retail shops and galleries in particular are targeting Tasmanians with higher levels of discretionary income. The retail shops and galleries sell a broad range of special timber products, from giftware through to furniture items; while other categories tend to focus on smaller items of giftware that buyers can readily carry.

A focal point for tourists to Tasmania is the Salamanca market, which currently has around 20 permanent stalls that sell woodcraft as all or part of their stock. However, the volumes of timber used in these products is relatively small compared to applications in commercial projects such as commercial fit-outs or home restorations.

2.3 Survey coverage
Indufor’s market demand survey, conducted to support this analysis of market demand, sought also to obtain a range of informative data on the socio-economic contribution and trends across the sector. This included consideration of enterprise turnover (gross revenues), employment, capital investment and business plans for the future.

A summary of the findings from the survey is set out below. This provides insights on the scale and dimensions of the sector, based on the sample sizes covered by the survey.

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9 Indufor market demand survey 2015; survey responses from instrument makers.
Table 2-2 Summary of coverage of Indufor market demand survey

<table>
<thead>
<tr>
<th>Growers (n)</th>
<th>Sawmillers (n)</th>
<th>Distributors (n)</th>
<th>Producers (n)</th>
<th>Retailers (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total sawn timber production/usage (m³)</td>
<td>3,600 (7)</td>
<td>2,400 (5)</td>
<td>130 (13)</td>
<td>Not provided</td>
</tr>
<tr>
<td>Number of FTE employees working on special timbers from surveyed enterprises</td>
<td>43 (4)</td>
<td>5 (3)</td>
<td>62 (13)</td>
<td>41 (13)</td>
</tr>
<tr>
<td>Changes in employment, from last five years (%)</td>
<td>+15%</td>
<td>-12%</td>
<td>0%</td>
<td>+13%</td>
</tr>
<tr>
<td>Total special timber revenues from surveyed enterprises ($)</td>
<td>$1,600,000 (3)</td>
<td>$6,850,000 (5)</td>
<td>$3,850,000 (3)</td>
<td>$3,644,000 (8)</td>
</tr>
<tr>
<td>Estimated revenues - five years ago ($)</td>
<td>$2,100,000 (3)</td>
<td>$6,763,000 (5)</td>
<td>$6,050,000 (3)</td>
<td>$3,330,000 (8)</td>
</tr>
<tr>
<td>Actual capital investment over last five years from surveyed enterprises ($)</td>
<td>Not provided</td>
<td>$11,565,000 (5)</td>
<td>Not provided</td>
<td>$1,120,000 (8)</td>
</tr>
<tr>
<td>Planned capital investment over next five years ($)</td>
<td>Not provided</td>
<td>$3,500,000 (4)</td>
<td>Not provided</td>
<td>$680,000 (5)</td>
</tr>
</tbody>
</table>

Source: Indufor market demand survey 2015. Numbers in (brackets) indicate number of survey responses that comprise the survey results.

This summary shows the businesses and individuals covered by the survey account for:

- Approximately 3,600 m³ of sawn timber produced by sawmillers and sold to downstream customers via direct sales, distributors and producers (estimated to be over 90% of total sawn timber throughput);
- Approximately 160 full time equivalent (FTE) people employed directly in working with special timbers, across sawmills, distributors, producers and retailers – a similar level to employment overall in the same businesses five years ago;
- Approximately $20 million in turnover (revenue) directly from special timbers production and sales, compared to around $22 million in turnover from the same businesses five years ago;
- Over $12 million in capital investment in special timbers over the past five years; and
- Over $5 million of planned capital investment over the next five years, largely subject to confidence in the availability of special timbers supply over this time horizon.

As an indication to the viability of the supply chain, the survey asked respondents to indicate employee status between current day and five years ago. In total, and in broad terms, employee numbers have been maintained over this period. Sawmillers and retailer respondents have lower employee numbers now (both down by around -12%), while producers showed an increase in employee numbers (+13%); however, this result was influenced by a couple of particular producer responses.

Consideration of employee numbers by sub-sector and overall should take into account the lower overall throughput of the special timbers supply chain. The survey results infer the sector participants have maintained, but not markedly expanded, their operations of their enterprises.
Broader industry changes

This sector profile sits against a backdrop of substantive change in the wider Tasmanian forest industry, which has clearly impacted on the special timbers sector. The downturn in markets for native forest hardwood products, Gunns’ exit from the native forest industry, and the subsequent Tasmanian Forests Agreement process all impacted on the industry as a whole.

The socio-economic impacts of these changes in the forest industry were analysed and reported by Schirmer et al. (2014), who found that total industry employment fell from almost 7 000 people in 2008 to around 2 700 people in 2013 – a decline of 61% over this period.10

This wider industry trend should not be implied to suggest similar proportional reductions in employment in the special species timber sector – Indufor’s market demand survey indicates otherwise. However, there is a clear relationship between the larger industrial operations and special timbers production, which has drawn its log supply mostly from integrated harvesting operations across the state. In this context, an overlay of the level of harvest of special timbers from public native forests with total forest industry employment is set out below.

Figure 2-5 Industry employment trends and special timbers harvests, 2006 to 2013

![Graph showing industry employment trends and special timbers harvests, 2006 to 2013](source: Forestry Tasmania Sustainable Forest Management Data Tables; Schirmer et al. (2014))

In addition to the wider forest industry changes, Indufor’s market demand survey picked up the importance of Tasmanian tourism and tourism expenditure to special timbers demand in the retail sub-sector in particular. A number of retailed respondents flagged the ‘up and down’ of tourism-based activity had led to some operating challenges and some reductions in employment numbers.

There is a range of interrelated factors that collectively drive the market demand and tourism spend on special timber products. Among these factors, Tourism Tasmania reported in 2014 that visitor arrivals to Hobart and surrounds have increased steadily over the past 4-5 years; but visitors to other regions (where various special timbers retail outlets are located) had been more varied; and total visitor expenditure in Tasmania has fallen annually over this period.11

11 Tourism Tasmania Strategic Scan 2014.
Determining causal linkages would require more a detailed analysis of patterns of tourism activity, as they relate to the types and locations of special species retail outlets. However, the market demand survey clearly highlighted the importance of tourism to market demand for particular products and sub-sectors of the special species industry.

These broader industry trends contribute to the explanation of reductions in employment in some particular sub-sectors; notably in sawmilling and to a lesser extent in retail. The apparent resilience among most producers who contributed to Indufor’s market demand survey may reflect the large spread of businesses that can potentially diversify their enterprise activity more so than large industrial players, or carry lower profitability for longer periods.
3. SPECIAL TIMBERS MARKETS

This section presents a review of the market demand for Tasmanian special timbers by species, and delineates between timber grades in terms of their uses and values.

3.1 Markets by species

3.1.1 Blackwood

Blackwood (*Acacia melanoxylon*) is the most prominent of Tasmania's special timbers, by volume harvested and processed into a wide range of products. The timber ranges in colour from light golden-brown to deep brown (sometimes with a reddish tint) and occasionally showing black streaks. Further to this, blackwood is easily worked, stable in application and durable. In addition to the supply of solid sections, the availability of high quality veneers has increased the timber's versatility for use in joinery, cabinet making, and feature panelling.

An overview of the current log supply, key markets and price ranges for blackwood sawn timber is set out below.

Figure 3-1 Overview of key markets for blackwood, by timber grade

<table>
<thead>
<tr>
<th>Timber grades</th>
<th>Primary markets</th>
<th>Indicative supply (%)</th>
<th>Indicative timber supply price ($/m³)</th>
</tr>
</thead>
</table>
| Premium grade with tone wood quality or special feature | • Instrument makers  
• Furniture makers  
• High end woodcraft | Up to 5% | $5 000-$15 000 |
| High grade quality with low feature               | • Furniture makers  
• Cabinetry & Joinery  
• Commercial fit-outs  
• Flooring  
• Woodcraft makers | 60-70% | $2 000-$3 000 |
| Low grade quality                                 | • Furniture manufacturers (via exports)  
• Woodcraft makers | 20-35% | $1 000-$1 500 |

Sources: Forestry Tasmania log production volumes; Indufor market demand survey 2015
Notes: * Forestry Tasmania produced an average of 9 545 m³ per year of blackwood (all grades) between 2009/10 and 2013/14. ** Indicative log grade proportions based on Forestry Tasmania log production in 2014/15. *** Average sawn timber recovery rates estimated to be around 35%.

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Most of the blackwood available to the sector is supplied by Forestry Tasmania under long-term (e.g. 10+ year) sales contracts with several larger sawmills, which have set up processing operations and timber distribution arrangements around this supply base and continuity. These sawmills generally receive a proportion of the full suite of millable logs (‘category 4’ and ‘utility’ logs, and some ‘outspec’ logs). These grades include high quality logs suitable for sliced veneer, sawing material, and a range of low grade material with lower value recovery.

Forestry Tasmania has also negotiated shorter term sales contracts (e.g. one to three years) with a small number of other customers. These are typically for locations where there is no other regular demand for special timbers, or for species or grades of logs for which regular demand is limited. The contracted quantities are for no more than 100-300 m³ per year. Some of these contracts arise from tenders conducted by Forestry Tasmania from time to time.

Beyond these occasional tenders, there is no regular competitive bidding for blackwood millable logs. Therefore the role of optimising the value recovered for sawlogs, across all grades, sits primarily with the contracted sawmills. Generally the sawmillers break down the logs and then seek to sell sawn timber to the most profitable markets.

For the purpose of this analysis, three grades of blackwood timber were identified: premium grade with tonewood quality or other special feature; high grade with low feature; and low grade. Figure 3-1 illustrates the spread of market demand for blackwood sawn timber. The highest prices are paid for premium quality grades where there is tonewood quality or other attractive features, such as large dimensions, fiddleback or wavy figure grain. The price range of $5 00 to $10 000+/m³ was observed from a range of Indufor’s market demand survey results. However, the proportion of sawn timber output that realises these types of prices is relatively small - estimated to be up to 5% at most.

Most blackwood sawn timber is sold into domestic markets, primarily to furniture makers, cabinetmakers and joinery shops, commercial fit-out projects and, to a lesser extent, flooring products. Indufor’s market demand survey results found that blackwood is generally in high demand from this range of producers, with most sawmillers, distributors and producers reporting they would buy more high grade blackwood if it was available. Blackwood flooring is an exception to this; it is currently struggling to compete with consumer preference for the premium ‘brown timbers’, notably spotted gum, and cheaper options available, including Tasmanian oak and imported timber such as American oak.

The survey also observed demand was relatively soft for lower grade blackwood timber, with sawmillers reporting a lack of demand in Australia. This is largely due to low grade blackwood lacking in distinctive features, e.g. pale and lacking figure, and there are various substitute options. As a result, most of this low grade is sold to export markets, notably China, where it is understood to be processed into wooden furniture and other products. This is attributable to the globalisation of markets and the relatively low labour costs in other countries.

Export prices paid for low grade blackwood are generally substantially lower than the higher grade sawn timber sold into domestic markets, and in isolation, the value recovery may be minimal. However, integrated harvesting and processing systems for blackwood (like Tasmanian oak) rely upon realising some return from low grade material for the commercial viability of the sector as a whole, and currently export markets are offering the best outlet.

Forestry Tasmania’s non-millable logs are sold to the market through IST. IST sells both logs and sawn timber, with some local processing intended to realise higher returns from the resource. IST sells its higher quality logs through a tender process, which has realised sales of over $1 000/m³ for premium quality blackwood logs. Recent tender prices for plain blackwood logs have been in the order of $250-$500/m³. While this provides some indication of market

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14 Indufor has used the term ‘premium grade’ to differentiate between high grade timbers, with premium grade having special or exceptional features, e.g. tonal qualities, birds eye or fiddleback grain.
values, the auction volumes are generally very small and log grade specifications vary from tender to tender.

3.1.2 Celery-top pine

Celery-top pine (*Phyllocladus aspleniiifolius*) is a natural, durable and tough fine grained timber. The wood is creamy white when freshly cut and darkens to a mellow rosy gold hue over time and with exposure to sunlight. Slowly grown, it has a hardness, strength and density not normally associated with softwoods. Further to this, celery-top pine is easy to work. It turns well and has long been employed in the traditional crafts of boat building and wood turning.

An overview of the log supply, key markets and price ranges for celery-top pine sawn timber is set out below.

**Figure 3-2 Overview of key markets for celery-top pine, by grade**

<table>
<thead>
<tr>
<th>Total log supply to the sector, average over last three years</th>
<th>Supply of Category 4 sawlogs**</th>
<th>Supply of Utility &amp; Outspec logs**</th>
</tr>
</thead>
<tbody>
<tr>
<td>400-600 m³</td>
<td>100-200 m³</td>
<td>300-400 m³</td>
</tr>
</tbody>
</table>

**Indicative annual production potential for sawn timber**

<table>
<thead>
<tr>
<th>Timber grades</th>
<th>Primary markets</th>
<th>Indicative supply (%)</th>
<th>Indicative timber supply price ($/m³)</th>
</tr>
</thead>
</table>
| High quality grade incorporating ‘boat grade’ | • Boat builders  
• Furniture makers | Up to 5% | $6 000-$8 000 |
| High quality grade, outside boat grade | • Furniture makers  
• Boat builders | 50-60% | $2 000-$4 000 |
| Lower grade, shorter and narrower lengths | • Furniture makers  
• Cabinetry & Joinery  
• Boat builders  
• Woodcraft makers | 40-50% | $1 000-$1 500 |

Sources: Forestry Tasmania log production volumes; Indufor market demand survey 2015

Notes: * Forestry Tasmania produced an average of 816 m³ per year of celery-top pine (all grades) between 2009/10 and 2013/14. ** Indicative log grade proportions based on Forestry Tasmania log production in 2014/15. *** Average sawn timber recovery rates estimated to be around 35%.

Farley *et al.* reported in 2009 that celery-top pine accounted for over 40% of the special timbers volume used for traditional boat building in Tasmania; with the second largest contributor, Huon pine, accounting for approximately 28%. Together with King Billy pine, these species are clearly the premium timbers for boat building due to their special combination of properties.

As noted above, boat builders generally have exacting specifications for their timbers, and ‘boat grade’ constitutes a relatively small proportion of the harvest from industrial operations –

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indicatively, up to 5%. Boat builders seek long, wide, defect free boards, and for celery-top timber of this quality, they are currently paying in the order of $8 000/m³.

The other primary market for high quality celery-top pine is furniture makers, which can be less demanding on specifications, particularly length requirements. Based on the market demand survey results, Indufor estimates approximately 10-20% of the current total harvest can command premium prices from furniture makers and boat builders seeking long wide sections.

Lower grade celery-top pine has limited application in boat building, and is directed more to furniture makers, cabinetry and joinery and woodcraft makers. In these markets, celery-top pine faces more competition from other timber products (including engineered wood products for cabinetry and joinery applications), and demand is somewhat softer; hence prices for these logs and the sawn timber are lower.

The scope to increase the proportion of celery-top pine sawn timber going to boat builders and other high end markets appears limited by the nature of current planning and harvest systems, which are based on integrated harvesting operations. Celery-top pine is, like other special timber species, recovered mainly as an arising from integrated harvesting operations for Category 1 and 3 sawlogs (primarily Tasmanian oak).

3.1.3 Huon pine

Huon pine (Lagarostrobos franklinii) is arguably the most iconic of Tasmania’s special timbers. It has a rich golden colour and distinctive figure, making it one of the world’s most desirable furniture and veneering timbers. Its durability and workability make it one of the best known boat building timbers. The wood contains natural preserving oil with a distinctive perfume, and its fine and even grain makes the wood easy to work with hand tools.

Huon pine was used by the early pioneers in Tasmania for everything where durability and ease of working was required – e.g. in furniture, boats and ships, and in machinery and patterns for casting. It continues to be used today for a broad range of functional and aesthetic applications.

An overview of the current log supply, key markets and price ranges for Huon pine sawn timber is set out below.

The iconic status of Huon pine is amplified by the situation of its supply. Almost all Huon pine forests are now reserved and most of the resource that is available comes from logs salvaged from rivers, the forest floor and areas inundated by hydro-electric schemes.

While celery-top pine can be preferred in some specific boat building applications, Huon pine is a premium timber for boat builders, furniture makers and high end woodcraft. High quality grade timber, with or without the special birds eye feature, will generally attract premium prices. Indufor’s market demand survey identified prices ranging up to $15 000/m³ in exceptional cases for long wide sections suitable for commission pieces such as boardroom tables.

The top end prices of over $10 000/m³ were estimated to be in the order of 1-2% of total Huon pine sawn timber production. The survey indicated that most Huon pine sawn timber is sold for ex-mill prices of between $3 000/m³ and $6 000/m³.

Lower grade Huon pine is generally timber with minimal feature and short lengths. This grade is sold mostly to furniture makers, cabinetmakers and joinery shops, and woodcraft makers, who specialise in using small sections to create timber products that incorporate Huon pine; generally with some recognition of its status as an icon Tasmanian timber species.

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Figure 3-3 Overview of key markets for Huon pine, by grade

<table>
<thead>
<tr>
<th>Total log supply to sector, average over last three years*</th>
</tr>
</thead>
<tbody>
<tr>
<td>300-500 m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supply of Category 4 sawlogs**</th>
<th>Supply of Utility &amp; Outspec logs**</th>
</tr>
</thead>
<tbody>
<tr>
<td>200-250 m³</td>
<td>100-250 m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indicative annual production potential for sawn timber</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-150 m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Timber grades</th>
<th>Primary markets</th>
<th>Indicative supply (%)</th>
<th>Indicative timber supply price ($/m³)</th>
</tr>
</thead>
</table>
| High quality grade with birds eye or other special feature | • Furniture makers  
• Boat builders  
• High end woodcraft | Up to 5% | $6 000-$10 000+ |
| High quality grade with minimal feature, and shorter lengths | • Furniture makers  
• Cabinetry & Joinery  
• Boat builders  
• Woodcraft makers | 70% | $3 000-$6 000 |
| Lower quality grade with minimal feature, and shorter lengths | • Furniture makers  
• Cabinetry & Joinery  
• Boat builders  
• Woodcraft makers | 40% | $2 000-$3 000 |

Sources: Forestry Tasmania log production volumes; Indufor market demand survey 2015

Note: * Forestry Tasmania produced an average of 550 m³ per year of Huon pine 2009/10 and 2012/13, but in 2013/14, only 70 m³ of craftwood was recovered from Teepookana during the year. However, Forestry Tasmania was able to supply customers from existing Huon pine stockpiles.

** Indicative log grade proportions based on Forestry Tasmania log production in 2014/15.

3.1.4 Myrtle

Tasmanian myrtle (*Nothofagus cunninghamii*) is the dominant understory tree in Tasmania’s cool temperate rainforest and in mixed wet eucalypt forests. The wood has been used extensively over time, notably as a cabinet timber. Colour varies from pink to a deep red brown and fiddle-back grain, stripey colour and burl figure is highly coveted. While a pale and pink myrtle is available, commercial production has tended to focus on the deeper red variety.

Tiger myrtle is perhaps the rarest of the myrtle colour decorations. The tiger stripe of contrasting dark brown and black is caused by fungal discoloration. Tiger myrtle is most often produced from cull trees with too much centre defect to meet sawlog or pulpwood specifications.

Myrtle has been used in solid form or as a veneer in high quality furniture, joinery, cabinet making and feature panelling in homes and offices, or as a striking finishing timber for cornices, architraves and skirting. It has further applications for craft workers. Myrtle turns well and traditionally has been used for spindle turning and bowls.

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Up until 10 years ago, myrtle accounted for a substantial proportion of Tasmania's special timbers harvest – in the order of 15% by volume in 2003/04 and 2004/05 (see Figure 2-1).

However, significant policy changes and forest reservations associated with the Tasmanian Community Forestry Agreement in the mid-2000s led to a substantial reduction in access to myrtle timbers. Since that time, annual production of myrtle has declined sharply, and over the past five years, it has been less than 3% of the total supply of special timbers. Forestry Tasmania's total production of myrtle logs in 2014/15 was around 40 m$^3$, which represents approximately 10-15 m$^3$ of sawn timber.

As a result, traditional markets other than woodcraft have shifted away from using myrtle. Indufor's market demand survey results found some distributors referring to myrtle as "irrelevant", largely on account of the lack of consistency in supply. To some extent, this shift has been accentuated by the fashion preference for lighter timbers in recent years. Re-establishing market demand would require considerable marketing effort and clear confidence that consistency of some substantive supply could be provided.

Meanwhile in the woodcraft sector, the deep red myrtle timber, particular with tiger features, continues to be popular. Recent tender prices reported by IST indicate that myrtle with tiger figure, in logs or short lengths, will sell for prices between $1,000 and $6,000/m$^3$. Myrtle burls and stumps are attracting prices between $350 and $700/m^3$; while plain myrtle logs are selling via tender for around $250 to $400/m^3$. The IST tendering process provides for competitive bidding on individual lots, and is reflective of market demand for these timbers.

3.1.5 Sassafras

Of all Tasmanian timbers, sassafras (*Atherosperma moschatum*) has the most variable and dynamic colouring. It is available in two major groupings: golden (or white) sassafras and blackheart sassafras.21

Sassafras is normally pale creamy grey to almost white, and can be attractive as a veneer or as a solid timber. If the tree is infected with a staining fungus it produces the blackheart pattern. Blackheart sassafras is a timber with distinctive dark brown, black, and even green streaks running through the wood. Blackheart is highly prized for decorative work and bowl turning.

Sassafras timber is versatile. While the wood is light and strong, it is generally soft and easily worked. Sassafras is renowned for furniture use as a solid, a veneer or a laminated board, and is also used for panelling, mouldings, joinery, veneers, cabinetry and wood turning.

An overview of the current log supply, key markets and price ranges for sassafras sawn timber is set out below.

Sassafras constitutes a relatively small proportion of the total supply of special timbers – on average, around 2% over the past 10 years. Blackheart sassafras has accounted for around 60% of Forestry Tasmania’s supply of sassafras to the sector over this same period.

Indufor’s market demand survey results found that blackheart sassafras is clearly preferred over white sassafras and it commands a premium price. Across the value chain, respondents indicated that blackheart sassafras is very much in vogue and there is a high level of market demand for its unique and high distinctive colouring and patterns. Recent IST tender prices show most sassafras logs with blackheart stain are selling for between $1,500 and $3,000/m$^3$, while exceptional logs have sold for around $5,000/m^3$. These log prices can be rationalized where buyers will maximize recovery through veneer processing or milling for specific project purposes, and full utilisation of fall down material – mostly through other wood craft. Furthermore, it must be recognised these prices relate to relatively small volumes of timber – usually less than a few cubic metres per transaction.

Figure 3-4 Overview of key markets for sassafras, by grade

<table>
<thead>
<tr>
<th>Timber grades</th>
<th>Primary markets</th>
<th>Indicative supply (%)</th>
<th>Indicative timber supply price ($/m³)</th>
</tr>
</thead>
</table>
| Blackheart sassafras – premium grade, high feature | • Furniture makers  
• Cabinetry & Joinery  
• Shop-fitters  
• High end woodcraft | Up to 5% | $5 000-$8 000 |
| Blackheart sassafras – low feature  | • Furniture makers  
• Cabinetry & Joinery  
• Shop-fitters  
• High end woodcraft | 50-60% | $3 000-$5 000 |
| White sassafras (and lower grade sassafras) | • Furniture makers  
• Cabinetry & Joinery  
• Woodcraft makers | 30-40% | $1 500-$2 000 |

Sources: Forestry Tasmania log production volumes; Indufor market demand survey 2015

Note: * Forestry Tasmania has produced approximately 170 m³ per year of blackheart sassafras over the past three years; and approximately 40 m³ of white sassafras over this period. ** Indicative log grade proportions based on Forestry Tasmania log production in 2014/15.

IST tender prices show sassafras logs with plain colour are selling for between $1 500 and $3 000/m³. These prices generally reflect a premium on the wood lots sold to contracted sawmills as part of integrated harvesting and log supply operations. Indufor’s market demand survey results indicate that most of the plain colour sassafras sawn timber is sold for between $1 500 and $2 500/m³. Market demand for the plain colour sassafras is clearly not as strong as for the blackheart, but it is still recognised as sassafras and carries good woodworking properties for a range of end uses.

3.1.6 Silver wattle

Silver wattle (Acacia dealbata) can be a striking light brown to subtle pink timber, and its distinct growth rings can create a striped pattern (particularly when backsawn), which makes it a fine timber for furniture designers and manufacturers. Silver wattle is closely related to blackwood and provides a counterpoint to the more widely used but darker species. The timber is strong and durable, lending itself to use in solid form and in veneers.

Notwithstanding these properties, Indufor’s market demand survey found that silver wattle does not have the same market cachet as the other Tasmanian special timbers. It was generally overlooked in responses by sawmillers and distributors, and producers were generally not able to quantify their use of silver wattle on a regular or reliable basis.

Forestry Tasmania’s log production records show silver wattle has accounted for a relatively small proportion of total supply of special timbers; and this has decreased over the past
10 years, from around 2% to less than 1%. The average annual supply to the sector over the past five years has been 65 m³, which represents around 20-25 m³ per year of sawn timber.

Without access to substantive data on log allocations to customers, Indufor understand a significant proportion of silver wattle is harvested as non-millable logs and sold via IST to a range of users. Recent IST tender prices show silver wattle log with some figure selling for between $250 and $435/m³. This price range is comparable to recent IST tender prices for blackwood logs with plain grain; but less than the price for blackwood with some figure.

### 3.2 Markets by location

Indufor’s market demand survey invited respondents across the value chain (including sawmillers, distributors, producers and retailers in interstate markets) to specify the proportion of sales to customers within Tasmania, interstate and international markets. A summary of the combined survey responses is set out in Figure 3-5 below.

**Figure 3-5 Location of customers for special timbers, by sub-sector**

<table>
<thead>
<tr>
<th>Sawmillers</th>
<th>Distributors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tasmania</td>
<td>Tasmania</td>
</tr>
<tr>
<td>Interstate</td>
<td>Interstate</td>
</tr>
<tr>
<td>International</td>
<td>International</td>
</tr>
</tbody>
</table>

- **Sawmillers**
  - 53% Tasmania
  - 0% Interstate
  - 23% International
  - 24%

- **Distributors**
  - 100% Tasmania

- **Producers**
  - 46% Tasmania
  - 7% Interstate
  - 47% International

- **Retailers**
  - 62% Tasmania
  - 14% Interstate
  - 24% International

**Source:** Indufor market demand survey 2015

**Notes:** Proportions are weighted by volume for sawmillers, distributors and producers. For retailers proportions are based on non-weighted averages. Where sawmillers have their own distribution businesses, sales of sawmill products are presented under ‘Sawmills’ not ‘Distributors’.

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23 Forestry Tasmania Sustainable Forest Management data tables.
The survey results indicate:

- Sawmillers and distributors sell most of their special timbers to customers interstate. The survey indicates the proportion of interstate sales is around 55%. This is broadly consistent with the findings of the previous review of the woodcraft sector in 2009, which found the primary markets for sawmillers and distributors are interstate (around 58%).\(^{25}\)

- International sales by sawmillers are currently in the order of 20%. This is higher than reported in 2009 (previously around 5%)\(^{26}\), but is broadly consistent with observations made in Indufor’s market demand survey, which found that sawmillers have increased their sales of sawn timber to international markets – notably a larger proportion of lower grade material to markets in Asia.

- Tasmanian producers sell the majority of their special timbers products within Tasmania. However, given a significant proportion of this product will be sold through the retail sector, and the majority of retail sales are based interstate (see below), Indufor infers the majority of finished special timber products are sold interstate.

- Retailers sell most of their special timbers to customers/clients interstate. The survey indicates the proportion of interstate sales is around 60-65%. Again, this is broadly consistent with findings from the review of the woodcraft sector in 2009, which found the primary markets for sawmillers and distributors are located interstate (around 56%).\(^{27}\)

- International sales by retailers are also in the order of 14%. These sales to interstate and international customers are commonly transacted in Tasmania, reflecting the tourism element in these sales. The 14% sales levels is broadly consistent, though slightly lower than the previous review in 2009 (around 20%).

Overall, this assessment shows the sector has a high dependency on interstate sales for sawn timber and finished products. International markets are also significant, and appear to be increasing. Key challenges for further expansion of international markets are likely to include relatively higher transaction costs and greater exposure to relatively low cost competitors.

### 3.3 Price trends

Publicly available price trend data for Tasmania’s special timbers sector is limited. Indufor’s market demand survey provided industry specific information, and various insights into log and timber pricing are set out below.

**Millable logs**

Forestry Tasmania provides annual reporting on the Mill Door Log Value (MDLV) for aggregate sales of log types, including 'special species log'. A summary of the average log prices on a unit basis set against the harvest volume trend over the past nine years is set out below. This summary of harvest volumes and log prices encompasses all special timber species (including ‘other’ eucalypt and mixed species) and all grades.

Figure 3-6 indicates log prices have remained relatively flat in real terms over the past decade, while the overall supply of the special timber logs have declined appreciably across most of the species.

It is important to note that most of the millable log volume is sold under long-term log supply contracts, and the log prices are set through periodic negotiations. In this context, log price movements are not directly reflective of variations in annual market demand for finished timber products.


Non-millable logs

The other source of publicly reported price data is IST’s tender prices. Successful tender prices are reported online following each tender, for each of the individual lots sold through the tender. These results are published in the interests of transparency and providing guidance for prospective buyers at forthcoming auctions. A set of advertised log prices for the selected species is listed in Table 3-1.

Table 3-1 IST advertised price ranges for logs of selected species, June 2015

<table>
<thead>
<tr>
<th>Special timbers logs</th>
<th>Lower end ($/m$^3$)</th>
<th>Upper end ($/m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackwood logs, plain grain</td>
<td>250</td>
<td>460</td>
</tr>
<tr>
<td>Blackwood logs with birds eye figure</td>
<td>550</td>
<td>2 700</td>
</tr>
<tr>
<td>Blackwood logs with fiddleback grain</td>
<td>-</td>
<td>2 100</td>
</tr>
<tr>
<td>Celery-top pine logs</td>
<td>300</td>
<td>1 000</td>
</tr>
<tr>
<td>Huon pine craft logs</td>
<td>550</td>
<td>2 700</td>
</tr>
<tr>
<td>Sassafras logs, plain colour</td>
<td>1 000</td>
<td>1 500</td>
</tr>
<tr>
<td>Sassafras logs with blackheart stain</td>
<td>1 000</td>
<td>3 000 – 5 000</td>
</tr>
<tr>
<td>Myrtle, plain logs</td>
<td>250</td>
<td>400</td>
</tr>
<tr>
<td>Myrtle, tiger figure in logs or shorts</td>
<td>1 000</td>
<td>5 900</td>
</tr>
<tr>
<td>Silver wattle log with figure</td>
<td>250</td>
<td>435</td>
</tr>
</tbody>
</table>

Source: Island Specialty Timbers – Tender prices, June 2015
While useful for providing current market signals, the scope to establish a price trend over time based on IST data is limited by the variability in tender lots. Lots offered up for sale comprise one or multiple logs, and the dimensions or grade of each of the logs may vary considerably from previous lots of the same species. The spread of tender prices is illustrated through a set of recent transaction price examples presented in Figure 3-7.

**Figure 3-7 IST tender prices for logs of selected species, November 2014 to May 2015**

![Graph showing IST tender prices for logs of selected species, November 2014 to May 2015.](image)

Source: Island Specialty Timbers – Tender prices, November 2014; April 2015; May 2015; Tender prices for logs of the selected species, sold through Geeveston and Smithton.

The IST tender results above indicate significant variance in per cubic metre prices, with some of the tender prices being well in excess of the average prices received overall. This variation in prices can be attributed to:

- The IST approach of tendering the logs that are considered to be of highest value to a range of potential customers;
- The relatively high levels of demand for limited supplies of particular species and grades;
- The IST approach of selling small volumes of logs with unique characteristics; and
- The variation between the lots, in terms of species, log grades and dimensions.

**Sawn timber**

Publicly available price data for sawn timber products is more limited than for logs.

The only source of regular (or semi-regular) public reporting on Tasmania’s special species sawn timber prices is periodic reporting by IST on tender prices accepted for small packs of boards, of various species and grades. The volume of IST sawn timber sales overall is relatively small compared to logs – in the order of 3% of total IST sales over the past two years. IST only sells sawn timber through its Geeveston yard; Smithton only sells logs.

Based on IST’s experience of buyer preferences and anecdotal feedback, it appears many of its customers prefer to pay more for a log in the round form than purchase sawn timber at broadly equivalent pricing, i.e. having factored in the cost of milling to make things equal. This has been attributed to many buyers looking to dictate how the log will be sawn. IST has reported that this trend spans across all species sold through the facility.
IST does not maintain a public record of sawn timber price trends over time, and Indufor considers there has been insufficient trade of comparable timber grades to construct a meaningful price trend series for the range of selected species. Some examples of tender prices accepted for IST sawn timber sales in the past 12 months are listed in Table 3-2.

Table 3-2 Tender prices received for IST sawn timber sales, Geeveston, 2014 to 2015

<table>
<thead>
<tr>
<th>Tender</th>
<th>Special timbers logs</th>
<th>Quantity (m³)</th>
<th>Unit price ($/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oct 2014</td>
<td>Myrtle boards, select &amp; standard, kiln dried</td>
<td>0.24</td>
<td>3 898</td>
</tr>
<tr>
<td>Oct 2014</td>
<td>Celery top pine boards, kiln dried</td>
<td>0.45</td>
<td>333</td>
</tr>
<tr>
<td>Sep 2015</td>
<td>Myrtle board pack (grade not specified)</td>
<td>n/a</td>
<td>3 400</td>
</tr>
</tbody>
</table>

Source: Island Specialty Timbers – Tender prices, November 2014 and September 2015

A further limitation on establishing price trends for special species sawn timber from IST sales is the considerable variability in tender lots. Lots offered up for sale comprise one or multiple packs, and the dimensions or grade of the timber in each pack may vary from previous lots of the same species.

Beyond IST reporting, there is minimal price trend data reported in the public domain. Indufor’s market demand survey and qualitative interviews sought further information on price trends and expressions of willingness to pay for special species timbers in sawn form. The survey found a mixed set of responses and divergent observations on price trends for different species and grades, across the industry supply chains.

The leading sawmillers of special species timbers noted the larger volume species (notably blackwood) and non-premium grades of all species are competing in markets with a range of other Australian timbers and imported timbers. This domestic and international competition has generally limited price increases for sawn timber products to no more than 3-5% per year\(^28\), i.e. generally, price increases for sawn timber products have tended to be flat to moderate increases in real terms over the past 5 – 10 years.

In contrast, some producers cited examples of substantial price increases over the past five years, for particular species and grades.

For example, survey respondents from the boat building sector have reported transaction prices for boat grade celery-top pine that indicate prices have increased from around $3 500/m³ in 2006/07 to around $5 000/m³ in 2009/10 and over $8 000/m³ in 2014/15 – nominally, annualised increases of 10-15%; or over 7 – 10% in real terms.\(^29\)

Boat grade celery-top pine is clearly one of the premium grades of special species timbers, and the volumes transacted are typically small compared to the larger volume sales of blackwood and non-premium grades of other species. However, examples of this nature illustrate the range of industry information and some divergent observations on price trends across the industry.

Some other producers expressed similar or related observations that prices for high quality and premium grade timber had increased or were increasing substantially in real terms. These observations were made by furniture makers and musical instrument makers. Quantification of these price increases was limited by the relatively small quantities of particular grades, and generally overshadowed by concerns about lower levels of supply available.

This range of viewpoints is discussed further in section 4.5, in the context of survey respondents’ willingness to pay for special timbers.

\(^{28}\) Consolidated findings from the Indufor market demand survey, 2015.
\(^{29}\) Transaction price information provided by representatives of the boat building sector.
4. ASSESSING MARKET DEMAND

This section presents an assessment of market demand for Tasmanian special timbers, firstly by considering key drivers and constraints, then addressing market demand in the context of the willingness and capacity of buyers to purchase goods offered for sale by sellers. Key factors including timber input costs and the scope for product substitution are considered.

4.1 Demand drivers

Indufor’s market demand survey invited respondents across the value chain to identify the most significant drivers of demand for Tasmania’s special timbers. A summary of combined responses (from 35 enterprises in total) for each of the key sub-sectors is set out below.

The combined survey responses indicate the most prominent drivers of demand comprise:

- The unique characteristics of the timbers;
- The Tasmanian ‘brand’;
- Marketing programs, which can promote other factors (e.g. the Tasmanian brand); and
- Design of the timber products.

**Figure 4-1 Survey respondent views on key drivers of demand for special timbers**

While sawmillers identified the unique characteristics of the timbers as being the most important demand driver, producers proposed the Tasmanian brand as being the most important, and retailers noted Tasmanian tourism and consumer trends as being the key demand driver.

Several of these drivers are largely beyond the direct control or influence of the sector. These include the characteristics of the timbers, the Tasmanian brand, Tasmanian tourism and consumer trends.

However, marketing programs including the targeting and development of new markets and the design of timber products are key drivers the sector can work on and enhance over time.
In relation to marketing, Farley et al. (2009) noted there was “a lack of collective voice that assists in addressing issues and developing any strategy to take the sector forward” – and sector participants interviewed for this market demand assessment generally concurred with this view. A small number of individual players are investing in marketing of their products, with some broader sector benefit, but it lacks collective funding and consistent messaging – largely due to the relatively small volumes traded and the uncertainty over the future of the industry.

4.2 Demand constraints

Similarly, Indufor's market demand survey invited respondents across the value chain to identify the most significant constraints on demand for Tasmania's special timbers. A summary of combined responses (from 36 enterprises in total) for each of the key sub-sectors is set out below.

Figure 4-2 Survey respondent views on key constraints on demand for special timbers

The combined survey responses indicate the most prominent constraints on demand comprise:

- Resource availability;
- Wood costs, or maintaining an “affordable” supply of special timbers;
- The controversial media image of the forestry industry in Tasmania; and
- The ageing demographic of suppliers with woodcraft skills to produce fine timber products.

Concerns about the ongoing availability of special timbers were prominent in survey feedback across all sub-sectors. In some cases, these concerns were interlinked with concerns expressed about the costs of acquiring the timber, more so than other production costs.

Beyond resource availability, both sawmillers and producers considered wood costs to be a notable constraint on demand.
In contrast, retailers have more concern in respect to the supply of their product from ageing suppliers, and the longevity of these business relationships. It was noted the large majority of these suppliers are in the later stages of their working careers, and there is a lack of younger people entering the sector and picking up the craftsmanship skills. In this context, retailers foresee a lack of skilled suppliers as a major constraint for the sector.

**Certification requirements**

Survey respondents did not mention either forest management certification or chain of custody in the context of key drivers (opportunities) or constraints (challenges) for their business.

Indufor asked respondents under a separate line of inquiry whether their customers require information about the timber source, chain of custody or forest management certification. Aggregated responses are shown in Figure 4-3 and Figure 4-4 below.

**Figure 4-3 Market demand for information on timber source or chain of custody**

![Figure 4-3](image)

Source: Indufor market demand survey 2015

**Figure 4-4 Market demand for information on forest management certification**

![Figure 4-4](image)

Source: Indufor market demand survey 2015
The survey results indicate that information about the source of timber is more important for sawmillers and distributors than it is for producers and retailers. The sawmill responses incorporate observations that export markets generally require an acceptable form of forest management certification and chain of custody – and the PEFC-aligned Australian Forestry Standard (AFS)\(^{30}\) is meeting that market requirement at this stage.

However, producers and retailers indicated that less than 20% of their customers request information about the source of the timber or the chain of custody.

The survey results also indicate that generally across the sub-sectors, less than 20% of customers require information about forest management certification associated with special timbers.

Coupled with the survey responses to key demand drivers and constraints, it is apparent that forest management certification and chain of custody requirements are important for sawmillers and distributors primarily. Furthermore, because these requirements have not been referred to as constraints, Indufor infers the sawmillers and distributors have set up adequate systems for addressing key customer requirements relating to forest certification and chain of custody.

### 4.3 Demand profiles for sawn timber products

To assess market demand for Tasmania’s special timbers, Indufor sought to develop demand curves for the different species.

Demand curves are used by economists to estimate behaviour in competitive (efficient) markets and are often used with supply curves to estimate the market equilibrium price, or the price at which sellers are willing to sell the same amount of product as the market’s buyers are willing to purchase.

However, the scope to develop robust demand curves for Tasmania’s special timbers sector is limited by the lack of substantive time series data on transaction prices for specified quantities of each of the different grades of timber for each species. While various timber price data are available in different forms, e.g. individual sawmill wholesale prices and IST tender prices, the respective grades and quantities are not aligned such that a robust economic analysis can be conducted for particular species and grades.

Hence, Indufor has constructed demand profiles based on indicative price data compiled through its market demand survey, and using this data to indicate price frontiers for the main grades of timber for each species. Demand profiles for four selected special timber species – blackwood, Huon pine, celery-top pine and sassafras – are set out below.

Insufficient data was provided to derive demand profiles for myrtle and silver wattle. This largely reflects the relatively small volumes of timber trade for these species in recent years, and the lower prioritisation of these species by sawmillers and producers surveyed in this study.

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\(^{30}\) The Australian Forestry Standard has been recognised by the international Programme for Endorsement of Forest Certification (PEFC), an international non-profit, non-governmental organisation dedicated to promoting sustainable forest management (SFM) through independent third-party certification.
Figure 4-5 Demand profile for blackwood sawn timber, 2015

Source: Derived from Indufor market demand survey 2015
Note: Price points in this profile reflect a range of timber grades.

Figure 4-6 Demand profile for celery-top pine sawn timber, 2015

Source: Derived from Indufor market demand survey 2015
Note: Price points in this profile reflect a range of timber grades.
Figure 4-7 Derived demand profile for Huon pine sawn timber, 2015

Source: Derived from Indufor market demand survey 2015
Note: Price points in this profile reflect a range of timber grades.

Figure 4-8 Derived demand profile for sassafras sawn timber, 2015

Source: Derived from Indufor market demand survey 2015
Note: Price points in this profile reflect a range of timber grades.
Notable observations on the derived demand profiles set out above include:

- The demand gradients across all species show the market is differentiating between timber grades and buyers who value the higher grades are willing to pay more.

- The steeper demand gradient for blackwood largely reflects the apparent demand for blackwood with tonal qualities (tonewood), fiddleback or tear-drop grain features in Tasmania, interstate and international markets. However, the proportion of blackwood that is attracting these premium values remains small at present.

- Compared to other special timbers, blackwood has a wider spread of demand prices, with a significant portion of timber sold at relatively low prices.

- The scope for realising higher prices for special timbers is determined by the availability of timber with sought after natural timber features – i.e., it is the inherent natural features of the timber that largely explains the higher prices. These natural features include:
  - tonal qualities, fiddleback figure or tear-drop grain of the blackwood;
  - large clear lengths of ‘boat grade’ celery-top pine;
  - birds eye feature and other significant figure in Huon pine;
  - blackheart figure in sassafras; and similarly
  - tiger figure in myrtle.

4.4 Inferred mill door log values

The capacity for sawmills and veneer mills to pay for logs is dependent on a range of variables, including end product prices. Key variables include mill recovery rates, capacity to optimise grade recovery, operational efficiency, and the extent to which special timbers are priced at average versus marginal production costs. A number of these variables depend in turn on the main species supplied, the quality and uniformity of log supply, and the investment of processing operations (capital expenditure) over time. As such, there will be considerable variance in mill capacity to pay for logs across the spread of current and prospective operations.

While recognising this broad range of variables, the demand profiles for special timbers can be used to derive an indicative, inferred capacity to pay for logs. In general terms, mill door log values can be inferred, based on the output prices for sawn timber (sales revenue) minus the average sawmill production costs and the operating margin or profit (total operating costs).

For this particular purpose, Indufor has developed a set of basic models of sawmilling operations. These models were set up for the four special species timbers for which there was some substantive price data – i.e. blackwood, celery-top pine, Huon pine and sassafras. There was insufficient data arising from the survey or other sources to construct the same models for myrtle and silver wattle.

The Indufor models are structured to derive indicative mill door log values (MDLV), based on assumptions relating to:

- sawn timber recovery rates, from Category 4 logs and from Utility & Outspec logs;
- sawn timber product prices, for a range of kiln dried boards and green sawn timber (ex-mill);
- processing costs, for the green mill (for all sawn timber) and also dry mill operations (for all premium quality and high quality boards, plus a proportion of lower grade material); and
- nominal profit margins that may be applied based on sawmill costs of production.

The model derivations of mill door log values are presented in Appendix 3. A summary of the key assumptions for these models is set out in Table 4-1. A summary of the findings is set out in Table 4-2 below.
This derivation of mill door log values can give rise to negative values, where sawmill operating costs and the operating margin exceed the sales revenue. Negative values reflect the lower end of the range of capacity to pay, based on the specified assumptions for a range of variables.

Table 4-1 Sawn timber assumptions for deriving mill door log values

<table>
<thead>
<tr>
<th>Special species sawn timbers, by grade</th>
<th>FT 2014/15 log supply* (m³):</th>
<th>Proportion of sawlog - Cat 4 (%)</th>
<th>Proportion of Utility/Outspec (%)</th>
<th>Observed sawn timber values, ex-mill ($/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackwood</td>
<td>8 728</td>
<td>1%</td>
<td>0.5%</td>
<td>$5 500-$7 000</td>
</tr>
<tr>
<td>Premium quality saw timber</td>
<td></td>
<td>26%</td>
<td>19.0%</td>
<td>$2 000-$3 000</td>
</tr>
<tr>
<td>High quality saw timber</td>
<td></td>
<td>13%</td>
<td>20.5%</td>
<td>$1 000-$1 500</td>
</tr>
<tr>
<td>Lower grade saw timber</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Celery-top pine</td>
<td>595</td>
<td>1%</td>
<td>0.5%</td>
<td>$6 000-$8 000</td>
</tr>
<tr>
<td>Premium quality saw timber</td>
<td></td>
<td>25%</td>
<td>19.0%</td>
<td>$2 000-$4 000</td>
</tr>
<tr>
<td>High quality saw timber</td>
<td></td>
<td>14%</td>
<td>20.5%</td>
<td>$1 000-$1 500</td>
</tr>
<tr>
<td>Lower grade saw timber</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Huon Pine</td>
<td>308</td>
<td>1%</td>
<td>0.5%</td>
<td>$6 000-$8 000</td>
</tr>
<tr>
<td>Premium quality saw timber</td>
<td></td>
<td>20%</td>
<td>18.0%</td>
<td>$3 000-$5 000</td>
</tr>
<tr>
<td>High quality saw timber</td>
<td></td>
<td>14%</td>
<td>16.5%</td>
<td>$2 000-$3 000</td>
</tr>
<tr>
<td>Lower grade saw timber</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sassafras</td>
<td>255</td>
<td>1%</td>
<td>0.5%</td>
<td>$6 000-$8 000</td>
</tr>
<tr>
<td>Premium quality saw timber</td>
<td></td>
<td>20%</td>
<td>18.0%</td>
<td>$3 000-$5 000</td>
</tr>
<tr>
<td>High quality saw timber</td>
<td></td>
<td>14%</td>
<td>16.5%</td>
<td>$1 500-$2 000</td>
</tr>
<tr>
<td>Lower grade saw timber</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: FT log production data, *YTD June 2015; Indufor derivations of MDLV, based on sawmill processing models developed for this analysis.

Table 4-2 Inferred mill door log values derived from sawmill processing models

<table>
<thead>
<tr>
<th>Indicative MDLV estimates</th>
<th>FT 2014/15 log supply* (m³):</th>
<th>Lower end estimates ($/m³)</th>
<th>Higher end estimates ($/m³)</th>
<th>Average estimates ($/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 4 sawlogs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackwood</td>
<td>3 147</td>
<td>$60</td>
<td>$400</td>
<td>$230</td>
</tr>
<tr>
<td>Celery-top pine</td>
<td>154</td>
<td>$0</td>
<td>$590</td>
<td>$300</td>
</tr>
<tr>
<td>Huon pine</td>
<td>204</td>
<td>$250</td>
<td>$810</td>
<td>$530</td>
</tr>
<tr>
<td>Sassafras</td>
<td>39</td>
<td>$180</td>
<td>$670</td>
<td>$430</td>
</tr>
<tr>
<td>Utility/Outspec logs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackwood</td>
<td>5 581</td>
<td>-$60</td>
<td>$240</td>
<td>$90</td>
</tr>
<tr>
<td>Celery-top pine</td>
<td>441</td>
<td>-$120</td>
<td>$370</td>
<td>$130</td>
</tr>
<tr>
<td>Huon pine</td>
<td>104</td>
<td>$230</td>
<td>$760</td>
<td>$500</td>
</tr>
<tr>
<td>Sassafras</td>
<td>217</td>
<td>$150</td>
<td>$600</td>
<td>$370</td>
</tr>
<tr>
<td>All grades</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blackwood</td>
<td>8 728</td>
<td>-$20</td>
<td>$290</td>
<td>$140</td>
</tr>
<tr>
<td>Celery-top pine</td>
<td>595</td>
<td>-$90</td>
<td>$430</td>
<td>$170</td>
</tr>
<tr>
<td>Huon pine</td>
<td>308</td>
<td>$240</td>
<td>$790</td>
<td>$520</td>
</tr>
<tr>
<td>Sassafras</td>
<td>255</td>
<td>$150</td>
<td>$610</td>
<td>$380</td>
</tr>
</tbody>
</table>

Source: FT log production data, *YTD June 2015; Indufor MDLV derivations based on basic sawmill processing models. Note average estimates of MDLV have been rounded.
The range of inferred log prices reflects the sensitivity of sawmill profitability to changes in key variables, notably recovery assumptions and sawn timber prices for high volume categories. Similarly, the assumptions relating to the mix of log grades (i.e. Category 4 and Utility and Outspec log grades) can have a considerable impact on the inferred capacity to pay.

Noting these variables, the models developed for this market demand analysis indicate average mill door log values for low grade (Utility & Outspec) and high grade (Category 4) as follows:

- blackwood logs in the range of $90/m³ to $230/m³ (average across grades $140/m³);
- celery-top pine logs in the range of $130/m³ to $300/m³ (average across grades $170/m³);
- Huon pine logs in the range of $500/m³ to $530/m³ (average across grades $520/m³); and
- Sassafras logs in the range of $370/m³ to $430/m³ (average across grades $380/m³).

It is important to highlight these inferred log prices are based on generic processing models for full-time sawmilling operations; in contrast to producers using small-scale mills and wood turners that are breaking down logs for woodcraft. The latter group of producers could have higher capacity to pay for logs, as a result of higher value end use products or lower costs of production. Recent IST tender prices (refer Table 3-1) indicate the higher prices that some operators will pay for particular species and log specifications.

4.5 Willingness to pay

Indufor’s market demand survey asked participants about price increases in the past five years and how their customers had responded to any substantive increases. Survey responses are shown in Figure 4-9.

Figure 4-9 Survey responses on customer responses to previous price increases

![Survey responses on customer responses to previous price increases](image)

Source: Indufor market demand survey 2015

While survey responses for this inquiry were low, they revealed a mix of responses. In most cases, across the sub-sectors, price increases had been limited to 3-5% per year, with CPI adjustments referred to as a base position. Most sawmillers, distributors and retailers have applied this indicative level of price increase each year and it has been accepted by their customers. However, it was also noted that for a number of respondents considered prices had remained relatively stable over the past five years. Producers noted a range of customer responses to previous price increases, including examples of customers having dropped products when prices were increased by 5-10% within the last five years.
The market demand survey also asked respondents to nominate the level of price increase their customers would accept before shifting to other, non-special timber products. A summary of combined survey responses, by sub-sector, is set out in Figure 4-10.

**Figure 4-10 Market perspectives on customer capacity to absorb higher prices**

These survey responses indicate that overall, across all special timber species:

- Sawmillers reported there is minimal scope to increase prices for special timbers before their customers would shift to other products.
- Distributors reported a larger proportion of their customers may have a higher capacity to pay. Indufor considers the variation in responses reflects variation across timber species and grades. For example, survey results indicate that distributors could carry increased prices for Huon pine sawn timber; whereas blackwood flooring products are close to the limit of their pricing frontier, before customers are expected to move to lower cost options (e.g. Tasmanian oak) or premium products (e.g. spotted gum).
- Producers varied in their responses, with over 30% saying that only minimal price increases were possible, while the balance (more than 60%) considered there would be scope to increase prices by a moderate amount, i.e. more than 5-10% over time. Again, Indufor attributes this variation to different species and different market positioning across the range of producers.
- Most retailers consider there is minimal scope to increase prices for special timber products, although a small proportion recognised there may be scenarios in which price increases of 10% could be achieved if managed carefully and consistently across the sector.

### 4.6 Timber input costs

A key consideration in relation to willingness to pay is the extent to which the input timber costs represents a large component of the producers’ total costs for finished products. When the input timber cost is a relatively small component (compared to say labour costs), any change in the timber cost will have a relatively smaller impact on profitability compared to a producer where timber costs represent a greater proportion of total costs. In other words, the producer is likely to have a greater capacity to absorb any price changes.
As part of the market demand survey, Indufor asked respondents to specify total wood input costs as a proportion of total product costs. A summary of the combined responses (across all subsectors) is set out in Table 4-3 below.

**Table 4-3 Timber input costs as proportion of total product costs, by sub-sector**

<table>
<thead>
<tr>
<th>Sub-sector</th>
<th>Timber input costs as proportion of total product costs (%)</th>
<th>Timber input costs as proportion of total product costs (rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boat builders</td>
<td>Up to 5%</td>
<td>Low</td>
</tr>
<tr>
<td>Musical instrument makers</td>
<td>Up to 10%</td>
<td>Low</td>
</tr>
<tr>
<td>Furniture makers</td>
<td>15-25%</td>
<td>Low to Medium</td>
</tr>
<tr>
<td>Woodcraft makers</td>
<td>20-30%</td>
<td>Medium</td>
</tr>
<tr>
<td>Cabinetry and joinery</td>
<td>10-60%</td>
<td>Medium to High (varies)</td>
</tr>
</tbody>
</table>

Source: Indufor market demand survey 2015

These survey results show the spread of responses across producer sub-sectors.

In proportional terms, the timber input costs are generally lowest for boat builders and musical instrument makers, as their products generally incorporate relatively high labour costs (on a per cubic metre of special timbers basis) and also other non-timber input costs e.g. other boat components including engines, electronics and a range of fit-out works.

This suggests that boat builders and music instrument makers can potentially absorb higher prices for their preferred timber species and grades, than other producers for whom the timber input costs is a significantly higher proportion of total costs, e.g. furniture makers and cabinetry and joinery shops. This is reflected in the derived demand profiles presented above, in which boat builders pay a premium for ‘boat grade’ timber (notably celery-top pine, Huon pine and also King Billy pine) and high end musical instrument makers pay for high quality timbers with tonal qualities (notably blackwood with fiddleback or other special figure).

The survey results indicate cabinetry and joinery producers may be more sensitive to increases in timber input costs, as timber costs constitute a relatively larger proportion of total costs.

### 4.7 Timber inventory levels

The extent to which value chain participants hold a timber inventory (or stockpile) is another indicator of market demand. Holding a substantial proportion of timber inventory can be an indicator of either concerns about future supply for production or sales, or a view that market demand is or will be high for these timbers and therefore the cost of holding the stockpile will be compensated by a future higher sale price – or both of these factors.

To address this aspect, the market demand survey asked participants to nominate their current level of inventory of special timbers (whether that be in log form or sawn timber), as a proportion of total annual production.

This inquiry found a spread of responses. Based on indicative estimates of current levels:

- Sawmillers are on average holding close to one years’ production of special timbers;
- Distributors are holding between 10-15% of annual sales of special timbers;
- Producers can be categorized into two broad groups - a subset that do not hold much stock (‘low stock’), typically up to 15% of annual production, and another set that hold multiple years’ worth of stock (‘high stock’) for anticipated production in the future; and
- Retailers are on average holding around 20-30% of annual sales of special timber products.
The survey also asked participants to nominate whether: their inventory of special timbers had increased, stayed relatively constant or decreased over the past five years; and whether they have an expectation their inventory of special timbers will increase, stay constant or decrease over the next five years.

Aggregated responses to these inquiries are shown in Figure 4-11 and Figure 4-12 respectively.

**Figure 4-11 Survey responses on inventory management over past five years**

![Inventory Management Past Five Years](image1)

**Source:** Indufor market demand survey 2015

**Figure 4-12 Survey responses on inventory management over next five years**

![Inventory Management Next Five Years](image2)

**Source:** Indufor market demand survey 2015
The survey responses indicate that timber inventory levels have generally decreased across sub-sectors, with the exception of ‘high stock’ producers. Decreasing stockpiling can indicate the following market implications:

- the supply chain has confidence in being able to secure supply when they require the timber. This assessment of behaviour is contradicted by the survey respondents expressing concern over accessing adequate resource;
- the supply chain either has no surplus capital which could be used to secure supply or any surplus capital is being allocated elsewhere in the enterprise;
- the supply chain does not foresee substantial increases in product pricing and therefore no need to protect their enterprise to future increases in supply chain costs.

Survey responses and qualitative input from the semi-structured interviews identified a common theme of producers responding to concerns about future supply but only limited stockpiling (or ‘future proofing’) their business.

For the future, overall the survey responses indicate that most participants across the sub-sectors are expecting to hold their current (lower) inventory levels to be relatively constant. A moderating factor is managing capital flows (‘cash tied up in inventory stocks’), and many survey responses referred to this as a consideration in their management of inventory levels.

**Private stock piles and timber sales**

The study captured some anecdotal information about timber sales from private stock piles being common within the industry, but reliable quantitative data on volumes and prices from these sales was not available. However, the anecdotal evidence and qualitative information on private sales indicates that holders of special species timbers have realised there is monetary value in stock piles in their back yards, and therefore, that there is limited supply of certain grades of certain species available through commercial supply chains. These stockpile supplies are being utilised and depleted, so private sales are expected to diminish over time.

**4.8 Timber substitutes**

A further key consideration is the extent to which there are cost-competitive substitutes for Tasmania’s special timbers. In a globalised world of timber trade, with increasing use of engineered wood products for a range of applications, there is increasing scope for product substitution. To address this consideration, Indufor asked survey respondents to identify substitutes that were present in their markets for special timbers. A list of the indicative scope for product substitution is set out in Table 4-4 below.
Table 4-4 Nominated substitute timbers for Tasmania’s special timbers

<table>
<thead>
<tr>
<th>Species</th>
<th>Timber grades</th>
<th>Nominated substitutes</th>
<th>Scope for substitution*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackwood</td>
<td>Premium grade, with tonewood quality, fiddleback or other figure</td>
<td>Koa (Acacia sp.); Spruce; Queensland maple; silkwood; rosewood; Brazilian mahogany</td>
<td>Low-Medium</td>
</tr>
<tr>
<td></td>
<td>High quality grade, with low feature</td>
<td>Tasmanian oak; American walnut; American white oak; rosewood</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flooring: Tasmanian oak; spotted gum</td>
<td>Medium-High</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cabinetry and joinery: Laminated veneers, and engineered wood products</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Lower quality grades</td>
<td>American walnut; American white oak; European oak; Plantation timbers; beech; meranti; redwood</td>
<td>High</td>
</tr>
<tr>
<td>Huon pine</td>
<td>Premium grade, or birds eye feature</td>
<td>Minimal scope identified for direct replacement in traditional applications</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>High quality, minimal feature</td>
<td>Minimal scope identified for direct replacement in traditional applications</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Other high end applications</td>
<td>Other special timbers</td>
<td>Low</td>
</tr>
<tr>
<td>Celery-top pine</td>
<td>Boat grade</td>
<td>Same scope to use imported timbers including teak and Oregon</td>
<td>Low-Medium</td>
</tr>
<tr>
<td></td>
<td>High quality, non-boat grade</td>
<td>Oregon; imported pines; beech</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Non-boat grade</td>
<td>Other Tasmanian special timbers</td>
<td>High</td>
</tr>
<tr>
<td>Sassafras</td>
<td>Blackheart</td>
<td>No other species identified with comparable aesthetic features</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>Tasmanian oak; Other plain blonde timbers</td>
<td>High</td>
</tr>
<tr>
<td>Myrtle</td>
<td>Tiger myrtle</td>
<td>Few other species with comparable aesthetic features</td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td>Red myrtle</td>
<td>Jarrah; Other ‘red’ timbers</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>White myrtle</td>
<td>Other plain blonde timbers</td>
<td>High</td>
</tr>
<tr>
<td>Silver wattle</td>
<td>All grades</td>
<td>Other Tasmanian timbers</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Light brown timbers with distinctive features</td>
<td></td>
</tr>
</tbody>
</table>

Source: * Scope for substitution rated by Indufor, based on market demand survey 2015

A related inquiry of the market demand survey was the likely consequence for value chain participants if their preferred special timbers products became less readily available, or more expensive – and whether they were more likely to shift to using (i) alternative special timbers; (ii) other timber products; or (iii) non-timber products.

A summary of the combined responses is set out below.
Figure 4-13 Likely responses to preferred special timbers becoming less available

This shows an understandable spread of responses across the range of sub-sectors. The sawmillers surveyed for this market demand assessment are dependent on the supply of special timbers, and have established markets based on their capacity to process and deliver preferred species. Most sawmillers (around 80%) said that at a level, a substantial reduction in availability would lead to them ceasing operations.

Most timber distributors are less dependent on particular species. Their business model is based on selling the most cost competitive timber products available to them over time. While they seek to respond to customer requests (e.g. for Tasmanian special timbers), they are generally in a position to advise customers what is and is not available at any point in time – and respond to changes in supply. Hence distributors expect to be able to switch to alternative special timbers or imported timbers. It should be noted the survey did not pick up any distributors saying their most likely alternative would be other Australian timbers.

Producer responses were mixed and relatively even across the potential survey responses. This reflects varying degrees of dependency on preferred timber species, and apparent potential across most producers (over 60%) to be able to shift to alternative timber products, or to a lesser extent, non-timber products.

Retailer responses were also mixed and reflect the spread of retailers who were engaged in the survey. Some retail businesses sell Tasmanian products exclusively – e.g. retail outlets specialising in showcasing local craftsmanship and Tasmania’s heritage values. These businesses constitute most of the respondents who indicated their business would cease operating. Other retailers are less dependent on Tasmania’s special timbers – notably larger chains in Tasmania and in mainland states. These businesses are expected to shift to the most cost-competitive alternatives, comprising a range of timber and non-timber products.

Based on the market demand survey results, Indufor has rated the willingness to pay for the six main special timbers. The formulation of these ratings, set out in Table 4-5, has taken into account the preferences across the range of sub-sectors and end users, and recognising the different grades for each species.
Table 4-5 Inferred willingness to pay for Tasmania's special timbers

<table>
<thead>
<tr>
<th>Species</th>
<th>Timber grades</th>
<th>Scope for substitution (rating)</th>
<th>Proportion of product input costs (rating)</th>
<th>Inferred willingness to pay (rating)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blackwood</td>
<td>Premium grade</td>
<td>Low-Medium</td>
<td>Low</td>
<td>Medium-High</td>
</tr>
<tr>
<td></td>
<td>High quality grade</td>
<td>Low-Medium</td>
<td>Medium-High</td>
<td>Medium-High</td>
</tr>
<tr>
<td></td>
<td>Lower quality grade</td>
<td>High</td>
<td>Medium-High</td>
<td>Low</td>
</tr>
<tr>
<td>Huon pine</td>
<td>Boat grade</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>High quality grade</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>Lower quality grade</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Celery-top pine</td>
<td>Boat grade</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>High quality grade</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Non-boat grade</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Sassafras</td>
<td>Blackheart</td>
<td>Low</td>
<td>Medium</td>
<td>Medium-High</td>
</tr>
<tr>
<td></td>
<td>White</td>
<td>High</td>
<td>Medium-High</td>
<td>Low</td>
</tr>
<tr>
<td>Myrtle</td>
<td>Tiger myrtle</td>
<td>Low</td>
<td>Medium</td>
<td>Medium-High</td>
</tr>
<tr>
<td></td>
<td>Red myrtle</td>
<td>Medium</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>White myrtle</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
<tr>
<td>Silver wattle</td>
<td>All grades</td>
<td>High</td>
<td>Medium</td>
<td>Low</td>
</tr>
</tbody>
</table>

Source: Indufor market demand survey 2015

This assessment indicates inferred willingness to pay is highest for:
- high quality grade blackwood;
- Huon pine;
- celery-top pine, specifically high quality ‘boat grade’;
- blackheart sassafras; and
- tiger myrtle.

The demand for these specialist timber products realises markedly higher timber prices compared with lower quality special timber products. For each of the species, the existing value chain participants have developed a range of markets according to timber grade and potential end uses.
5. CONCLUSIONS
A summary of key findings from this market demand analysis for special timbers is set out below.

5.1 Key findings
Key findings and observations on the sector included the following:

Timber supply
- The supply of special timber logs to the sector has declined appreciably over the past 10 years, across all of the selected special timber species (down 55% to around 10 000 m$^3$).
- In this context, survey respondents from all sub-sectors nominated resource availability as the main constraint on demand for special timbers.
- With the varying levels of reduction in supply of each timber species, the proportions of supply have changed such that blackwood now accounts for more than 85% of special timbers available to the sector (up to around 90% in 2014/15).
- After blackwood, the next largest volumes of supply are now celery-top pine and Huon pine (both up to 5% of total special timbers supply). However these supply levels vary; for Huon pine in particular, for which supply is dependent on the recovery of fallen trees and seasonal access to these recovery areas.
- For myrtle, the log supply from public native forests has declined to the extent that a range of timber distributors and producers now refer to myrtle as “irrelevant” in relation to use in larger commercial projects. Re-establishing market demand for myrtle would require considerable marketing effort and renewed sense of confidence that consistency of some substantive supply could be provided.
- Over this period, average log prices supplied through Forestry Tasmania sales contracts have increased in nominal terms, but remained relatively flat in real terms. Most of the millable log volume is sold under long-term log supply contracts, and the log prices are set through periodic negotiations. In this context, log price movements are not directly reflective of variations in annual market demand for finished timber products.
- Indufor’s market demand survey explored the proportion of sales of special timber products to customers in Tasmania, interstate and international markets. This survey found that sawmillers and distributors sell the majority of their special timbers interstate (around 55% for sawmillers and almost 100% for distributors), and sawmillers currently sell over 20% of their sawn timber internationally. This means the majority of special timbers are now processed outside Tasmania.

Demand drivers and constraints
- Indufor’s market demand survey results indicate the most prominent drivers of demand comprise: the unique characteristics of the timbers; the Tasmanian ‘brand’; marketing programs; and the design of the timber products.
- While sawmillers identified the unique characteristics of the timbers as being the most important demand driver, producers proposed the Tasmanian brand as being the most important, and retailers noted Tasmanian tourism and consumer trends as important also.
- The survey results indicate the most prominent constraints on demand comprise: resource availability; wood costs, or maintaining an “affordable” supply of special timbers; the controversial media image of the forestry industry in Tasmania; and the ageing demographic of suppliers with woodcraft skills to produce fine timber products.
- Concerns about the ongoing availability of special timbers were prominent in survey feedback across all sub-sectors. In some cases, these concerns were interlinked with concerns expressed about the costs of acquiring the timber, more so than other production costs.
Beyond resource availability, both sawmillers and producers considered wood costs to be a notable constraint on demand.

Retailers have more concern in respect to the supply of their product from ageing suppliers, and the longevity of these business relationships. Retailers have observed a large majority of these suppliers are in the later stages of their working careers, and there is a lack of younger people entering the sector and picking up the craftsmanship skills.

Demand profiles for sawn timber products

- Market demand varies across the selected special timbers and their various grades.
- There is a range of high value markets in which prices for special species timbers can be relatively high. These include high end furniture, some boat building projects and also musical instruments. However, the current level of sales into these high value markets is generally modest compared with total volumes of supply. Willingness to pay in these markets is discussed further below.
- Blackwood high grade timber accounts for the large majority of special timbers volume available for commercial applications. It competes in various markets (including furniture manufacturing, cabinetry and joinery, and flooring) with other Australian timbers and a range of imported timbers. In this context, the willingness to pay for blackwood high grade timber is moderated by competitive markets for larger commercial projects.
- Huon pine is also seen in a separate category from other species, on account of its iconic status among Tasmania’s special timbers, and the nature of its supply.
- For species other than blackwood and Huon pine, there are distinct grade features that are recognised as having more value and commensurate with higher prices. These include:
  - sassafras with blackheart stain;
  - celery-top pine available in long clear (select) lengths; and
  - myrtle with tiger feature.
- Lower grades of timber are sold for significantly lower prices. In the case of blackwood, the survey results indicate demand is relatively soft for lower grade timber, with sawmillers reporting a lack of demand in Australia. This is largely due to low grade blackwood lacking distinctive features, e.g. pale and lacking figure, for which various substitute options exist. As a result, most of this low grade is sold to export markets, notably China, where it is understood to be processed into wooden furniture and other products. This is attributable to the globalisation of markets and the relatively low labour costs in other countries.

Inferred mill door log values

- The capacity for sawmills and veneer mills to pay for logs is dependent on a range of variables, including end product prices. A number of these variables depend in turn in the main species supplied, the quality and uniformity of log supply, and the investment of processing operations (capital expenditure) over time.
- While recognising this broad range of variables, Indufor has developed a set of basic models of sawmilling operations to derive an indicative, inferred capacity to pay for logs. In general terms, mill door log values can be inferred, based on the output prices for sawn timber (sales revenue) minus the average sawmill production costs and the operating margin or profit (total operating costs).
- The range of indicative log prices presented in this analysis reflects the sensitivity of sawmill profitability to changes in key variables, which include recovery assumptions and sawn timber prices, particularly for the relatively high volume categories, i.e. the high quality grades for most species. Similarly, the assumptions relating to the mix of log grades (i.e. Category 4 and Utility and Outsprec log grades) can have a considerable impact on the inferred capacity to pay.
The inferred log prices presented in this analysis are based on generic processing models for full-time sawmilling operations; in contrast to producers using small-scale mills and woodturners breaking down logs for woodcraft. The latter group of processors could have higher capacity to pay for logs due to higher value end use products or lower costs of production.

Willingness to pay

Key factors that impact on producers’ willingness to pay for special timbers are their respective input costs, and the extent to which cost-competitive substitutes are available.

This analysis found that timber input costs are generally lowest for sub-sectors including boat builders and musical instrument makers, as their products generally incorporate relatively high labour costs (on a per cubic metre of special timbers basis) and also other non-timber input costs. While boat builders generally seek celery-top pine, Huon pine and King Billy pine, musical instrument makers have expressed demand for blackwood and other species with tonal qualities and attractive aesthetic features.

In relation to substitutes, this analysis found the extent to which cost-competitive substitutes are available varies across the range of species and grades. In some cases, the scope for direct substitution is considered relatively low, e.g. finding other products that match the multi-dimensional attributes of Huon pine; whereas in other cases the scope is considered relatively high, e.g. lower grades of blackwood and silver wattle.

In this context, a schematic of the relative market positioning for Tasmania’s special timbers is set out in Figure 5-1. This positioning of each species is based on the relative volume available (based on current supply) and relative willingness to pay (wholesale price per cubic metre of sawn timber).

Figure 5-1 Relative market positioning of all special timbers, sawn timber grades

![Figure 5-1 Relative market positioning of all special timbers, sawn timber grades](Image)
• This schematic above clearly shows that blackwood stands apart in terms of the volume available. The volume of other species, and the proportion of high quality grade within these other species, is small in comparison with blackwood (which is in itself a relatively small proportion of the total log production from Tasmania’s native forest timber industry).

• To observe other species, a schematic of the relative positioning of special timbers other than blackwood is shown in Figure 5-2.

Figure 5-2 Relative positioning of special timbers, excluding blackwood

Source: Indufor

• After blackwood, Huon pine is prominent in its positioning, which reflects producers having a relatively high willingness to pay, for a relatively high proportion of the variable supply available.

• After Huon pine, the next two species that feature are celery-top pine and sassafras – specifically, blackheart sassafras. Market demand for suitable grades of these timbers is reflected in the market demand survey results and also, in the case of blackheart sassafras, recent IST tender prices.

• Recent IST tender prices indicate there continues to be strong market demand for the relatively small quantities of tiger myrtle available. However, demand for ‘plain myrtle’ is relatively low, and as result of the trend of diminishing supply over time, the market has indicated a propensity to shift to alternative options.

• Similarly, Figure 5-2 also shows that market demand for white sassafras and silver wattle is relatively low. The scope to invest in marketing and developing new markets is likely to be constrained by the supply volumes available.
• The inferred willingness to pay for each special timber species need to be moderated by the current price points and the extent to which sector participants consider they can increase prices and maintain their market share.

• Indufor’s market demand survey results found the extent to which sector participants consider they could increase prices and maintain their market share is variable. Most sawmillers and retailers said there was minimal scope to do so; while some producers and distributors indicated there was more scope to do so.

5.2 Concluding remarks

Overall, this analysis has found that market demand is strong for some particular special timber species and grades, and the market is willing to pay relatively high prices for generally modest volumes of timber. This is reflected in some examples of real, and sometimes significant, price increases over time.

For some other species and grades, there is evidence of competitive markets and increasing potential for product substitution that collectively constrain market demand and prices. The market demand survey conducted for this analysis has found the majority of special timbers (by volume) is processed outside Tasmania, which has implications for the requirements for special timbers to compete with an increasing array of alternative timber and non-timber products.

Against the backdrop of a substantial reduction in special timbers log supply over the past 10 years, prices have increased to varying extents in nominal terms – but for most of the volume, there is limited time series data or other evidence to indicate real price increases over this time.

In this context, market demand for Tasmania’s special timbers is exposed to a complex range of supply and demand side factors. Interventions arising from public policy or commercial investments in special timbers will need to be cognizant of international competition in markets.