



30 November 2005

announcements@bsx.com.au

QUEENSLAND PAULOWNIA FORESTS LIMITED (BSX CODE: QPFG)

Queensland Paulownia Forests Limited announces it has obtained an executive summary report from BIS Shrapnel on the market potential for paulownia products in Australia.

Subsequent to this announcement, a copy of the executive summary will be made generally available to the public by QPFL. A copy is now attached by way of announcement to the BSX.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Ian Sandeman', followed by a horizontal line.

Ian Sandeman
Chief Executive Officer

THE MARKET POTENTIAL FOR PAULOWNIA PRODUCTS IN AUSTRALIA

Prepared for Queensland Paulownia Forests Ltd

September 2005

©copyright BIS Shrapnel Pty Ltd 2005

*The information contained in this report is the property of
BIS Shrapnel Pty Limited and is confidential.*

All rights reserved.

No part of this report may be reproduced or transmitted in any form, nor may any part of or any information contained in this report be distributed or disclosed to any person who is not a full-time employee of the Subscriber without the prior written consent of BIS Shrapnel Pty Limited. The Subscriber agrees to take all reasonable measures to safeguard this confidentiality. Subscribers may not, under any circumstances, use information in this report for promotional purposes.

Note: Although great care has been taken to ensure accuracy and completeness in this project, no legal responsibility can be accepted by BIS Shrapnel Pty Limited for the information and opinions expressed in this report

Job No: D4616

*BIS Shrapnel contact: Bernhard Neufeld
BIS Shrapnel Pty Limited
Level 8, 181 Miller St
North Sydney NSW 2060
Australia
Tel. +(612) 9959 5924
Fax +(612) 9959 5795*

EXECUTIVE SUMMARY

In June 2005, Queensland Paulownia Forests Limited (QPFL) commissioned BIS Shrapnel Forestry to undertake a marketing report on Paulownia timber.

Background on QPFL

QPFL is one of Australia's leading Paulownia developers and managers. Founded in 1995, QPFL has six plantations in Southern Queensland and an additional plantation located near Forbes in New South Wales. It is the first forestry company growing Paulownia to publicly state a strategy to market the timber as a value added end product. The plantations have over 200 kilometres of underground irrigation mains and sub mains and over 2,500 kilometres of irrigation tape, as well as 5 million drippers that help to distribute the 7.3 million billion litres of water that they are capable of storing. They can pump at a rate of 302 million litres per day if required to grow the Paulownia under optimum conditions.

The company is now moving into the production phase of development, and will produce timber and high value added products from the Paulownia plantations, beginning in 2005 and 2006

Plantation Resource

The current plantation resource of QPFL has the capacity to produce up to 40,000 cubic metres per year of sawn timber within the next five years. Production will likely be a modest 1,000 cubic metres in 2005, and 2,000 to 3,000 cubic metres in 2006 and will increase more rapidly between 2007 and 2010, to 40,000 cubic metres, and by 2015, production should be 130,000 to 145,000 cubic metres. If domestic production is insufficient to meet market demand over the next decade, QPFL has plans to import Paulownia from China.

Marketing Strategy

The QPFL marketing strategy in combination with an effective research and development program, the purchase of a mill that will include a value added operating facility, and supply agreements with customers has been designed to provide the best possible return to Paulownia Growers for their rough sawn timber product. This strategy is in the initial stage of being implemented at time of writing, and offers a basis for expanding the use of Paulownia for high value applications. The integration of growing, processing and marketing operations is the most effective way to ensure that Paulownia is used for the highest value added processing applications, and therefore returns the highest value to various stakeholders along the processing chain, including the Growers for their rough sawn timber.

Through a research and development program QPFL has established a technical database for effective and profitable harvesting, value adding and marketing of the resource.

QPFL is focusing on the high value, high quality market segments for the products that will be produced and considerable effort has been placed on quality assurance at all levels of the process. To support product quality, QPFL is developing a log grading card and specification and grading rules for Paulownia timber.

Processing of Paulownia

QPFL plans to be actively involved in the processing of Paulownia, and to this end has purchased a sawmill and is establishing a separate processing organization. The organization will ultimately develop a line dedicated to the processing of Paulownia. The vertical integration process will help to establish a growing market for the plantation logs, and subsequent rough sawn timber and is intended to ensure the best returns to Growers for this raw material.

The Market for Sawn Timber

Consumption of sawn timber in Australia has averaged between 4 million and 5 million cubic metres per year over the past decade. Over 3 million cubic metres is softwood, and just over 1 million cubic metres is hardwood.

Almost 80% of sawn timber is used in building construction, much of it for structural purposes such as framing. Plantation grown Radiata Pine has replaced much of the hardwood from native forests traditionally used for structural applications in building construction.

However, consumer demand for specialty timbers for applications such as joinery, furniture, panelling, and many other applications, ensures that there will be a continuing market for timber species that can meet the requirements of these special applications, including native grown hardwood species, and imported species such as Meranti, Douglas Fir, and Western Red Cedar. Specialty timber products such as plantation grown Paulownia, are well positioned to penetrate the market for applications where these imported species are commonly used.

Advantages and Limitations of Paulownia

Paulownia has many characteristics which make it an ideal timber for many specialty applications. The many advantages of Paulownia include a light colour, an even texture, light weight, very good sound conduction and thermal insulation qualities, natural drying characteristics, and qualities which make it a very easy timber to work, including routing ripping, sanding and boring.

The main limitations of Paulownia are its lack of strength, soft surface and price.

The inherent advantages of Paulownia as a specialty timber, and the marketing and development strategy adopted by QPFL positions the species to penetrate the market for many specialty applications and uses that are currently met by imported timber products. As Paulownia is introduced to the Australian consumer, applications with significant potential in the early stages of development include mouldings, marine plywood, door cores, partitioning, coffins, replacement for Western Red Cedar, replacement for balsa in boat building and mobile homes, surfboards, and musical instruments.

The market size of each of these applications, the potential for Paulownia to replace existing products in these applications in Australia is discussed below.

Mouldings

The use of mouldings in the building industry is significant in Australia, and offers one of the best opportunities for Paulownia to enter and penetrate the market. Demand for mouldings is driven by the building and renovation industry, and is supplied by imported specialty timbers such as Meranti, Western Red Cedar, Douglas Fir, native hardwood timber, imported and plantation grown Radiata Pine, and composite products such as MDF. The lightweight, light

colour and good gluing qualities of Paulownia make it ideally suited to the production of mouldings. Paulownia (280 kg/m^3) is significantly lighter than other materials currently used in mouldings, such as MDF (680 kg/m^3), tropical hardwood (450 kg/m^3), Australian hardwood ($<800 \text{ kg/m}^3$) and radiata pine (500 kg/m^3).

At the peak of the housing market, an estimated 190,000 cubic metres of sawn timber and MDF was used to produce mouldings. Paulownia would need to capture just 25% of this market to utilize all of the QPFL resources of 40,000 cubic metres, which it expects to produce by 2010. This is an achievable target with an effective marketing and development strategy. A 25% share of this market would require 47,500 cubic metres of Paulownia.

Marine Plywood

QPFL has tested, and developed a composite product made of a Paulownia blockboard core laminated with hoop pine veneers, to be used as a lightweight alternative to marine plywood in non structural (mainly decorative) applications. The lightweight of this composite product will provide a significant advantage in applications such as boat building, where weight is a significant issue.

There are opportunities to use Paulownia core products in interior or overlaid plywood niche applications where the light weight is important, where significant strength is not required, and where consumers are prepared to pay a higher price for Paulownia. Over 40,000 cubic metres of interior and overlaid plywood was produced in Australia in 2004, and a further 40,000 cubic metres was imported. A 15% share of this 80,000 cubic metre market in ten years time would result in a requirement for 12,000 cubic metres of Paulownia each year.

There is also a significant market for marine plywood in New Zealand, which is estimated to be several times larger than the Australian market.

Door Cores

Paulownia offers significant opportunities for use in door cores. The advantages of using Paulownia for this application include its lightweight, making installation easier, and its thermal conductivity and the high ignition point improving the fire rating of a building. Doors with a Paulownia core can take on any appearance using high quality hardwood or softwood veneers, or pre-finished thin MDF for the smooth finish required on a painted door.

Timber and MDF use in solid core doors was over 78,000 cubic metres in 2004, and is expected to be approximately 70,000 cubic metres in 2005 despite the downturn in residential construction. Paulownia would need to gain a 15% share of the door market in Australia over the next ten years, to supply 12,000 cubic metres of Paulownia per year to the solid door core market, and 20% to supply 16,000 cubic metres. Lighter doors with a higher fire rating are likely to be able to gain a higher price.

Office Partitioning

Office partitioning offers considerable potential for Paulownia. Its light weight in particular provides advantages for the production of portable partitioning that is regularly moved. The thermal insulation and high ignition qualities of Paulownia are also an attractive characteristic for partitioning.

It is estimated that between 5,000 and 10,000 cubic metres of natural timber, particleboard and MDF is used for office partitioning each year. A 30% share in applications where weight is a significant issue would require up to 3,000 cubic metres of Paulownia per annum.

Coffins

Coffins offer a significant opportunity for Paulownia because of the light weight of the timber and the light colour, enabling it to be stained to mimic a range of other timbers. The slow rate of decay and stability of Paulownia relative to other timbers is also an advantage in this market. However, disadvantages have also been identified in previous research, such as screw holding ability. The coffin market is also likely to be highly fickle, with preferences for high value timbers.

Australia's mortality rate averages 130,000 per year. The production of 130,000 coffins would require an estimated 13,000 cubic metres of timber per annum.

On the assumption that QPFL could capture 20% of the coffin market over the next ten years, an estimated 2,600 cubic metres of Paulownia would be required annually. A 60% share of the market would require an estimated 7,800 cubic metres of Paulownia annually.

Western Red Cedar

Paulownia is lighter in weight than Western Red Cedar, and has many of the same characteristics. It has the potential to replace Western Red Cedar in most applications. An estimated 40% of the Western Red Cedar imported to Australia is used in external cladding, and the remaining 60% is used across a wide range of moulding and millwork applications, including windows and doors, shutters and Venetian blinds.

Australian imports of Western Red Cedar have fluctuated widely over the past seven years, from as high as 81,300 cubic metres in 2000, to as low as 43,100 cubic metres in 2001. However, if adjusted for housing starts, which has driven the high level of variability in consumption, there has been a significant fall in usage over the past seven years.

More than 98% of Western Red Cedar imported by Australia is sourced from Canada, and small volumes are sourced from the United States and other countries.

Paulownia has the potential to compete with Western Red Cedar in all applications. However, it will need to be price competitive to gain significant market share. Builders and other end users are familiar with the characteristics of Western Red Cedar and are unlikely to change, unless there are significant price and quality benefits associated with the change.

Australia imported an average of 60,000 cubic metres of Western Red Cedar per year over the past five years. If QPFL could capture 30% of this market over the next decade, this would represent an estimated 18,000 cubic metres of Paulownia required per annum.

Internal Fit-Out of Boats

The internal fit-out of boats, caravans, and mobile homes is very weight sensitive. The lightweight of Paulownia timber would offer significant advantages over wood products in cabinetry and other fittings. It also provides a significant advantage in aesthetic qualities.

On the assumption that 5,000 cubic metres of timber per year is used for the internal fit-out for boats, caravans and mobile homes, a 25% share of this market in ten years time would require 1,250 cubic metres of Paulownia.

Surfboards

Surfboards are a highly specialised application for wood products. The bulk of surfboards produced in Australia are fibreglass with a foam core. The main segment in the surfboard market for timber products is in the traditional long boards, which are a small niche in the

surfboard market. Paulownia has significant advantages over other timbers for surfboard manufacturing due to its light weight, stability, ease with which it can be moulded and its low absorption of water. As a result, it is likely to be the preferred species used in wooden surfboard manufacture

While long boards are gaining in popularity and are a high value segment of the market, they will always be a very small segment of the market. A 50% share of this market over 10 years would require only 5 cubic metres of Paulownia per year.

Musical Instruments

In China, Paulownia has been used for hundreds of years in the manufacture of traditional Chinese musical instruments, and it is valued highly for its acoustic qualities. There are likely to be some opportunities for Paulownia in musical instrument manufacture in Australia, for applications such as guitar bodies and piano casings. These would take advantage of the acoustic qualities of Paulownia, as well as the lightweight and the light colour making it easy to stain, as would the manufacture of speakers, which currently use MDF and particleboard.

The size of this market is unclear, but the volume of timber used in Australia is likely to be very small.

Exports

Once sufficient supply is available from Australian plantations, it may be possible to export Paulownia to a wide range of markets. China is the largest consumer, and a possible target market, but it is also a very large producer, and has a significant domestic resource of Paulownia. However, there are several key markets to which China has been exporting for several years, including Japan, South Korea Taiwan, Vietnam, Malaysia, United States, Italy, Hong Kong, and a wide range of other countries. It is possible that QPFL could ultimately target China, and compete with China in other export markets.

China currently exports over 200,000 cubic metres of Paulownia per year to Japan, South Korea, Taiwan, Vietnam, the United States, Italy and a number of other markets, including Australia. With a concerted export marketing effort, it is possible that QPFL could gain a 20% share of this market over the next ten years, which would require 40,000 cubic metres of Paulownia per annum. China is also a very large potential export market that could be targeted by QPFL.

The market for Paulownia is clearly growing in all of these countries, with total exports from China having increased by an average of 6% per annum over the past seven years. There appears to be potential to diversify exports to other countries as well, as exports from China have been maintained at a high level to a wide range of other countries.

Composite Products

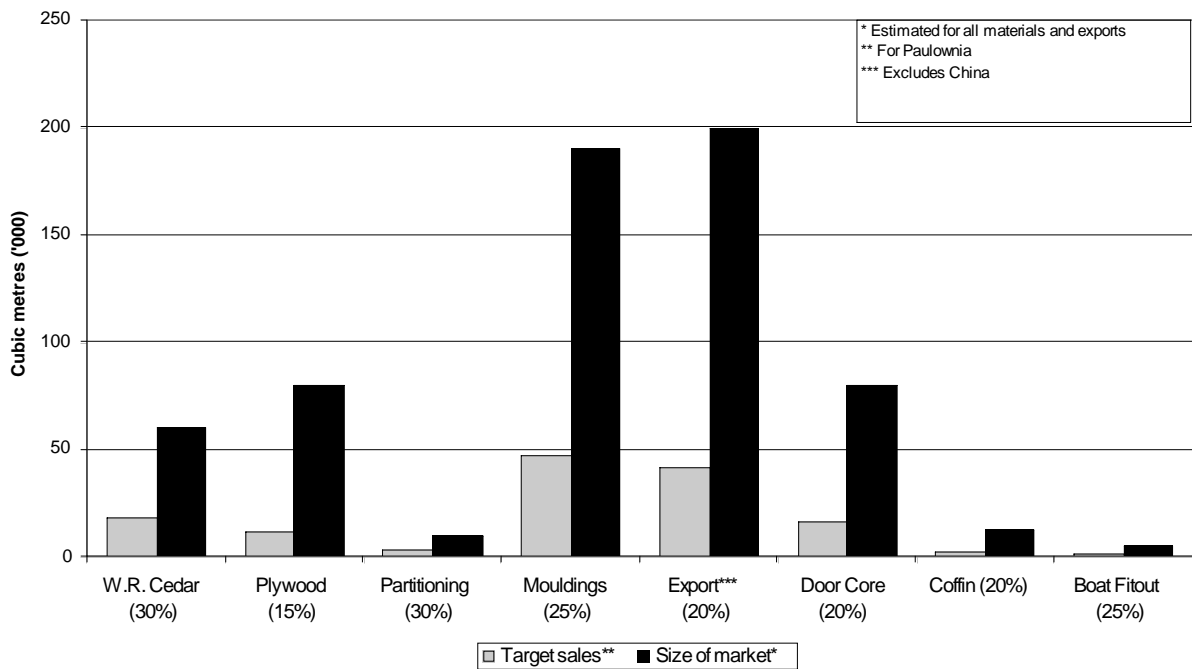
It is possible to engineer Paulownia to provide additional strength. This can be achieved by strengthening it with aluminium, thereby still retaining its light weight advantage, or reinforcing it with fibreglass, or other materials with strength characteristics. There may be a market for composite reinforced Paulownia, but it is likely to be relatively expensive and would require a considerable marketing and engineering effort to be successful. However, in the long term composite products may result in additional requirements for Paulownia.

Total Market Size

The market size for those applications for which Paulownia is most suited is estimated to be approximately 638,000 cubic metres, including export markets. The domestic market for the key applications is estimated to be 438,000 cubic metres.

Table1 shows the estimated size of the market for each of the applications, and a target share of each of these applications for Paulownia. A reasonable target is to ultimately capture a 22% share of the market, which would amount to sales of approximately 144,000 cubic metres of Paulownia. The most significant volume of sales would be to the mouldings, export, Western Red Cedar, door core and plywood markets, which between them would absorb an estimated 135,000 cubic metres of Paulownia, or 94% of total production.

Chart 1: Target Market Share, Sales and Size of Market by Application



Market Penetration Scenario: 2006-2015

Capturing a 22% share of the market will take some time. Over the first two years, only a few thousand cubic metres of Paulownia will be available from QPFL resources. The current plantation resource of QPFL has the capacity to produce up to 40,000 cubic metres of sawn timber by approximately 2009 or 2010. By 2015, the resource will have the capacity to produce 130,000 to 145,000 cubic metres per year.

In the next two to three years, production will likely be modest, with production of 2,000 to 3,000 cubic metres in 2006, followed by a more rapid increase from 2007. Production should reach 40,000 cubic metres by 2010, and by 2015, it should be 130,000 to 145,000 cubic metres. If production is insufficient to meet market demand over the next decade, QPFL has plans to supplement domestic production with Paulownia imported from China. Any surplus in the domestic market can be exported.

Chart 2 shows a possible market penetration scenario for Paulownia for the ten year period 2006-2015. It has been assumed that Paulownia can capture a 50% share of the surfboard and music markets, a 30% share of the Western Red Cedar and partitioning markets, a 25% share of the mouldings and boat fitout markets, a 20% share of the door core, coffin and export markets, and a 15% share of the plywood market, over a ten year period.

In the scenario presented in Chart 2, the market share increases from less than 1% in 2006 to 22% share of the total market of 648,000 cubic metres in 2015, a period of ten years. It has been assumed that the total market does not increase over the next ten years. It is possible that the market could grow by up to 5% per year, and this would reduce the market share of Paulownia, or provide further opportunities to increase the volume of Paulownia supplied to the market. China as a potential export market has been excluded from the estimate of the total market size. There is a potentially significant additional market for export to China.

The scenario presented in Chart 2 is a reasonable and achievable scenario, but it will take a considerable market and product development program to achieve, as well as an export development program. This program will need to address several key issues, including the cost of Paulownia relative to competitive products, the cost of servicing a large number of small secondary processors, the fact that other countries, including the United States have a Paulownia resource that is not currently exploited, and that QPFL may only gain a small share of the market for each of the applications, and will need to focus on the high value end of the spectrum. However, with a concerted effort, a 22% share of the market spread across a range of applications is achievable.

Chart 2: Paulownia Market Penetration Scenario: 2006-2015

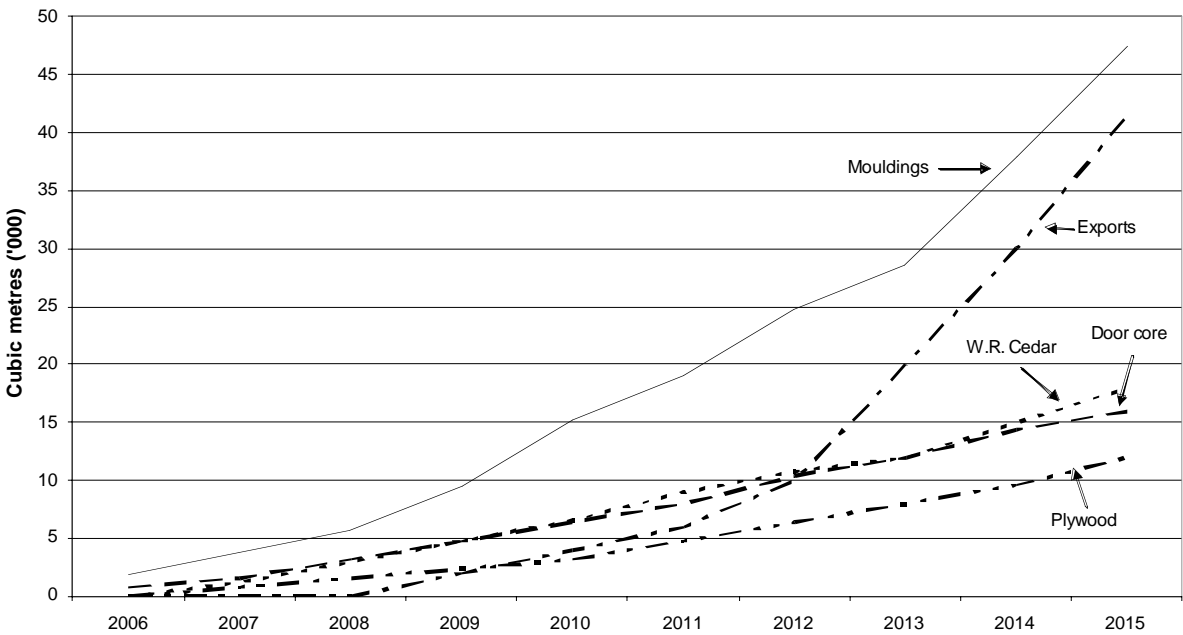


Chart 3: Paulownia Market Penetration Scenario: 2006-2015

