High-value wood resources

Technical Report 211

Processing plantation-grown eucalypt sawlogs: modelling costs and log prices for mills optimised for the Tasmanian plantation resource

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CRC for Forestry
Researching sustainable forest landscapes

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Public report

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Summary

Plantation-grown eucalypt sawlogs have somewhat different processing characteristics to native forest sawlogs. Research has identified sawmilling equipment and methods that would improve processing performance, relative to that obtained when plantation sawlogs are processed in conventional native forest sawmills.

There is interest in evaluating the profitability of sawmills optimised for a eucalypt plantation sawlog resource, particularly in Tasmania, where a resource of plantation sawlogs is being developed and the supply of pruned plantation sawlogs is expected to reach 150 000 cubic metres per year by around 2025.

This report presents financial modelling for a sawmill optimised to quarter-saw plantation-grown sawlogs of *Eucalyptus globulus* and *E. nitens*, with an annual log requirement of about 100 000 cubic metres per year, assuming two mill shifts per day. The modelling is based on the costs and performance of an existing native forest eucalypt sawmill in southern Tasmania, which had previously been modelled in 2007. Modifications to sawing and drying equipment and procedures to optimise the mill for plantation sawlogs have been costed and the model adjusted accordingly. Of particular note is the use of a multi-saw resaw to increase mill productivity with the shorter, smaller diameter but more uniform plantation sawlog resource.

The modelling system involves constructing a new mill and operating it for a twenty-year period. Log prices payable at the sawmill were calculated, consistent with achieving a target internal rate of return (IRR) on investment in the mill. Assumptions of volume recoveries of products are based on processing trials of plantation logs, and product prices are detailed.

Mill-door log prices payable ranged from less than $50 per cubic metre, assuming a requirement of 15% IRR and only 5% of log volume recovered as sawn boards of standard grade and better, to more than $200 per cubic metre, for an IRR of 10% and 23% of log volume recovered as standard grade and better. Mill-door log prices exceeding $100 per cubic metre could be supported, provided recovery of standard grade and better exceeded 10% at an IRR of 10%, or 12% at an IRR of 15%.

The modelling is for a new mill of the type described. Modelling the modification of any existing sawmill would require consideration of that mill's particular circumstances.

Introduction

Existing eucalypt sawmills in Tasmania are configured for sawing eucalypt logs from native forests, with the main species processed being *Eucalyptus delegatensis*, *E. obliqua* and *E. regnans*. Sawing is conducted in two main stages and mills are usually equipped with single-saw log break-down systems coupled with resawing lines to complete the two-stage process. These systems have developed over many years to process this native forest resource and are well suited to the highly variable size and quality of native forest logs where 'grade-sawing' is required to maximise product recovery and quality[1].

The shortcomings of these 'native forest' sawmills for processing short-length pruned plantation-grown *E. nitens* and *E. globulus* are described in CRC for Forestry Technical Report 209 (Washusen 2011). The use of single-saw break-down and resawing systems (where they are installed) can slow material flow rates and hence increase sawing costs, particularly for short log lengths characteristic of pruned plantation logs[2]. In addition, single saws produce asymmetric release of growth stresses, which have steep pith-to-bark gradients in small-diameter plantation-grown logs. This poor control of growth stress release can further slow the sawing process, reduce recoveries, and can contribute to poor sawing accuracy resulting in downgrading of dried boards and reduced product value.

The review by Washusen (2011) describes some of the alternative processing options that can be applied to improve material flow and sawmill efficiency, reducing processing costs. During a CRC for Forestry workshop held in Hobart in December 2010, this information generated interest in exploring the possibility of developing a specialised mill for processing short plantation-grown logs of relatively uniform dimensions and quality where 'grade-sawing' methods are less relevant than for conventional native forest logs.

Washusen (2009) describes methods for comprehensive financial modelling of sawmill operations, known as CSIROMILL, which were developed primarily to assist growers and processors to develop profitable value chains for new plantation eucalypt resources. The modelling method uses material flow rates and volume recoveries through sawing and drying, built up from processing experiments on different sawing and drying equipment types carried out by CSIRO with the assistance of industry. Mill construction and operating costs are determined from surveys of equipment suppliers and recent actual mill construction. Returns are determined from current price schedules for different sawn timber board sizes and grades produced. The modelling approach is to construct a new sawmill, 'run' it for a full working life and evaluate mill-door log prices payable with achieving target rates of return on capital invested. The modelling method enables examination of the effects of changes in resource quality (as assessed by processing trials) and mill set-up on mill-door log prices, and comparison of different mill set-ups. The application of CSIROMILL modelling is exemplified in the study reported by Washusen *et al.* (2009b), which established mill-door log prices for pruned plantation-grown logs of *E. saligna*, *E. viminalis* and *E. globulus* grown and processed in Western Australia.

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[1] Grade-sawing refers to the adjustment of the sawing pattern for each individual log so as to maximise the recovery of high-value sawn products (large-dimensioned boards of standard grade or better). Grade-sawing takes into account log size and taper and defects such as defective log quarters and hollow log centres.

[2] The majority of Tasmanian sawlog plantations are pruned to a height of 6.4 m, but logs of this length cannot be processed as a single sawlog, primarily because of problems associated with the release of growth stresses (Washusen 2011). The best processing outcomes result when bush logs are cross-cut to produce two sawlogs of about 3.0 m in length.

The *E. nitens* and *E. globulus* plantation sawlog resource in Tasmania is at a relatively early stage of development (Forestry Tasmania 2007). The first substantial volumes of pruned plantation logs should become available for processing from about 2015, and up to 150 000 cubic metres per year are forecast to be available from about 2025, from plantations in state forests. Much smaller additional volumes from plantations on private land may also be available. It is anticipated that about 80% of the initial available log harvest will be *E. nitens*, and the balance *E. globulus*. This level of resource, from a decentralised plantation estate, would not supply sufficient log volume to operate a large modern sawmill, purpose-designed for processing a uniform plantation log resource at low processing cost. A dedicated sawing line set up for quarter-sawing plantation sawlogs, such as the HewSaw R250 PLUS Trio, discussed by Washusen (2011), would require a log intake of 260 000 – 320 000 cubic metres per year for a two-shift operation.

As an alternative, it may be possible to retrofit existing 'native forest' eucalypt sawmills with processing components that improve mill performance when sawing plantation logs, enabling profitable operation on a plantation-grown resource with a lower log volume requirement. In 2007, CSIRO in consultation with Neville Smith Timbers produced a model of the NST Southwood sawmill, located at the Southwood wood-processing complex west of Huonville in southern Tasmania. This enabled modelling of a mill operation using native forest sawlogs. This sawmill has since changed hands and it is now owned by Gunns Ltd. It is clear from trials with short-length logs, and from staff observations of normal processing operations, that there can be serious bottlenecks in the processing line that significantly slow the mill's operation.

The current mill is set up with two single-saw log break-down units that produce flitches of variable dimensions for resawing on two MEM twin bandsaws. Boards produced on the twin saws are sent directly to a green chain for sorting, and slabs are diverted to a scanning multi-rip. Gunns Ltd staff estimate that the current mill capacity is around 45 000 cubic metres log intake per year in a single shift, processing the current log supply from native forests which have log lengths of up to 5.4 m. The two MEM twin saws process these long flitches relatively efficiently in several passes. However, as the log length shortens, material throughput slows substantially, because of the greater number of reciprocating sawing passes for a given wood volume throughput.

Volume throughput may be increased for short logs by substituting one of the twin saws with a multi-saw such as the MEM Cobra-Multimate (installed in the Whittakers Timber Products new small sawlog line in Greenbushes, WA) or the HewSaw NS250 (a new multi-saw developed by Veisto Oy, Finland). Both of these multi-saws process accurately dimensioned cants in a single pass to produce either back-sawn or quarter-sawn boards on resawing. The HewSaw NS250 has feed speeds of 60–200 m/minute (www.hewsaw.com), substantially improving mill performance with both short and long logs. In order to produce accurately dimensioned cants, modifications are required to the log break-down system with one of the single-saw log break-down units to be replaced with a twin break-down saw and scanner similar to the MEM Tally Twin used in the new mill at Whittakers Timber Products. The other single saw is then used to halve logs for the twin saw.

Modelling method used

The model is based on the models developed by CSIRO with extensive industry consultation between 2003 and 2009. One of these models is of the NST Southwood mill in which the sawing line has been altered as described above.

The model simultaneously calculates mill-door prices based on sawmill internal rates of return (IRR). It is a series of linked spreadsheets that replicate the capital and operating costs of the mill. It is a time-series analysis over a twenty-year period at which time the mill is scrapped. Equity is assumed to be 100%. Allowances are made for taxation on profit and refunds where losses are incurred. All equipment is depreciated at rates given in detailed output tables.

The equipment and staffing levels are fixed for defined log input ranges. To calculate mill-door prices, it is possible to alter the following variables:

1. Log input can be altered within the defined range, and automatic adjustments are made to the production costs which are linked to volume throughput.

2. Taxation rate can be altered to any percentage.

3. IRR can be altered to any percentage.

4. Wood value produced per cubic metre of log input can be altered.

Capital, operating costs, staffing levels and summary sheets are given in output tables.

Sawmill description and operation

Pruned, debarked logs are delivered to the mill and stored under water sprays. Delivered logs are 6.2 m long with minimum 36 cm small-end diameter (SED). Each log is cross-cut at the mill to produce two sawlogs with a final length of 3.1 m. Small-end diameter range is 36–64 cm.

The sawing is conducted as follows:

1. Single bandsaw. Single pass to halve each log.
2. Computer-operated twin bandsaw with scanner and hydraulically operated log turn-down device. Breaks down each log half into three flitches. The centre flitch is processed to produce cants of the following dimensions: (i) 36–44 cm SED logs; cant width 187 mm; cant heights 175 and 200 mm: (ii) 45–64 cm SED logs; cant width 219 mm; cant heights 225, 250, 275 mm. The number of passes varies with log diameter: 36–52 cm, two passes; 53–58 cm, three passes; 59–64 cm, four passes. Dimensioned boards, 27 mm thick, are produced on the third and fourth passes for logs greater than 53 cm SED. Logs less than 52 cm SED are turned down once, while logs greater than 53 cm are turned down twice.
3. Resawing line 1: Existing MEM twin saw and scanning multi-rip. Processes rounded side flitches with true quarter-sawing strategy. Slabs are resawn with MEM scanning multi-rip.
4. Resawing line 2: HewSaw NS250 fitted with 500 mm diameter saw blades. Resaws cants to produce 27 mm thick boards in a single pass.
5. Trim-saw system: Boards are docked when required.

Drawings of cutting patterns for 50 cm SED and 60 cm SED logs are shown in figures 1a and 1b.

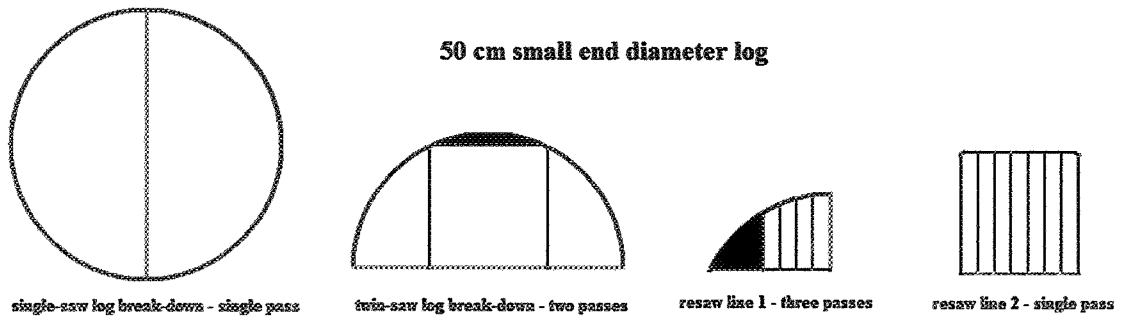

Figure 1a. Sawing pattern and number of passes for 50 cm SED log

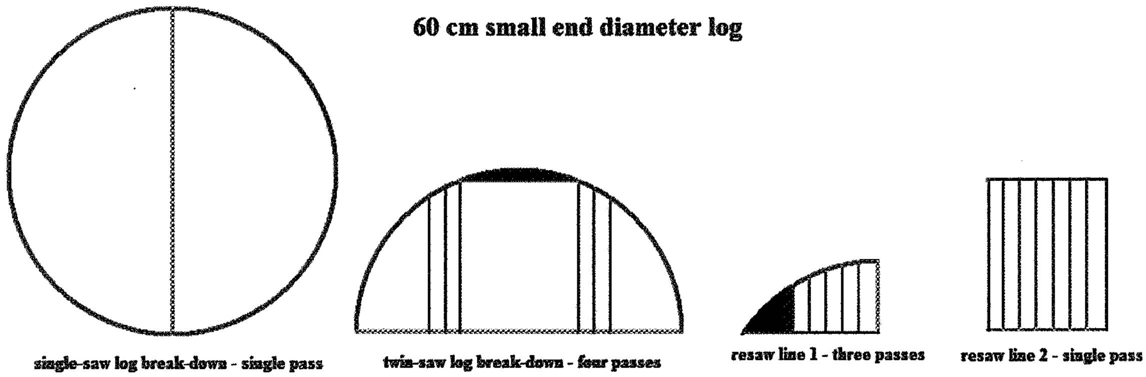

Figure 1b. Sawing pattern and number of passes for 60 cm SED log

Estimated log intake for a two-shift operation is 90 000 to 110 000 cubic metres per year. Given that logs are equally distributed across the diameter range, sawn board output is produced as follows: 4% from the twin break-down saw, 44% from resawing line 1 and 52% from resawing line 2. If resawing line 1 cannot handle this capacity, some extra slabs can be sawn on the twin break-down saw and directed to the scanning multi-rip.

The green chain is equipped with bin sorter and automatic stacker. Sawn residues are chipped and transported by conveyors to a stock pile or for loading directly into trucks. Before drying, boards are given a standard boron diffusion treatment (one month). Boards are dried in drying sheds with drop-down sides, which are equipped with fans (four months). At mean moisture content of 15%, boards are steam reconditioned for eight hours at >98°C, then kiln-dried to 10–12% moisture content. Heating for kilns is via pressurised hot water from a Kohlbach furnace using sawdust and dry shavings as fuel. Dried boards are skip-dressed, ripped and docked for grading.

Product values and recoveries used for modelling

Table 1 shows the recoveries of different products assumed for modelling. Total volume recovery of sawn boards (utility, standard and select grades) is assumed to be 32%. This is higher than the volume recoveries of 27% and 28% obtained from the CRC for Forestry quarter-sawing study on pruned, plantation-grown *E. nitens*, which reported 27% for the 2.7 m butt-log and 28% for the second 2.7 m log (Washusen *et al.* 2009a). Higher recoveries are expected from the sawing system described here because:

(i) the multi-saw systems employed reduce log and flitch distortion during sawing, eliminating the need required in that study for straightening cuts on flitches and resawing of boards to remove spring.

(ii) better sawing accuracy improves green volume recovery and also reduces losses on drying arising from board undersizing (Washusen *et al.* 2009a).

The variable costs in the model are fixed at the sawn volume throughput equivalent to 36% recovery, while the product values produced are based on 32% recovery.

Table 1. Product recovery and values used for modelling

Product	Recovery (% log volume)	Product value ($/m^3)
Standard grade and better	32 less % recovery of utility grade	1250
Utility grade	32 less % recovery of standard grade and better	350
Woodchip	48	75
Sawdust	15	0
Mill waste	5	0

The recoveries of standard grade and better assumed in Table 2 can likewise be compared with those reported by Washusen *et al.* (2009a) for plantation-grown *E. nitens* in Tasmania. In that study, recovery of standard grade and better was recorded at 6.7% of log volume for butt-logs and 14.3% of volume for second logs (i.e. an average of about 10%). Industry graders indicated that surface checking was the main defect leading to downgrading from standard to utility grade in this study. Improved drying and reconditioning methods were shown by Blakemore *et al.* (2010) to markedly reduce both surface checking, and visible internal checking following reconditioning, which was not evaluated as a grade-limiting defect by Washusen *et al.* (2009a). It is therefore anticipated that recovery of standard and select grades would be towards the upper levels shown in Table 2.

Table 2. Recovery of standard grade and better and product value per cubic metre of log intake calculated with values given in Table 1

Recovery of standard grade and better (% log volume)	$/m^3 log intake
23	355
20	328
17	301
14	274
11	247
8	220
5	193

The model, incorporating the changes to the processing system described above, and using the product values and grade recoveries shown in tables 1 and 2, was run to calculate mill-door prices for sawlogs, consistent with attaining rates of return of 10% and 15%. These internal rates of return have been used in recent modelling studies of native forest sawmills (Washusen 2009, Washusen *et al.* 2009b).

Results

The appendix shows the model worksheets, with IRR set at 15%.

Figures 2a and 2b plot the mill-door log prices for the different recoveries of standard grade and better shown in Table 2, consistent with IRR of 10% and 15% respectively.

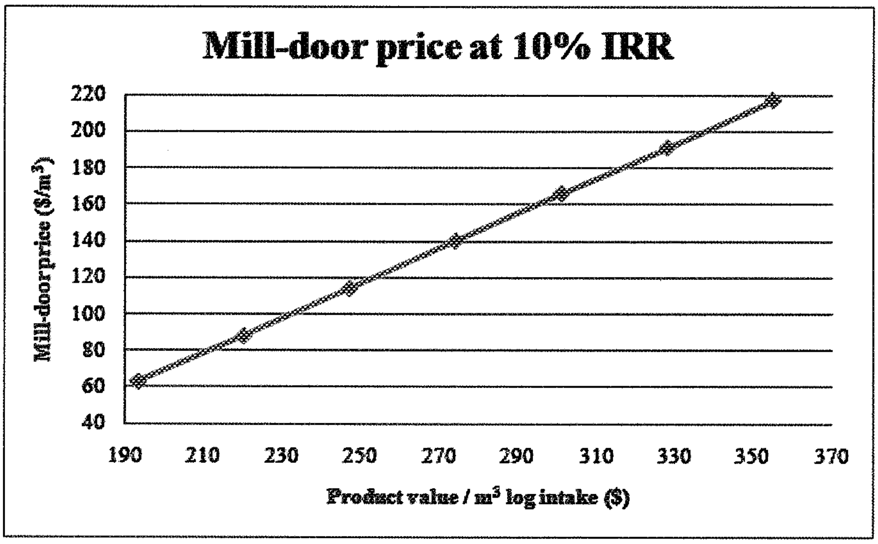

Figure 2a. Mill-door prices at 10% internal rate of return for product values given in Table 2

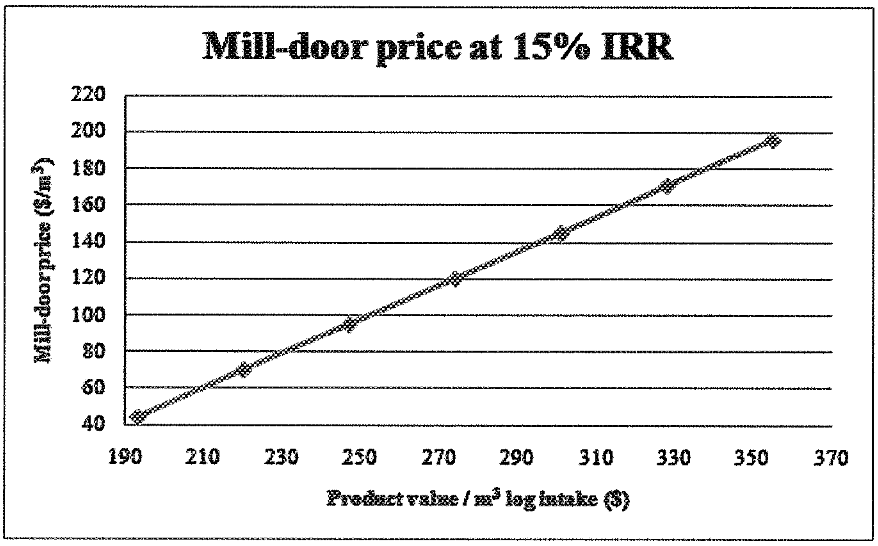

Figure 2b. Mill-door prices at 15% internal rate of return for product values given in Table 2.

As expected, mill-door log prices payable are affected by the target IRR, and also by the recoveries of standard and select grade boards. Mill-door log prices payable ranged from less than $50 per cubic metre (assuming 15% IRR and only 5% recovery of standard grade and better) to more than $200 per cubic metre (for an IRR of 10% and 23% recovery of standard grade and better). Mill-door log prices exceeding $100 per cubic metre could be supported provided recovery of standard grade and better exceeded 10% at IRR of 10%, or 12% at IRR of 15%.

Discussion

The results presented here represent only a few scenarios out of many that could be tested with the modelling system developed. Nevertheless, they indicate that a sawmill configured as described here, and processing 100 000 cubic metres of plantation sawlogs per year in a two-shift operation, should be able to operate profitably, while paying mill-door prices of $100 per cubic metre or more, which may be attractive to sawlog growers. Overall profitability of sawlog plantations depends also on sales of unpruned sawlogs and pulp-logs from the part of the tree stem above the 6.4 m pruned sawlog. Sale of pulp-logs from commercial thinnings prior to the final sawlog harvest may contribute additional revenue to the grower.

Several points need to be made to place these results in context:

- A two-shift sawmill operation is assumed. The modelling system has not been set up to model a single-shift operation, which would not be realistic to recover the substantial investment in advanced mill technology.
- Prices for materials, equipment and labour for the construction and operation of the mill are 2007 prices, except for the HewSaw NS250 ripsaw, for which a February 2011 price is used. Prices of output products are also at 2007 levels. Price changes since 2007 should be factored into any detailed sensitivity analysis such as would be undertaken for a specific investment proposal.
- While the variable costs in the model are fixed at 36% recovery of sawn wood, the product values are based on only 32% recovery of board products. This means the model actually overestimates the variable processing costs by about 12%, which in turn contributes to underestimation of the mill-door log prices. In practice, it is anticipated that 36% of dried sawn product recovery could be achieved with optimum sawing and drying practices. The level of product recovery also depends on market requirements. Some Australian eucalypt mills have markets that accept select and standard grade boards down to lengths as short as 30 cm, usually at discounted prices. Where markets require longer lengths, mills prefer to chip short-length boards for sale as woodchips or to be used as fuel.
- Prices for sawn boards are based on those current in 2007 for Victorian 'ash' eucalypt native forest boards. It is assumed that quarter-sawn select and standard grade boards of equal dimensions cut from plantation *E. nitens* and *E. globulus* could be marketed at the same price. This assumption seems reasonable, in the context of declining availability of sawn timber from native forest eucalypts. However, it can only be tested once production commences. Specific marketing of appearance-grade boards from plantation-grown *E. nitens* and *E. globulus* may be required, as their appearance differs significantly from native forest boards (Harwood 2010). There is already an international market in appearance-grade sawn boards of plantation-grown eucalypts produced in South American countries, and some components of furniture are manufactured from plantation-grown eucalypts in South-East Asia.
- A specific uncertainty concerns the impact of closed internal checks on acceptability for appearance applications such as furniture, window frames and site-specific joinery, which involve re-dimensioning of sawn boards. This potential problem could affect the price of select and standard grade boards from *E. nitens*, but is not likely to be significant for *E. globulus*, in which levels of internal checking appear to be much lower (Washusen 2011). Evaluation of the impact of closed internal checks on secondary processing, using samples of boards from early processing trials of plantation-grown *E. nitens*, is

recommended. We know, from pilot trials already conducted, that closed internal checks should not cause surface defects in service unless they are exposed by re-dimensioning of boards in secondary processing. Untreated board samples of *E. nitens* free of surface checks, but with closed internal checks, have been exposed to outdoor conditions for over one year without any surface defects developing.

The modelling reported here was undertaken to determine mill-door log prices payable consistent with profitable operation, for a newly constructed mill similar to the Southwood mill, but modified as outlined above to process plantation-grown sawlogs. It does not aim to evaluate the prospects of modifying the existing Southwood mill, or any other Tasmanian mill, to process the plantation resource. Such modification would require less capital investment than construction of an entirely new mill, and might be an attractive option for a milling operation anticipating declining access to native forest sawlog resources and access to large quantities of plantation sawlogs. Modelling such modification of an existing mill may be appropriate in the future, closer to the onset of large-scale supply of plantation sawlogs. It would require consideration of the available plantation log resource for a particular mill, and the condition and anticipated working life of the existing mill components.

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Appendix: Model set-up and output for IRR 15%

Quartersawing 20-25 year old pruned *E. globulus* and *E. nitens*

Log break-down
MEM single band saw (single pass); in-line twin band saw with log scanner and hydraulic turn down device
Resawing
Line 1: MEM twin resaw (multiple passes) with in-line scanning multi-rip: Line 2: HewSaw NS250
Board sorting
Automated bin sorter and stacker
Drying system
Drying shed and kiln: Steam recondition at mean MC of 15%
Dry mill
Multi-rip, planing and packaging to skip dressed boards only
Resource
Pruned *E. nitens* and *E. globulus* 36-60 cm sed x 3.0 m long
Single shift annual log intake
45,000-55,000 m3 x 2 shifts
Life cycle
20 y operating life, 1 year to set up, 50% of sawn wood sold year 2, 50% of sales from year 21 in year 22
Relative to costs
Real AUD at 2007

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
CAPITAL EXPENDITURE																						
Infrastructure	869,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sawmill	10,243,745	578,000	158,000	158,000	158,000	158,000	578,000	158,000	158,000	158,000	158,000	578,000	158,000	158,000	158,000	158,000	578,000	158,000	158,000	158,000	158,000	0
Drying systems	9,050,000	0	0	0	0	0	0	0	0	0	4,170,000	0	0	0	0	0	0	0	0	0	0	0
Drymill	3,481,000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CURRENT EXPENDITURE																						
Infrastructure costs	651,000	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	0
Sawmill	224,000	2,157,000	2,157,000	2,157,000	2,157,000	2,157,000	2,157,000	2,187,000	2,157,000	2,157,000	2,157,000	2,157,000	2,157,000	2,157,000	2,187,000	2,157,000	2,157,000	2,157,000	2,157,000	2,157,000	2,157,000	0
Drying systems	96,000	1,455,100	1,910,200	1,910,200	1,910,200	1,910,200	1,910,200	2,020,200	1,910,200	1,910,200	1,910,200	1,910,200	1,910,200	1,910,200	2,020,200	1,910,200	1,910,200	1,910,200	1,910,200	1,910,200	1,910,200	0
Dry mill	100,000	932,000	1,814,000	1,814,000	1,814,000	1,814,000	1,814,000	1,844,000	1,814,000	1,814,000	1,814,000	1,814,000	1,814,000	1,814,000	1,844,000	1,814,000	1,814,000	1,814,000	1,814,000	1,814,000	1,814,000	0
Log costs	0	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	0
INCOME																						
Wood products	0	17,750,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	17,750,000
Sale mill vehicles	0	0	0	0	0	0	48,000	0	0	0	0	48,000	0	0	0	0	48,000	0	0	0	0	0
Infrastructure	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	234,000
Sawmill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	649,520
Drying systems	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	270,000
Drymill	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	377,750

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		
1. INFRASTRUCTURE																							Assests	**Dpn rate (%)**
Office (130m2)	130,000																						52,000	**60**
Staff Facilities (130m2)	130,000																						52,000	**60**
Weighbridge	100,000																						40,000	**60**
Transformer and housing	100,000																						40,000	**60**
Roads Infrastructure and site prep	100,000																						40,000	**60**
Log storage-dams	10,000																						10,000	**0**
Log storage-Hot mix surface	200,000																						0	**100**
Log storage-Sprinkler system	20,000																						0	**100**
Contingencies	79,000																						0	**100**

	Year																					
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
2. SAWMILL																						**ASSETS**	**Dpn rate (%)**
Sawmill buildings																							
Green mill 70x40 m	840,000																					336,000	60
Sawshop 10x10 m	30,000																					12,000	60
Maintenance shop 10x6 m	18,000																					7,200	60
Electrical / lighting	150,000																					60,000	60
Sprinkler / water storage / pumps	230,000																					92,000	60
Contingencies	126,800																					50,720	60
Sawing equipment																							
Log merchandising foundations	45,000																					18,000	60
Sawmill foundations	45,000																					18,000	60
Dust extraction foundations	12,000																					4,800	60
Sawshop foundations	7,000																					2,800	60
Mechanical upgrade	0	300,000					300,000					300,000					300,000					0	100
Bark conveyor/storage	0																					0	60
Loading equipment (1 x 966 Cat)	0	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	0	NA
Infeed systems (2)	161,700																					0	100
Log Scanner	80,000																					0	100
Log breakdown system	1,948,000																					0	100
Twin resaws	1,104,245																					0	100
Scanning multirip	750,000																					0	100
Trim saw/docking system	533,000																					0	100
Residue system	148,000																					0	100
Sawdust extraction	105,000																					0	100
Sawdust bin	50,000																					0	100
Chipper and transfer system	134,000																					0	100
Chip bin	20,000																					0	100
Loading ramps for residue	53,000																					0	100
Board segregation	335,000																					0	100
Board sorter system	2,000,000																					0	100
Mechanical installation	298,000																					0	100
Walkways/safety barriers	250,000																					0	100
Compressor and air lines	75,000																					0	100
Saws	40,000																					0	100
Gantry crane	15,000																					0	100
Communication systems	40,000																					0	100
Saw doctor	600,000																					0	100
Mill vehicles	0	120,000					120,000					120,000					120,000					48,000	40

3. DRYING EQUIPMENT																						ASSETS	Dpn rate (%)
Fork lift for Lyctid treatment (1)	200,000																					50,000	75
Lyctid treatment centre	100,000																					0	100
12 tonne fork for loading kilns (3)	600,000																					150,000	75
6 tonne fork (2)	280,000																					70,000	75
Air drying building	1,200,000																					0	100
Kilns + installation (6)	4,170,000										4,170,000											0	100
Heating system and installation	2,500,000																					0	100

4. DRYMILL																						ASSETS	Dpn rate (%)
Dry mill 100 x 40 m	600,000																					240,000	60
Electrical / lighting	80,000																					32,000	60
Sprinkler / water storage / pumps	180,000																					72,000	60
Contingency	86,000																					0	100
Optimising docker (2)	600,000																					0	100
Multirip (2)	300,000																					0	100
predressing (2)	500,000																					0	100
Storage 100 x 40 m	780,000																					0	100
Dust extraction	220,000																					0	100
3.0 tonne loader (3)	135,000																					33,750	75

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
1. OVERHEADS																						
Manager (1)	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000	125,000
Marketing/accountant (2)	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000	160,000
Office (2)	50,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	50,000
Accountancy costs	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Electricity connection	0	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Insurance-buildings	0	283,725	283,725	283,725	283,725	283,725	283,725	283,725	283,725	283,725	283,725	283,725	283,725	283,725	283,725	283,725	283,725	283,725	283,725	283,725	283,725	283,725
Insurance-Stock	0	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000	288,000
Insurance-Public liability	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Insurance-Directors/office liability	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Motor vehicle operation	18,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	36,000	18,000
Land lease	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000	13,000
Legal costs	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000
Quality assurance	0	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800	10,800
Yard maintenance	0	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	75,000	0
Waste disposal	0	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000	25,000
Contingencies	75,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000
Administration expenses	150,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000	400,000

2. SAWMILL																						
Staff: Green mill (20)	100,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	100,000
Electricity: green mill	50,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	700,000	0
Maintenance (2)	50,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	0
Repair motor in fork lift	0	0	0	0	0	0	0	30,000	0	0	0	0	0	0	30,000	0	0	0	0	0	0	0
Motor vehicle operation	0	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	135,000	0
Motor vehicle repairs	24,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	72,000	0
General repairs/maintenance	0	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	150,000	30,000
3. DRYING SYSTEMS																						
Staff: air and kiln drying (10)	96,000	240,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	480,000	240,000
Energy kiln drying	0	180,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	360,000	180,000
Lyctid treatment	0	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	900,000	0
Repair fork lift	0	0	0	0	0	0	0	20,000	0	0	0	0	0	0	20,000	0	0	0	0	0	0	0
Repair fork lift	0	0	0	0	0	0	0	60,000	0	0	0	0	0	0	60,000	0	0	0	0	0	0	0
Repair fork lift	0	0	0	0	0	0	0	30,000	0	0	0	0	0	0	30,000	0	0	0	0	0	0	0
Maintenance (1)	0	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	25,000
Motor vehicle operation	0	22,500	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	22,500
Motor vehicle repairs	0	12,600	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	12,600
General repairs/maintenance	0	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000
4. DRY MILL																						
Staff (26)	100,000	650,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	1,300,000	650,000
Electricity: dry mill	0	95,400	190,800	190,800	190,800	190,800	190,800	190,800	190,800	190,800	190,800	190,800	190,800	190,800	190,800	190,800	190,800	190,800	190,800	190,800	190,800	95,400
Packaging	0	76,500	153,000	153,000	153,000	153,000	153,000	153,000	153,000	153,000	153,000	153,000	153,000	153,000	153,000	153,000	153,000	153,000	153,000	153,000	153,000	76,500
Repair forklift	0	0	0	0	0	0	0	30,000	0	0	0	0	0	0	30,000	0	0	0	0	0	0	0
Maintenance (1)	0	25,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	25,000
Motor vehicle operation	0	22,500	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	45,000	22,500
Motor vehicle repairs	0	12,600	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	12,600
General repairs/maintenance	0	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000	50,000

EXPENSES	**NOTES (All A$ are real)**																						
Infrastructure																							
Office 130m2	Depreciation	0	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	0
Staff Facilities	Depreciation	0	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	3,900	0
Weighbridge	Depreciation	0	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	0
Transformer	Depreciation	0	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	0
Roads Infrastructure and site prep	Depreciation	0	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	0
Log storage-dams	Depreciation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Log storage-Hot mix surface	Depreciation	0	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	0
Log storage-Sprinkler system	Depreciation	0	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0
Contingencies	Depreciation	0	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	3,950	0
Sawmill buildings																							
Green mill 70x40 m	Depreciation	0	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	25,200	0
Sawshop 10x10 m	Depreciation	0	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	0
Maintenance shop 10x6 m	Depreciation	0	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	0
Electrical / lighting	Depreciation	0	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	0
Sprinkler / water storage / pumps	Depreciation	0	6,900	6,900	6,900	6,900	6,900	6,900	6,900	6,900	6,900	6,900	6,900	6,900	6,900	6,900	6,900	6,900	6,900	6,900	6,900	6,900	0
Contingencies	Depreciation	0	3,804	3,804	3,804	3,804	3,804	3,804	3,804	3,804	3,804	3,804	3,804	3,804	3,804	3,804	3,804	3,804	3,804	3,804	3,804	3,804	0
Sawing equipment																							
Log merchandising foundations	Depreciation	0	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	0
Sawmill foundations	Depreciation	0	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	1,350	0
Dust extraction foundations	Depreciation	0	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	360	0
Sawshop foundations	Depreciation	0	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	210	0
Mechanical upgrade	Depreciation	0	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	0
Bark conveyor/storage	Depreciation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Loading equipment (1 x 966 Cat)	Lease for CAT 996	0	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	158,000	0
Infeed systems (2)	Depreciation	0	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	8,085	0
Log Scanner	Depreciation	0	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	0
Log breakdown system	Depreciation	0	97,400	97,400	97,400	97,400	97,400	97,400	97,400	97,400	97,400	97,400	97,400	97,400	97,400	97,400	97,400	97,400	97,400	97,400	97,400	97,400	0
Twin resaws	Depreciation	0	55,212	55,212	55,212	55,212	55,212	55,212	55,212	55,212	55,212	55,212	55,212	55,212	55,212	55,212	55,212	55,212	55,212	55,212	55,212	55,212	0
Scanning multirip	Depreciation	0	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	37,500	0
Trim saw/docking system	Depreciation	0	26,650	26,650	26,650	26,650	26,650	26,650	26,650	26,650	26,650	26,650	26,650	26,650	26,650	26,650	26,650	26,650	26,650	26,650	26,650	26,650	0
Residue system	Depreciation	0	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	7,400	0
Sawdust extraction	Depreciation	0	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	5,250	0
Sawdust bin	Depreciation	0	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	0
Chipper and transfer system	Depreciation	0	6,700	6,700	6,700	6,700	6,700	6,700	6,700	6,700	6,700	6,700	6,700	6,700	6,700	6,700	6,700	6,700	6,700	6,700	6,700	6,700	0
Chip bin	Depreciation	0	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	0
Loading ramps for residue	Depreciation	0	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	2,650	0
Board segregation	Depreciation	0	16,750	16,750	16,750	16,750	16,750	16,750	16,750	16,750	16,750	16,750	16,750	16,750	16,750	16,750	16,750	16,750	16,750	16,750	16,750	16,750	0
Board sorter system	Depreciation	0	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	0
Mechanical installation	Depreciation	0	14,900	14,900	14,900	14,900	14,900	14,900	14,900	14,900	14,900	14,900	14,900	14,900	14,900	14,900	14,900	14,900	14,900	14,900	14,900	14,900	0
Walkways/safety barriers	Depreciation	0	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	12,500	0
Compressor and air lines	Depreciation	0	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	3,750	0
Saws	Depreciation	0	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0
Gantry crane	Depreciation	0	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	750	0
Communication systems	Depreciation	0	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	0
Saw doctor	Depreciation	0	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	30,000	0
Mill vehicles	Depreciation	0	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	14,400	0
Drying equipment																							
Fork lift for Lyctid treatment (1)	Depreciation	0	7,143	7,143	7,143	7,143	7,143	7,143	7,143	7,143	7,143	7,143	7,143	7,143	7,143	7,143	7,143	7,143	7,143	7,143	7,143	7,143	7,143
Lyctid treatment centre	Depreciation	0	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762	4,762
12 tonne fork for loading kilns (3)	Depreciation	0	21,429	21,429	21,429	21,429	21,429	21,429	21,429	21,429	21,429	21,429	21,429	21,429	21,429	21,429	21,429	21,429	21,429	21,429	21,429	21,429	21,429
6 tonne fork (2)	Depreciation	0	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000
Air drying building	Depreciation	0	57,143	57,143	57,143	57,143	57,143	57,143	57,143	57,143	57,143	57,143	57,143	57,143	57,143	57,143	57,143	57,143	57,143	57,143	57,143	57,143	57,143
Kilns + installation (6)	Depreciation	0	417,000	417,000	417,000	417,000	417,000	417,000	417,000	417,000	417,000	417,000	417,000	417,000	417,000	417,000	417,000	417,000	417,000	417,000	417,000	417,000	417,000
Heating system and installation	Depreciation	0	119,048	119,048	119,048	119,048	119,048	119,048	119,048	119,048	119,048	119,048	119,048	119,048	119,048	119,048	119,048	119,048	119,048	119,048	119,048	119,048	119,048
Dry mill																							
Dry mill 100x40 m	Depreciation	40,000	17,143	17,143	17,143	17,143	17,143	17,143	17,143	17,143	17,143	17,143	17,143	17,143	17,143	17,143	17,143	17,143	17,143	17,143	17,143	17,143	17,143
Electrical / lighting	Depreciation	5,333	2,286	2,286	2,286	2,286	2,286	2,286	2,286	2,286	2,286	2,286	2,286	2,286	2,286	2,286	2,286	2,286	2,286	2,286	2,286	2,286	2,286
Sprinkler / water storage / pumps	Depreciation	12,000	5,143	5,143	5,143	5,143	5,143	5,143	5,143	5,143	5,143	5,143	5,143	5,143	5,143	5,143	5,143	5,143	5,143	5,143	5,143	5,143	5,143
Contingency	Depreciation	5,733	4,095	4,095	4,095	4,095	4,095	4,095	4,095	4,095	4,095	4,095	4,095	4,095	4,095	4,095	4,095	4,095	4,095	4,095	4,095	4,095	4,095
Optimising docker	Depreciation	20,000	28,571	28,571	28,571	28,571	28,571	28,571	28,571	28,571	28,571	28,571	28,571	28,571	28,571	28,571	28,571	28,571	28,571	28,571	28,571	28,571	28,571
Multirip	Depreciation	33,333	14,286	14,286	14,286	14,286	14,286	14,286	14,286	14,286	14,286	14,286	14,286	14,286	14,286	14,286	14,286	14,286	14,286	14,286	14,286	14,286	14,286
predressing	Depreciation	52,000	23,810	23,810	23,810	23,810	23,810	23,810	23,810	23,810	23,810	23,810	23,810	23,810	23,810	23,810	23,810	23,810	23,810	23,810	23,810	23,810	23,810
Storage 100x40 m	Depreciation	14,667	37,143	37,143	37,143	37,143	37,143	37,143	37,143	37,143	37,143	37,143	37,143	37,143	37,143	37,143	37,143	37,143	37,143	37,143	37,143	37,143	37,143
Dust extraction	Depreciation	9,000	10,476	10,476	10,476	10,476	10,476	10,476	10,476	10,476	10,476	10,476	10,476	10,476	10,476	10,476	10,476	10,476	10,476	10,476	10,476	10,476	10,476
3.0 tonne loader (3)	Depreciation		4,821	4,821	4,821	4,821	4,821	4,821	4,821	4,821	4,821	4,821	4,821	4,821	4,821	4,821	4,821	4,821	4,821	4,821	4,821	4,821	4,821
Infrastructure costs	As per schedule	651,000	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,746,525	1,603,525
Production costs (sawmill)	As per schedule	224,000	2,157,000	2,157,000	2,157,000	2,157,000	2,157,000	2,157,000	2,187,000	2,157,000	2,157,000	2,157,000	2,157,000	2,157,000	2,157,000	2,187,000	2,157,000	2,157,000	2,157,000	2,157,000	2,157,000	2,157,000	130,000
Production costs (drying)	As per schedule	96,000	1,455,100	1,910,200	1,910,200	1,910,200	1,910,200	1,910,200	2,020,200	1,910,200	1,910,200	1,910,200	1,910,200	1,910,200	1,910,200	2,020,200	1,910,200	1,910,200	1,910,200	1,910,200	1,910,200	1,910,200	530,100
Production costs (dry mill)	As per schedule	100,000	932,000	1,814,000	1,814,000	1,814,000	1,814,000	1,814,000	1,844,000	1,814,000	1,814,000	1,814,000	1,814,000	1,814,000	1,814,000	1,844,000	1,814,000	1,814,000	1,814,000	1,814,000	1,814,000	1,814,000	932,000
Wood costs		0	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	19,588,379	0
	TOTAL EXPENSES																						
INCOME	NOTES (All A$ are real)																						
Wood products		0	17,750,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	35,500,000	17,750,000
Sale mill vehicles		0	0	0	0	0	0	48,000	0	0	0	0	48,000	0	0	0	0	48,000	0	0	0	0	0
Infrastructure	No profit/loss on sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	234,000
Sawmill	No profit/loss on sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	649,520
Drying systems	No profit/loss on sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	270,000
Drymill	No profit/loss on sales	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	377,750
TOTAL INCOME	TOTAL INCOME																						
PROFIT/LOSS	PROFIT/LOSS																						
TAXATION	TAXATION																						