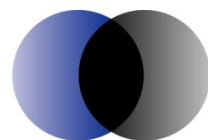


Forestry SA and the South East Region of South Australia

Assessing the regional impacts of
the proposed forward rotation
sale of Forestry SA

Prepared for The Department of Treasury and Finance
(SA)

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Economics Policy Strategy

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Executive summary

In the 2008-09 Mid-Year Budget Review, the South Australian Government (the Government) announced a package of measures aimed at realising value from some of the state's assets. One of these measures would be an investigation into options to sell the harvesting rights of Forestry SA (the proposed sale).

In summary, the Government's proposal is that a third party (the new owner) would take commercial control of up to three forward rotations of the softwood plantations in the South East of South Australia. The new owner would be subject to a replant obligation and honour existing log supply contracts. Forestry SA would retain operational control of the forest under a contract to the new owner in the first instance, although this contract would be subject to periodic benchmarking, so that arrangement may change over time.

Forestry SA would continue to own and manage the forestry estate in the Mount Lofty ranges and Mid North Region and continue to provide a range of environmental and research functions, funded through community service obligation (CSO) payments from the South Australian government.

In December 2010 ACIL Tasman was commissioned by the South Australian Government to undertake an analysis of the South East region's economy and softwood timber industry. This analysis will enable the preparation of a Regional Impact Assessment Statement (RIAS).

The nature of the proposed sale is that any direct impact it had would be on the regional economy. Social impacts would, if they occurred, result from the economic impact.

We found that the proposed sale is unlikely to have a significant economic impact on the region. Therefore there are unlikely to be significant flow on social impacts. Environmental impacts of any significance were also considered as unlikely.

Regardless of whether the proposed sale proceeds, there are a number of challenges facing the timber industry. Highly competitive imports of structural grade timber from Europe are increasing, in part due to the strength of the Australian dollar. It has been estimated that up to \$1 million worth of structural timber is imported to Australia every day. To remain competitive the South East region's mills need to continue to become more efficient and increase their scale, which may require the planting of more trees.

These challenges are independent of the proposed sale.

We have found no evidence to suggest that public ownership of the plantations has been, or could be, effective in shielding the industry from the global challenges it faces. If Forestry SA were to provide short-term assistance to existing timber mills by offering favourable log contracts, this would be to the detriment of the industry as a whole.

This does not mean that the Government does not have a role in assisting the timber industry deal with the challenges it faces. An important objective of the sale should be to establish a clear separation of regional development policies and the commercial running of the plantations. This would allow regional development policies to be targeted, transparent and responsive to the needs of the industry and the wider community, and create fewer risks of wider distortions in the regional and South Australian economies.

The key findings of our analysis are presented in more detail in the following sections.

Economic impact

There is no doubt that forestry and forest product processing is a significant part of the regional economy in the lower South East of South Australia (the region). Our analysis indicates that, with Kimberly Clark Australia moving to import all its pulp needs, from 2011 the softwood plantations in the region will directly employ 1,943 people and provide 11 per cent of Gross Regional Product (GRP).

When indirect contributions are also taken into account, forestry and forest product processing support approximately 2,674 jobs and provide approximately 19 per cent of GRP.

As with a large industry in any economy, regional or otherwise, the forestry industry is an important part of the social fabric of the regional community.

The community is concerned that the forward sale will lead to substantial job losses, with ensuing impacts on the broader community. The key concern is that the new owner would export logs on a large scale.

If a large quantity of log was exported, the impact on the local processing industry would be significant.

However, based on our analysis, it is unlikely that a significant additional quantity of sawlog would be exported as a result of a change in the ownership of the rotations (beyond that which Forestry SA may otherwise export).

If it did happen, large-scale exports of sawlog would be unprecedented, for the region and Australia. More importantly, though, our analysis suggests that the

export market would be a more risky and less profitable option for the new owner than the domestic market. Therefore, we do not expect that a new owner would purchase the rotations to pursue large-scale exports of sawlog.

In any case, we note that approximately half of the South Australian forestry estate is privately owned and there are no significant exports of sawlog at present. We also note that there are no barriers preventing those firms that buy sawlog from Forestry SA exporting that log, rather than processing it in the region.

If it was more profitable to export sawlog, we can see no reason why it would not be happening already.

Another point the community made is that Forestry SA has the responsibility of preserving industries dependent on forestry in the region. There is a concern that this function would be lost through the proposed sale and that the processing industry, in particular, would suffer as a result.

While we note the concern, we also note that, even with Forestry SA in place, a number of mills have recently closed in response to global market forces. For example, Kimberly Clark Australia (KCA) recently announced its intention to exit the softwood market in the South East of South Australia. KCA's exit was based on the need for the Company to meet global challenges in the paper industry. Forestry SA may have been able to forestall this decision by lowering the price of pulp wood, but this would not have been sustainable and would have created strong disincentives for others to invest in the timber industry in the region.

Similarly, a laminated veneer lumber (plywood) manufacturing plant owned by Carter Holt Harvey at Nangwarry was closed in early 2010.

Social impacts

Given that there are unlikely to be significant economic impacts from the sale, we do not expect the social impacts to be significant. In addition we note that, under the Government's proposal, the new owner would be required to provide ongoing access to the forest estate for recreational use.

In fact, it is likely the speculation about the sale, based on improbable export log volumes, has had a more detrimental social impact on the region than the sale itself is likely to have.

Environmental impacts

In relation to the environmental impact of the sale, local communities are mostly concerned with the issue of bush fire protection, plantation effects on water resources and continued management of native forests for biodiversity.

It is highly likely that the new owner will obtain or maintain all forestry plantation environmental management standards, and it is likely that this will be required as part of the rotation sale terms.

Fire

Forestry SA has the largest fire fighting capacity in the region, which is well above that provided by other forest growers, including significant contributions to the region's aerial detection efforts. It is not clear to us that the additional capacity is warranted. However, regional communities are concerned that this strong fire fighting capacity will be lost by the proposed sale.

In the case of the Queensland government sale of state plantation forest, the conditions of the sale ensured that the private owner would maintain sufficient fire detection and suppression capacity, and work cooperatively with state agencies to establish a coordinated fire management program.

If the SA Government deemed that the additional fire protection resources currently provided by Forestry SA are warranted, it could continue to contract these services directly with Forestry SA or local fire brigades.

Water

Plantation forests are a significant water user. Trees intercept rainfall and tap ground water where it is accessible.

The Government has commitments under the National Water Initiative (NWI) to manage water resources in areas where these are near to, at, or above full allocation. A process is currently underway to develop a water management regime for the Lower South East region, including the management of the water use of plantation forests there. The Lower South East Natural Resource Management Board recently released a consultation paper about managing water resources in the region.

This process is independent of the proposed sale. While it represents a potential risk for any future buyer, it currently represents the same risk for Forestry SA. Even if the proposed sale did not go ahead, it would be poor policy for the Government to shelter Forestry SA from any future water

management process. Hence, there is no reason to expect that the future water use of the forest estate will be different if the proposed sale goes ahead.

A new owner would not be able to sell any water entitlements at the expense of growing softwood trees, as the rotation sale will include replant obligations. However, it would be good water and forestry policy to allow the new owner, or operations manager, to sell any water believed to be in excess of forestry requirements. This would create incentives for the new owner or manager to increase the water use efficiency of the plantations.

Notwithstanding that Forestry SA is currently a significant water user, the proposed sale should have no impact on the water use of the forest estate. Therefore the proposed sale will have no environmental impact due to water use.

Biodiversity

Forestry SA currently manages a number of native forests, each of which contributes to the biodiversity of the State. Forestry SA manages these forests with a view to maximising their biodiversity potential. For example, it is currently implementing biodiversity corridor programs across its land in the South-East and Mount Lofty Ranges, to link areas of isolated native forest with strips of revegetation.¹

The intention of the proposed sale is that Forestry SA will retain control over the native forests, which are currently CSO funded. Therefore, the proposed sale would have no impact on the biodiversity impact of these forests.

Carbon

Forestry SA currently controls a large area of softwood forest, which could potentially be used as a carbon sink under national and/or international greenhouse emissions reduction policies. At the moment it is unclear how, or even whether, this will be possible. The two main reasons are that:

- 1 The Kyoto Protocol, which provides the basis for international trade in carbon credits, is about to expire with no clear plan for what is to replace it
- 2 The Commonwealth Government, which is best placed to introduce a national policy for greenhouse emissions reduction, has not yet made its intentions clear in this area.

Regardless of the future policy landscape, it seems unlikely that the proposed sale would have any significant impact on the amount of carbon stored in the

¹ See <http://www.forestry.sa.gov.au/corridors.stm>

Government's forest estate. The intention is that the rotations will be sold as a going concern, with an obligation on the purchaser to replant. Due to this obligation, the area of land under forest will be the same whether or not the sale proceeds. For this reason, the proposed sale is unlikely to have any environmental impact due to carbon storage.

Another question that has been discussed in relation to carbon storage is whether, by proceeding with the proposed sale, the Government will forego significant future carbon revenue. This is not an environmental issue and should be considered in the context of the value of the sale. It should be noted, though, that there is substantial uncertainty regarding the future value of carbon.

Conclusion

Ownership of the forward rotations presents the Government with a potential conflict in its existing regional development policy. If Forestry SA were to support the local processors with more favourable terms and/or prices to maintain or attract development, it could lower log prices in the region and therefore create disincentives to increase the plantation area.

Public ownership also creates incentives for regional businesses reliant on the plantation to seek political solutions, if negotiated settlements with Forestry SA are not resolved to their liking.

The dual mandate in the Forestry SA Charter also reduces the transparency of the log market in the SE. The market for sawlogs in the South East of South Australia lacks transparency about the way that sawlog prices are established and reviewed. This lack of transparency extends to the harvest and cartage contracts in the region. However, the Australian log market is not transparent compared to open markets in NZ and the US, where several commentators regularly provide highly detailed log market data for a fee.

The lack of transparency creates a substantial barrier to entry for new mills and plantation owners. It is therefore quite likely that it would hold the industry back in the region. Partly to avoid this, Forestry SA is becoming increasingly commercial in its operations.

As there are unlikely to be significant economic, social, and environmental impacts arising from the sale we do not believe any action by the Government to mitigate the regional affects of the sale is warranted. However, there are other steps the Government might consider taking that could provide benefits to the forestry industry generally. These could include:



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Economics Policy Strategy

Forestry SA and the South East Region of South Australia

- Clearly outlining the sale process, key risks, adjustment measures, terms of sale and tender process, and the provision of community service obligations (costs, funding and managing agency, etc.)
- Introducing a price reporting service to increase the transparency of the market. Confidential market information could be collected by a government agency or the ABS, and published in a way that does not breach any confidentiality
- Consulting with major processors to determine what major constraints they face and develop a strategy to reduce them, where possible, in conjunction with industry. This could be facilitated through a high level round table advisory group drawn from the senior managers of the major companies and unions present in the region
- Consider introducing a structural adjustment package for the timber industry (safety net) on a case by case basis where applicants can demonstrate that:
 - economic loss has been incurred by the sale
 - economic viability

Our findings are based on the results of our analysis that Forestry SA is responding to the challenges facing the South Eastern South Australian softwood industry in much the same way a commercial operator of the rotations would.

Contents

Executive summary	iii
1 Introduction	1
1.1 Terms of reference	1
2 The nature of the problem	2
3 What is being proposed?	4
3.1 The ‘with’ case - what has been proposed?	6
3.2 The ‘without’ case - How would the future look if the forward rotations are not sold?	6
4 Community concerns	8
5 The market for forest products and timber	11
5.1 International	11
5.2 Domestic log supply and demand	14
6 The South Australian Forestry Industry	18
6.1.1 Plantation forestry	20
6.1.2 Harvesting and Transport	25
6.1.3 Timber Processing	26
6.1.4 Other industries	28
7 Government involvement in the South Australian forestry industry	29
7.1.1 The industry protection limb	33
7.1.2 The community service limb	36
8 Contribution of forestry to the region: distribution and contribution	37
8.1 Population Characteristics	39
8.2 Workforce Characteristics	40
8.3 Economic Contribution of Forestry	42
8.4 Forestry contribution in context	47
9 Impact assessment - evaluation of concerns	53
9.1 The likelihood that a significant proportion of logs would be exported	53
9.1.1 The economics of log exports from Australia	55
9.1.2 Transport infrastructure costs	60
9.1.3 Efficiency gains	60
9.1.4 Diversity of log	61

9.2	The likelihood of changes in management practices to the detriment of log quality	62
9.2.1	Implications for larger millers	62
9.2.2	Implications for smaller millers	63
9.2.3	Does the log quality concern indicate inefficiency in plantation management?	64
9.3	Stability	65
9.4	Water	66
9.5	Greenhouse emissions policy and carbon value	68
9.5.1	What is the value of carbon stored in trees	68
9.5.2	Would the Government forego the Carbon revenue?	70
9.6	Fire protection	71
9.7	House prices and other economic impacts	71
10	Managing the impacts of the sale	73
10.1	Offsetting the concerns - natural hedges/adjustments	73
10.1.1	Price adjustments and supply response	74
10.1.2	Expansion of alternative land uses	76
10.1.3	The volume of timber under contract	78
10.2	Who is best placed to manage the risks?	79
A	Works Cited	1
B	Consultation list	1
C	The Australian market	1
D	Terms of reference	1
List of boxes		
Box 1	“Millennium Forestry” - changing rotation lengths in New Zealand	13
Box 2	Plantation Forestry - different grades of log	28
Box 3	Forestry SA 2009/10 Strategic Plan - broad goals	31
Box 4	Input-output tables and multipliers	52
Box 5	Protect the industry or protect the current members	74
List of figures		
Figure 1	World plantation forestry age class	12
Figure 2	CFC projections of housing demand in South Australia, Victoria and Australia to 2020	15
Figure 3	Dressed softwood imports by state: 1998-2008 ('000 m ³)	17
Figure 4	The ripple effects of forestry	20
Figure 5	South Australian Forestry Map	21
Figure 6	Plantation forests in Mt Lofty Ranges and Mid North	22
Figure 7	Plantation forests in the lower South East	23
Figure 8	The Green Triangle	24

Figure 9	Green Triangle Future Wood Production	25
Figure 10	Plantation Area by Local Government Area	38
Figure 11	Primarily affected Local Government Areas (LGAs)	39
Figure 12	Forestry industries share of total employment by place of work	42
Figure 13	Comparison of international log price (ex NZ) and the Australian Pine Log Price Index	56
Figure 14	Roundwood exported as percentage of total log volume harvested from 2003 - 2009 (national)	59
Figure 15	Proportion of Vic and SA log exports as a proportion of total coniferous harvested	59
Figure 16	Capital city house price trends	72
Figure 17	New land planted in NZ between 1978 and 2010	75
Figure 18	Total planted production forest area in NZ between 1978 and 2010	76
Figure 19	Distribution of plantation forestry, rainfall and dairy cattle in the region	78
Figure C1	Small sawlog - APLPI data	4
Figure C2	Intermediate sawlog - APLPI data	5
Figure C3	Medium sawlog - APLPI data	6
Figure C4	Large sawlog - APLPI data	7
Figure C5	Export and domestic use sawlog - APLPI data	9
Figure C6	Export and domestic use pulp log - APLPI data	10
Figure C7	Price index and volume of Australian pulp log	10
Figure C8	Preservation log - APLPI data	11
Figure C9	Salvage log - APLPI data	12
Figure C10	Australian log exports by destination	16
Figure C11	Australian log exports by state of origin	17
Figure C12	Australian wood product imports from China by type	18
Figure C13	Australian wood product imports from New Zealand by type	19

List of tables

Table 1	Softwood Plantation Ownership	5
Table 2	Softwood sawlog/ pulpwood supply projections compared to current consumption and production	16
Table 3	Summary of processing capacity in the Green Triangle	27
Table 4	Population by LGA 2009	39
Table 5	Age structure 2009	40
Table 6	Employment by industry (by place of work)	41
Table 7	Expenditure on road transport per year	41
Table 8	Number of businesses per industry (2006 Census)	42
Table 9	Forestry and forest products contribution to employment (2006-07)	43
Table 10	Forestry and forest products contribution to employment (2006-07) post KCA restructure	44
Table 11	Forestry and forest products contribution to GRP (2006-07)	45
Table 12	Forestry and forest products contribution to GRP (2006-07) post KCA restructure	46
Table 13	Total contribution to combined GRP by industry	48
Table 14	Selected agricultural industries' value added per \$m of production	48
Table 15	Estimated Type 1B value added multipliers for selected industries	49



ACIL Tasman

Economics Policy Strategy

Forestry SA and the South East Region of South Australia

Table 16	Estimated Type 2A value added multipliers for selected industries	50
Table 17	Estimated Type 1B value added multipliers for agricultural industries	50
Table 18	Type 2A value added multipliers for agricultural industries	51
Table 19	Export parity comparison	57
Table 20	Wood Density Metrics showing changes to average price as two different proportions of grades	63
Table 21	Contract terms and price adjusters, by country, by region	79
Table C1	APLPI log categorisation	2
Table C2	Sawlog prices, APLPI data, nominal growth rates	8
Table C3	Sawlog volumes, APLPI data	8
Table C4	Log harvest trends	14
Table C5	Australian log exports by destination	15
Table C6	Forecast plantation log supply, Australia	21

1 Introduction

The Department of Treasury and Finance (South Australia) (Treasury) commissioned ACIL Tasman to undertake a regional economic impact assessment of the proposed forward rotation sale of Forestry SA. The project was undertaken between January and April 2011.

In conducting its research, ACIL Tasman received a large amount of commercial-in-confidence information from a range of sources, including Forestry SA. This information helped support other publicly available information.

We also conducted extensive consultations in the region during February and March 2011. A complete consultation list is available in appendix B of this report. We are grateful for the time given to us by those we consulted.

1.1 Terms of reference

The full terms of reference for this project are set out in appendix D of this report.

The task to be undertaken was an assessment of the impacts, direct and indirect, of the proposed forward rotation sale on regional South Australia. The assessment was to include consultation on regional issues. Consultation was to include key stakeholders, such as councils, key unions and timber industry representatives. Beyond this, though, ACIL Tasman was free to consult as it thought necessary to obtain the necessary information to conduct its assessment.

The assessment was also to take into account the full range of impacts of the proposed forward rotation sales on the community and to identify strategies for managing impacts and issues.

The output sought from ACIL Tasman was a report covering these issues. ACIL Tasman was not asked to provide any recommendations regarding the sale, but only to provide advice on the potential scale and scope of any regional impacts identified.

The analysis presented here is not a cost-benefit study. This would require a consideration of total economic costs and benefits of the proposed sale, such as:

- Benefits to South Australia as a whole, including the proceeds of the sale, the effect on the State's fiscal position and an assessment of the opportunity costs of the capital tied up in the forward rotations

- The costs of the sale, including any regional economic considerations, and the revenue forgone from the plantation sale.

This study is limited to the second of these matters.

This report has been prepared to be consistent with the regional impact assessment statement (RIAS) framework published by the South Australian Government (the Government)². The principles of the RIAS framework are effective consultation and communication with rural and regional South Australian communities, before the Government implements decisions that may have a significant impact on community service levels and standards.

However, this is not a typical regional impact assessment. In most such assessments, the event (i.e. sale or regulation) is well defined. For example, a conservation area may be established or a government service discontinued, the terms of which are well defined and the impacts assessed. In this situation, the terms of the sale may vary with the impacts assessed and there is a cyclical nature to the problem. To resolve this, some assumptions have to be made about the types of sale and the regional impacts to be assessed, which, in turn, may affect the assumptions about the sale. These are described in the next section.

2 The nature of the problem

The Government has maintained an intervention policy in the State's softwood industry for more than 130 years. The policy is based on ownership of the plantations, with dual commercial and regional timber industry development to assist the Government meet its social and economic objectives.

The assumption implicit in this policy is that, if left to its own devices, the market would not have allocated the resources of the region(s) as efficiently.

It appears that the original intention of the policy was to utilise land in the South East region that would otherwise have been used for low value grazing. At the time, there were few incentives for private investment to develop the industry, as the infrastructure in the region was poor and there was no local processing industry.

Thus, by overcoming these constraints, a higher value use of the land could be developed. There are now over 166,000 ha of softwood plantation in the region, 50 per cent of which is now privately owned.

² For more detail on the RIS framework see <http://www.southaustralia.biz/Regional-SA/Regional-Impact-Assessment.aspx>

There is now also a large processing industry that processes almost all of the region's forest products.

The central question for this study is, therefore, if the Government no longer had commercial control over the plantations, would there be a reduction in the value generated from the resources of the region. If so, would there be a flow on social and environmental impact on the regional community.

The answer to this question largely rests on how Forestry SA discharges its regional development obligations under its Charter, which requires it to be a commercial forester with a focus on regional development. In some cases, these obligations will be in conflict with one another. The more commercially oriented Forestry SA becomes (that is, it seeks to maximise commercial value of the plantations), the smaller the divergence would be between private and public control of the forward rotations. The fewer differences there are between public and private owners, the smaller will be the regional economic impacts from the sale.

We needed to assess how, and to what extent, Forestry SA discharges its charter obligations. To do this, we examined the regional development levers at its disposal. Typically, a resource owner such as Forestry SA has three main levers under its control:

1. The price at which it sells the forest products
2. The way it allocates the forest products to different buyers
3. The length of contract it is willing to provide.

Theoretically, there would be little impact from the sale if:

- The Government, through the terms of the sale, required that any potential new owner fulfil the same regional development obligations or maintained them elsewhere in Government, i.e. a transfer of the Charter from Forestry SA to another party
- Forestry SA was already acting in a largely commercial fashion, replicating what a private operator would do
- Forestry SA was unable to influence the trends in the industry and was therefore unable to influence outcomes for the region regardless of its Charter.

On the first point, the new owner would capitalise the value of the regional development obligations and deduct them from the price it was willing to pay for the forward rotations. There may, or may not, be an efficiency gain for the Government, if the private owner felt it could meet those regional development obligations at a lower cost than Forestry SA presently does.

Therefore the Government potentially faces a trade-off between the sale proceeds (the benefit of which flows to the State as a whole) and minimising regional impacts.

The problem is also one of distribution of the costs and benefits. A concern in the region, made clear during our consultations, was that the South East region would incur all of the costs while the other areas of the State, particularly the metropolitan areas, would reap the benefits.

The benefits, mainly proceeds of sale, flow to the State as a whole (inclusive of affected regions). However, the primary beneficiaries of maintaining public ownership are potentially the forestry regions in the South East of the State.

In summary, the key questions for analysis are:

- Are there any market failures that currently exist in the regional forest market that require public ownership of the forest and that would have regional economic impacts if not corrected?
- If there are market failures in the South East forest products markets, to what extent, if any, does Forestry SA discount its commercial objectives to meet regional economic development objectives?
 - Is Forestry SA constrained in its ability to discharge its regional development objectives?

The terms of the proposed sale are detailed in the following section, with a discussion of the scenarios used in this analysis, both with and without the sale.

3 What is being proposed?

The proposed forward rotation sale - Key points

- The Government owns, through Forestry SA, a substantial plantation forestry estate, mainly located in the South East of the State
- The Government has announced its intention to sell three rotations of the Forestry SA softwood plantation in the South East of South Australia
- Assessing the regional impact of the sale requires a comparison between two scenarios: 'with' and 'without' the sale
- In the 'with' scenario, we assume that:
 - The new owner would have commercial control of up to three softwood rotations in the South East of South Australia
 - Three rotations would be sold
 - The purchaser would be subject to a replant obligation
 - Operational control and day-to-day management of the estate would remain with Forestry SA
 - Forestry SA would continue to provide fire protection services and manage native forests and the Mt Lofty Ranges and Mid North forests
- In the 'without' scenario, we assume that Forestry SA continues its efforts to capture

greater value from the business and increase the financial return it provides to the Government

In South Australia, there are plantation forests in three main regions, the Mid North, the Mt Lofty Ranges and the lower South East. The vast majority of the estate is softwood and most of this is located in the lower South East of the State, near Mt Gambier, South Australia's second largest city. Table 1 shows that the Government owns, through the South Australian Forestry Corporation (Forestry SA), a substantial portion of this estate. While Forestry SA owns more forest softwood than any other single forester, most of the estate is privately owned.

Table 1 **Softwood Plantation Ownership**

Company	Area (hectares)	Percentage
Auspine	40,000	24%
Forestry SA	72,000	43%
Green Triangle Forest Products	25,000	15%
Hancock Victorian Plantations	21,000	13%
Other (smaller grower and farm forestry)	8,000	5%
Total	166,000	100%

Data source: (Regional Development Australia, 2004)

The Government announced its intention to explore the potential upfront sale of Forestry SA's harvests in the 2008-09 Mid Year Budget Review.³ This was one of a number of debt reduction measures announced at that time, to reduce the State's fiscal pressures in response to the global financial crisis and its impact on the state budget.⁴

In this report, by comparing the likely futures 'with' and 'without' the sale, we estimate the impact that this sale would have on the lower South East region only. In section 3.1 we describe the key aspects of the 'with' scenario, as we have assumed it to be for the purposes of this assessment. In section 3.2 we describe key aspects of the 'without' scenario, which acts as a point of comparison.

³ Government of South Australia, "Mid Year Budget Review 2008-09", p. 11, available online at <http://www.treasury.sa.gov.au/>

⁴ Government of South Australia, "2009-10 Budget Statement Budget Paper 3", p.2.5, available online at http://www.treasury.sa.gov.au/df/budget/publications_and_downloads/previous_budgets.jsp

3.1 The 'with' case - what has been proposed?

For the purposes of this assessment, we have assumed that, if the sale went ahead, it would have the following characteristics:

- *Three rotations would be sold* - this is not necessarily the Government's intention, but we used this scenario for the impact assessment because it is the situation under which impacts would be greatest (i.e. longer sale term, greater potential for impact).
- *There would be a replanting obligation* - We have assumed that any sale would proceed on the condition that the buyer takes on an obligation to return the forestry estate to its current state on completion of the purchased rotations, and that this obligation is enforced.
- *Forestry SA would retain operational control of the forest* - we have assumed that Forestry SA would have operational, but not commercial, control over the forest estate, under a contractual arrangement made as part of the sale. If, or when, that contract expired, Forestry SA would be free to bid to continue operating the forest. This implies that Forestry SA would continue to employ approximately the same staff numbers that it currently employs, and it would also continue the Government community services that it presently undertakes
- *Forestry SA would retain its other functions* - as is discussed further in section 7 below, Forestry SA (now) does more than manage the forest. We have assumed that it would continue to perform these functions. In particular, we have assumed that Forestry SA's charter would remain in place and that it would continue to:
 - Manage its existing native forests
 - Manage its existing forests in the Mt Lofty Ranges and Mid North region, with the associated community service obligations
 - Provide the existing level of fire protection services throughout its operation
 - advocate for the construction of a new, world class mill in the South East

3.2 The 'without' case - How would the future look if the forward rotations are not sold?

An impact analysis should begin with a base of 'do nothing' or a counterfactual case.⁵ It is important to separate the impact of the proposed policy or change from other changes that would happen regardless.

⁵ This is a conventional approach in economic analysis and has a number of different names. These include 'factual / counterfactual analysis' and the 'future with and without test'.

In this section, we consider the likely future of the forestry industry if the forward rotations are not sold and Forestry SA continues to operate them in a ‘business as usual’ manner. This is not the same as assuming that Forestry SA would make no changes in the way that it operates the forests. Rather, it is important to take account of recent and ongoing trends and attempt to incorporate these into the counterfactual case.

Therefore, to allow an impact analysis of the sale of the forward rotations of Forestry SA’s plantations, it is necessary to form a view of how Forestry SA would manage its forest estate in future, assuming that the rotation sale does not go ahead.

To provide structure, it is most helpful to consider this issue in light of the first two parts of Forestry SA’s charter. As is discussed in more detail in the overview of Forestry SA in section 7, the charter gives it two main functions: to operate an efficient, commercial forest and to facilitate regional economic activity based on forestry.

In summary, our view is that the most likely ‘without’ case, or counterfactual, would involve continued focus by Forestry SA on operating the forest on a largely commercial basis.

In practice, this is likely to manifest itself in reductions in the rotation length, consistent with Forestry SA’s recent direction. It is also likely to involve setting log prices at rates consistent with sawlog market rates, with an increased emphasis placed on the price that could be obtained for log by selling it elsewhere, for example on from international markets.⁶

In line with the second limb of its charter, Forestry SA would continue to advocate the construction of, a new, world-scale, mill in the South East regardless of whether the proposed sale proceeds. This would be consistent with Forestry SA’s ongoing commitment to maximising the value of its resource, given that a new mill would have a greater capacity to pay for logs. It would also pose a risk for the incumbent millers, due to increased competition for a finite quantity of logs.

We do not consider that a significant expansion of the estate is likely under a continued Government ownership scenario. We have reached this position having considered a number of factors, including:

- Significant expansion of the estate would require a substantial contribution from the Government, which, given current fiscal constraints, is unlikely (in fact diametrically opposed to the direction the Government is currently advocating)

⁶ This is the opportunity cost of log.

- To expand the estate, the Government would have to become a significant competitor for land with the livestock grazing, dairy and a range of other new and emerging land uses in the region.

4 Community concerns

Key points

- The community's key concern is that a new owner of the forest estate would take the opportunity to export log, either now or in future
- If a substantial quantity of log is exported, the community is concerned that significant job losses would occur in the industries dependent on forestry, particularly processing
- If these job losses occur, the community is concerned that there would be adverse consequences socially. Examples would include, but not be limited to, school closures and reduction in medical services due to falling population, and similar closures of other services, increased welfare dependency and the loss of sporting (and other) clubs
- The community also has some more immediate concerns that:
 - The fire protection services provided by Forestry SA would be lost if the proposed sale goes ahead
 - Other community support provided by Forestry SA would be lost, such as Forestry SA's support of local events.

It is clear that the South East community holds concerns about the potential sale of Forestry SA's forward rotations. Large numbers of SE residents and business owners have attended public rallies on the steps of the South Australian Parliament House.

The regional community's primary concern is that the buyer of Forestry SA's rotations would be more likely than Forestry SA to direct logs to export, rather than selling it locally for processing. The concern, frequently raised in our consultations, is that a private sector owner would be more motivated to maximise return on investment than to support the local (regional) industry.

This concern was explained in a report released on 9 March 2011 by the Mayors of Grant, Mt Gambier and Wattle Range, the three local Governments in the region (no author was cited in the report).

The concern about exporting a substantial quantity of log stems from an underlying concern that the purchaser would be unlikely to have the same focus on facilitation of the regional industry as Forestry SA. As the Mayors put it, subject to contractual arrangements already in place, the purchaser would be able to sell logs "*to their best advantage...*without being constrained by regional development [objectives]." This includes the possibility that the purchaser would sell logs on export markets.

Under Forestry SA's charter, the concern is that the second limb, that regarding facilitation of regional industry based on timber, would be lost through the rotation sale.

In summary, the Community expressed the following concerns during our consultations:

1. **Export** - the new purchaser will not have the same regard for facilitating the local industry and may export large quantities of logs
2. **Log quality** - The purchaser may not adopt the same high standard of silvicultural and plantation management practices as Forestry SA and log quality may decline as a result
3. **Stability** - The sale of the rotations may destabilise certain aspects of the industry and the harvesting, hauling and processing industries may suffer as a result
4. **Water** - The sale of the forward rotations may increase the estate's exposure to possible increases in future water costs, thus increasing the cost of logs. The harvesting, hauling and processing industries may suffer as a result
5. **Carbon** - the sale of the Forestry estate would include selling a potentially lucrative carbon sink
6. **Fire protection** - The purchaser may not give the same priority as Forestry SA to maintaining forest and regional fire fighting capacity
7. **Social impacts** - the community is concerned that other problems will flow from the above impacts. For example:
 - a) The community is concerned that with reduced economic activity house prices will fall (some believe they have already fallen)
 - b) With reductions in employment in the area that would follow if there was a substantial impact on the processing sector (in particular), the community is concerned that people would leave the area, with harmful effects on the social fabric through reduced demand for schooling, potential school closures, and closures of community sporting clubs. These concerns stem from the primary concern that log would be exported in large quantity and thus that job losses would occur.
 - c) Further, the community regards Forestry SA as an important part of the fabric of local society through its sponsoring of community events and other forms of community support. The community is concerned that there will be a general decline in community welfare if the proposed sale proceeds.

In respect of the process, the community feels that it is not well informed about the detail of the Government's intentions. It is quite likely that this has given rise to at least some of the community's concerns.

Some of the concerns raised during our consultation are beyond the scope of a regional impact assessment. These concerns, which are closely related to one another, can be summarised as follows:

1. The sale would not represent value for money, as the Government would sell the asset at a lower value than the present value of the future earnings
2. The alternative uses of the sale proceeds have a lower value than maintaining ownership
3. There would be a transfer of wealth from the region to the metropolitan areas
4. It is impossible to know what the timber price will be in 50 or 100 years, so therefore it would be impossible to establish a reasonable asking price for the rotations.
5. One of the more common issues raised during our consultations, was that the proposed sale, and in particular uncertainty surrounding the details, was already having an impact. Clearly, any level of uncertainty would cause a loss of confidence in the community generally. The greater the speculation about the sale and its impacts, the more likely the local community will lose confidence. It is possible that speculation about the sale will have a greater impact on the region than the sale itself. This may be reversed once the situation becomes clearer.

The first of these issues relates to the method of sale, assuming that the sale goes ahead. This is beyond the scope of this project. The second, third and fourth issues relate to whether it is appropriate for Government to pursue the forward rotation sale, not to the impact of the sale. These issues are beyond the scope of a regional impact assessment.

In our view, issues arising from the uncertainty surrounding the sale are separate from the impact of the sale itself and should be excluded from this analysis.

5 The market for forest products and timber

The Forestry industry - key points

Internationally:

- Globally there is a large, and growing, log supply. Australia is a very small part of this, 4 per cent of the global total plantation timber production
- Global demand for sawn timber and other end products, and therefore for logs, is likely to grow substantially in the medium-term, particularly in Asia
- Log prices have been at unsustainably low levels for some time, and have shown little or no growth over the last decade. This will need to change to meet rising demand. There would be flow-on effects to the price of sawn timber and other end products
- Australia and New Zealand are well positioned to capture increased investment in plantation area to meet growing international demand, due to their stable investment environments and favourable conditions

In Australia:

- Domestic demand for sawn timber and other end products in Australia is projected to remain strong, albeit with periodic fluctuations due to the housing construction cycle:
 - Australian construction activity is currently in cyclical downturn, reducing demand for structural grade timber products
- Nevertheless Australia has a significant and growing deficit between construction grade timber demand and domestic supply
- Slow construction activity in Europe and North America, combined with a strong AUD/USD exchange rate, has meant that imported timber, mostly from Europe, is cost competitive and as a result is gaining market share
- Domestic producers have a sustainable comparative advantage in supplying domestic markets through reduced transport costs. However, this could be eroded by lower processing costs elsewhere
 - At least one large domestic timber processor is mounting a 'made in Australia' campaign to promote locally grown and milled timber products

In this section, we provide an overview of the forestry industry. This overview begins, in section 5.1, with a brief discussion of trends at the international level.

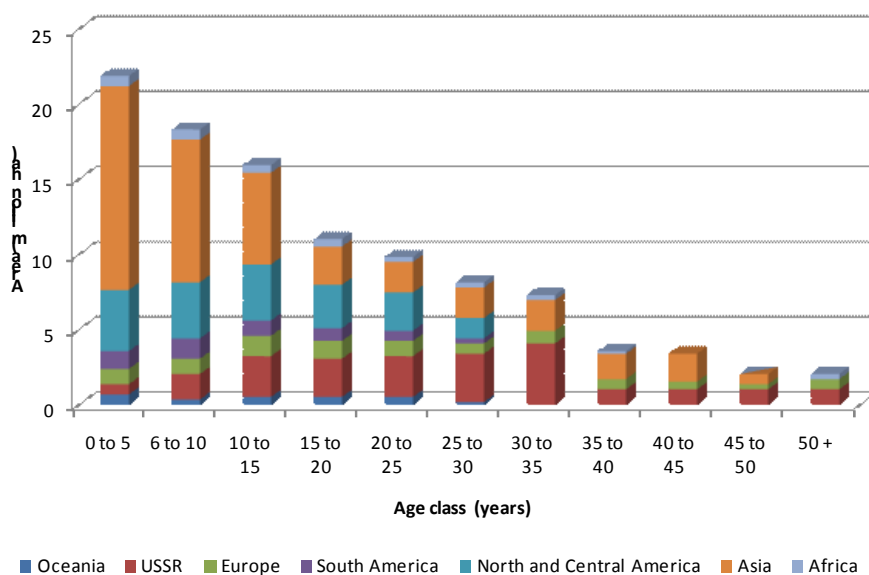
Section 5.2 and appendix C focus on the Australian industry, again quite briefly, before section 6 discusses the South Australian Forestry industry. Section 7 discusses Government involvement in the South Australian forestry industry.

5.1 International

The Food and Agriculture Organisation of the United Nations (FAO) conducts periodic reviews of the global forestry sector (Figure 1). A notable

feature of this figure is the dominance of Asia as host of (then) young trees. According to FAO, forest plantations in Asia account for 40 per cent of the global total, and slightly less than 60 per cent of the forest planted between 1985 and 1995.⁷

Figure 1 **World plantation forestry age class**



Source: FAO

Australia is part of Oceania (with New Zealand and a group of other countries that host little or no plantation area). It is notable that Oceania's share of the global plantation resource is very small.

A number of other high-level drivers are likely to be observed in coming years. These include the likelihood of strong growth in demand for logs from China, and India and, to a lesser extent, the United States of America. For China and India, the demand growth is linked to the rapid development occurring in those countries generally. For the USA, it is related to expected rebuilding after the Global Financial Crisis.

Another key issue on global markets is uncertainty regarding log supply from Russia, which first introduced, then varied, a log export tax; apparently designed to prevent exportation of Russian logs. As Russia had previously been exporting a significant quantity of log to China, this relates to the first point.

Thirdly, the experience in New Zealand, while mainly past, is informative about this process. The New Zealand Government made substantial changes

⁷ For these purposes, Australia and New Zealand are in the Oceania region. We understand that the forests referred to in this figure are mainly in China, India and Japan.

to its forestry operations in the 1980s and 1990s. This went beyond the proposals in South Australia and included selling Government owned forests, removing a log export ban and removing log price caps. This also saw changes in the operation of those forestry businesses - see the example in Box 1.

Box 1 “Millennium Forestry” - changing rotation lengths in New Zealand

In 1998, the New Zealand company Carter Holt Harvey Ltd. (CHH), announced a change in its management strategy for forest plantations of *Pinus Radiata* over the next 20 years. Under its “Millennium Forestry” strategy, CHH plans to plant 555 trees per hectare, with no pruning or thinning and harvest the trees when they are 20 years old. This is a marked departure from the traditional New Zealand “Direct Sawlog Regimes”, which tended to prune trees to 6 metres, thin to a final stocking of around 250 stems per hectare, and harvest at ages 28-32. CHH believes that in 20 years, price premiums for clearwood *Pinus Radiata* will be smaller. Improvements in processing technology will enable the profitable conversion of unpruned wood and fibre into products that can compete directly with sawn clearwood timber.

In essence, the CHH strategy centres on economic rationality. The strategy seeks to maximise fibre production and shorten the period between investment and realisation of returns. The strategy has created considerable controversy in New Zealand, with critics arguing that assumptions on the value (and properties) of shorter rotation trees might well be faulty and that shorter rotation plantations move further from “desirable” natural ecological forest traits and closer to “undesirable” cropping paradigms.

In summary, we note that there are numerous factors currently acting on world timber markets that may cause substantial changes in them over the medium and longer term. These were summarised by New Forests (2010). The key factors are:

1. An increase in the importance of plantation timber (as distinct from old growth timber) as the marginal source of supply
2. The relative stability of Australia and New Zealand and the resulting attractiveness of investing here
3. Growing timber demand in China, India and the United States of America
4. Uncertainty surrounding future (and past) supply from the former Soviet Union.

New Forests’ argument is that the international timber supply was once largely underpinned by naturally occurring forests, which were harvested and sold at prices that did not reflect the cost of replacing them. This, New Forests argues, established log prices at unsustainably low levels.

New Forests considers this increase in the cost of producing timber in the light of likely increases in demand for logs from China, India and a possible increase

in demand in the USA.⁸ In addition, it notes that timber supply from Siberia is uncertain for political reasons, in addition to the increase in the log export tariff.

Based on the above, New Forests concludes that log prices are currently at an unsustainably low level and that a number of factors will place upward pressure on price in the medium to longer term.

New Forests also considers that, if log prices do adjust, this will induce an increase in the area of plantation forest in operation. Given investment uncertainty in some of the prospective host countries, especially those in Latin America, New Forests argues that Australia and New Zealand are leading candidates to host a share of this investment.

5.2 Domestic log supply and demand

As at 2009, Australia was home to slightly more than 2 million ha of plantation forests, with approximately equal quantities of hardwood and softwood.

The Australian forestry estate has grown each year in the last 10 years, although growth has been below historical levels recently. After allowing for re-measurements and land use change following harvesting or bushfire, the growth in Australia's forestry estate in 2009 was 2.4 per cent.

By contrast, the entire estate increased by 51 per cent over the last ten years.

However, most of this increase has been in hardwood, which grew by 150 per cent over the last ten years. Growth in softwood plantation area was slow, only eight per cent over the same period. Therefore, growth in plantation area for the ultimate production of sawn timber has been slow.

Exacerbating this is the fact that, because of government policies, the area of native forests available for wood production is projected to fall in the future. One suggestion is that, in the medium term, this shortfall in native wood supply could be met by an increase in forest plantation resources (URS, 2007). In the shorter term, it appears to be causing an increase in imports of sawn timber.

On the demand side, growth appears likely to continue strongly.

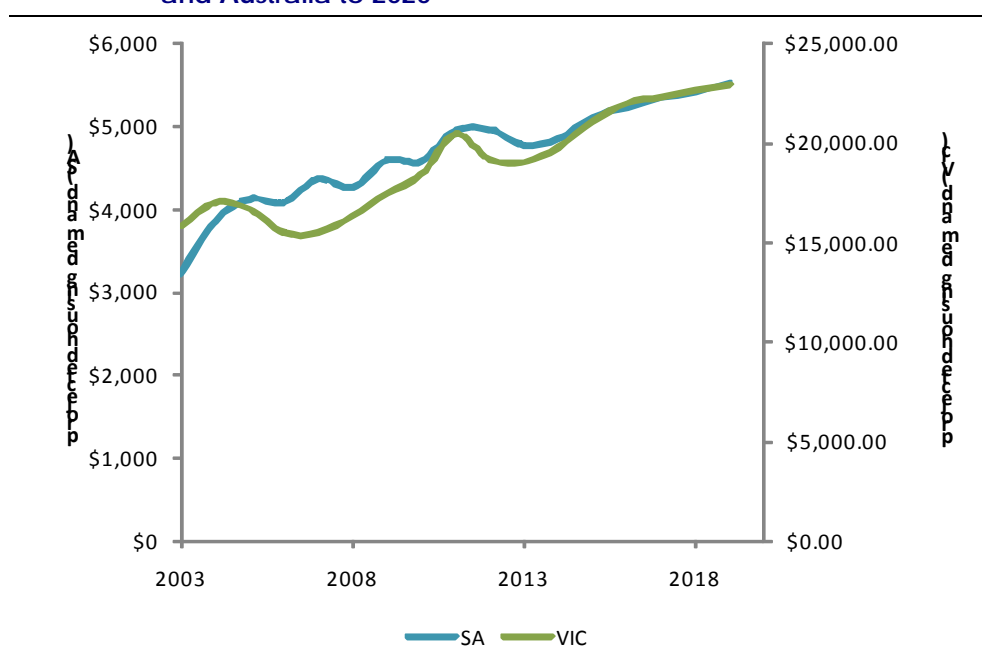
Sawlog demand is underpinned in Australia (and elsewhere) by construction activity and, in particular, housing construction.

⁸ New Forests' analysis is that the USA could see increases in both demand and supply. In net terms, the balance may change in either direction.

One of the best sources of projections of housing construction in Australia is the Construction Forecasting Council (CFC). The CFC was established by the Australian Construction Industry Forum (ACIF), with support from the Department of Industry, Tourism and Resources, and with the mission *‘to create a better compass of the industry’s direction for decision makers’*.

Figure 2 below shows the CFC’s forecast of residential construction activity in South Australia and Victoria.^{9 10}

Figure 2 **CFC projections of housing demand in South Australia, Victoria and Australia to 2020**



Data source: (Construction Forecasting Council, 2011)

It is evident from Figure 2 that housing demand, and thus demand for sawn timber, will continue to grow strongly in the South Australian Forestry industry’s two key markets, namely South Australia and Victoria. Similar growth in the broader Australian market means that there will be little scope for loss of sales to foresters in other states. This also means that facing a growing construction grade sawlog deficit, exports of this type of log are unlikely.

As noted above, this growth in demand so far has not been matched by growth in supply capacity, with the result that sawn timber imports have increased.

⁹ This includes new housing and renovations/extensions.

¹⁰ As the CFC publishes its forecasts in nominal dollars, it is necessary to deflate the forecasts to distinguish between the impact of growth in housing activity and the impact of changes in price.

In 2008, Industry Edge Pty Ltd published an assessment of the softwood industry in Australia. It provides a useful analysis of the key features of the Australian softwood industry (Industry Edge, 2008).

The Industry Edge report concludes that softwood demand has risen to full allocation of the east coast timber resources, but there are insufficient incentives for development of new public or private softwood plantations. Industry Edge claims that the pricing policies of public forestry owners results in sawlog prices below levels that cover the full cost of plantation investment.

Industry Edge attributes much of the reason for the low sawlog prices to the processor strategies that have been:

- To lock up as much of the resource as possible, for as long as possible
- To drive the price using indices, which transfer risk from processor to grower
- Reduce competition through increasing concentration
- Use scale to get unit costs down and make new entry difficult in a supply constrained environment
- Manage imports with non-tariff barriers (changes to structural standards that favour local timber products).

In a report prepared for the Department of Agriculture Fisheries and Forestry, *Australia's Forestry Industry in 2020*, it estimated that domestic consumption of softwood sawn timber has increased on average by 5.3% per annum but that this trend is likely to slow over the next 10 to 15 years. The report also states that domestic softwood supply will remain static for the next 20 to 30 years, due to static plantings over recent years (URS, 2007). The current slowdown in construction activity in Australia is likely to reduce structural timber demand in the medium-term but demand should return as economic growth recovers post-2009.

The data in Table 2 show an expected deficit in sawlog supply in eastern Australia, when compared to current consumption.

Table 2 **Softwood sawlog/ pulpwood supply projections compared to current consumption and production**

	WA	SA	Qld	NSW	Vic	Tas	Total
Coniferous log consumption (2008-09) '000 m3	n/a	n/a	n/a	n/a	n/a	n/a	13,376
Production volume '000 m3 (2008-09)	1,009	2145	1749	3705	3890	870	13,368
softwood saw log supply projections 2010-14	725	2,194	2,023	1,219	3,524	619	10,304

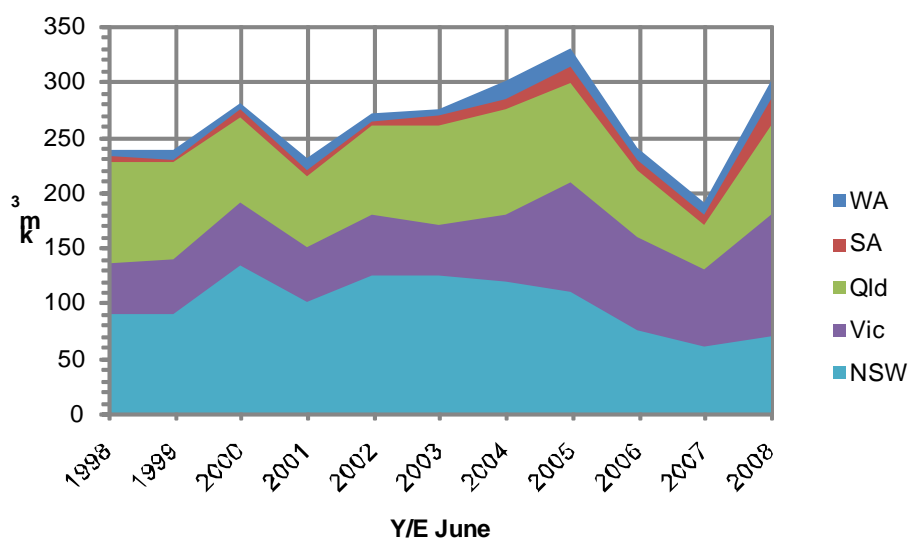
softwood saw log supply projections 2015-19	822	2,070	2,020	1,138	3,725	769	10,544
softwood saw log supply projections 2020-24	811	2,340	2,118	1,116	3,149	862	10,396
softwood saw log supply projections 2025-29	799	2,301	2,106	1,174	3,646	751	10,777

Data source: Australia's Plantation log supply 2005-2049 (2007), ABARES Australian Forest and Wood Products Statistic (2010).

Australia also imports significant quantities of structural grade softwood products from a wide range of countries. The data in Figure 3 shows imports of dressed softwood by states between 1998-2008. It shows that imports are highly variable and South Australia is not a significant importer of these products.

The high level of imports of structural softwood timber products from interstate and overseas means that the structural timber market in Australia is highly competitive. This also means that the potential for substitution of suppliers and building products is high.

Figure 3 **Dressed softwood imports by state: 1998-2008 ('000 m³)**



Note: Imports into NT & Tasmania are very low.

Data source: (Industry Edge, 2008)

ACIL Tasman concludes that:

- The domestic demand for structural timber products is likely to remain strong and will create strong disincentives to export sawlogs of a structural grade
- Supply constraints across the eastern states will continue for at least 20 to 30 years, with variations between states and regions. However, it appears that South Australia is likely to import more structural timber from Victoria and overseas as domestic production is constrained by sawlog supply

- Imports of structural grade timber are likely to remain significant, provided import standards or trade barriers are not increased.

6 The South Australian Forestry Industry

The forestry industry in the South East of SA - Key Points

- The 'forestry' industry in the South East comprises three separate levels: forestry, harvesting, and contracting and processing
- Green Triangle sawlogs are considered high quality by world standards and can be milled into high value construction grade timber products
- Green Triangle forest product output is expected to increase in future, mostly in pulpwood. Softwood output is likely to be relatively static, with increases in supply coming from innovations in silviculture and shortening rotation length
- Processing capacity in the Lower South East is dominated by large mills focussed on processing sawlog and pulpwood. A number of smaller mills are focussed on different types of sawlog

The discussion in section 5 focused on the broad supply and demand of forest products internationally and in Australia.

However, for the purposes of this study, it is helpful to take a broader definition of the forestry industry, to capture the linkages between the forestry industry itself and the various industries that depend on it (mainly downstream).

For the remainder of this report we consider the forestry industry as comprising three broad functional levels.¹¹ In fact, the forestry industry itself is small relative to the other downstream industries.

In the first level, trees are planted and tended for later commercial use. Trees may be either softwood or hardwood. In South Australia, most hardwood is eucalypt (blue gum), while most softwood is radiata pine.

In the second functional level, trees are harvested and transported from the forest for processing. Forest products are harvested in two stages: thinning and clear felling. Thinning produces smaller diameter logs that are selectively removed to allow the remaining trees to grow faster and straighter. There may be several thinnings per rotation, typically two in the Green Triangle.

¹¹ This applies to the forestry sector more generally; it is not unique to South Australia.

The timber products produced at the first thinning are generally only useful for paper production. Some smaller logs are produced at the second thinning.¹² Some processors regard these as sawlogs, while others do not. This largely depends on the scale and flexibility of the mill in question (see Box 2).

Once the trees have reached their desired age they are clear-felled, which means that all of the trees remaining in the stand are harvested.

In the third functional level, harvested trees are processed into a range of timber products. The timber products that can be produced from each log are determined by the diameter, length and density of the log. Slower growing, older logs as a rule are generally denser, although the relationship is weak.

The objective of the plantation manager is to manage the trees to produce the greatest return per ha or per tree. This usually means producing as much sawlog grade timber as possible, at the youngest age possible. Processors want to reduce the average cost of the timber they buy and maximise the yield per log, to increase saleable timber per cubic metre of timber purchased.

Most timber is produced in areas where annual rainfall is in excess of 700mm per annum. One of the major advantages of the Green Triangle is that this level of rainfall is found on relatively flat and accessible land. The level of access to these plantations is unusual and most other plantations are in steep terrain, where the land has few alternative uses of similar commercial value. For most plantations, the main competitor for the land is for the preservation of native forests and biodiversity. However, due to the flat terrain in the South East, softwood plantations compete for land with a wide range of land uses, including livestock grazing, and dairy production.

The terrain occupied by softwood plantations in the South East means that they can use a more active management regime. Site preparation, weed control, pruning and thinning cost less and the aim is to maximise yield per ha. In less accessible plantations, the emphasis is on maximising harvestable timber yield per tree.

Of the three functional levels, the first two are linked geographically to the forest. Once planted, a forest cannot be moved, and the business of harvesters and transporters is tied to the forest. There is more flexibility for processors as harvested logs are generally not perishable, which means that the distance between the forest and the mill is only limited by transport costs. However, as a rule it is generally preferable to transport the sawn timber products rather

¹² Note that the distinction between log that is, and is not, suitable for sawing is not a hard and fast line. There are mills that will saw logs that other mills prefer not to saw. Therefore, what one miller regards as sawlog another will consider suitable only for chipping.

than raw sawlogs, as there is considerable waste material in the log that is expensive to cart relative to its value after processing.

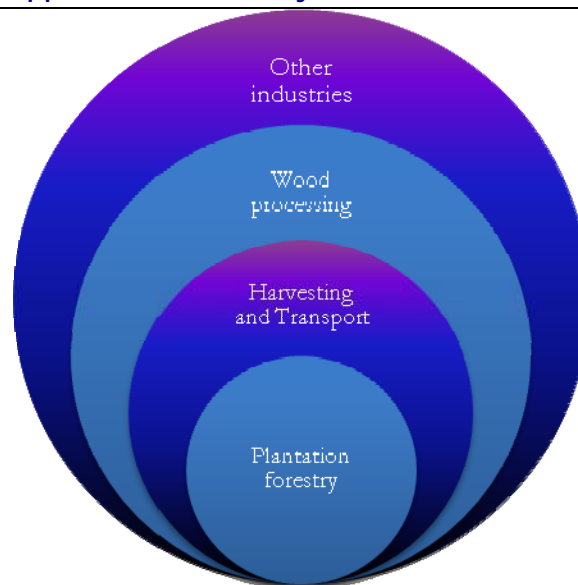
This makes the processing level subject to the possibility that its feedstock could be exported, albeit with associated additional transport costs.

In addition to the three functional levels of the industry, a number of other businesses are at least partially dependent on forest plantations. They are:

- Local engineering firms that repair and/or build harvesting, transport and processing machinery and equipment
- Firms selling goods and services to the timber industry, such as accountants, machinery dealers, employment firms, etc.
- Additional businesses built around supplying goods and services to these firms. The ripples from plantation forestry continue out to affect the State and eventually the national economy.

The interdependent nature of the industries is shown in Figure 4.

Figure 4 **The ripple effects of forestry**



Each of the functional levels is discussed in further detail below.

6.1.1 **Plantation forestry**

In South Australia, there are plantation forests in three main regions, the Mid North, the Mt Lofty Ranges and the lower South East. The location and type of forestry plantations in South Australia is shown in Figure 5.



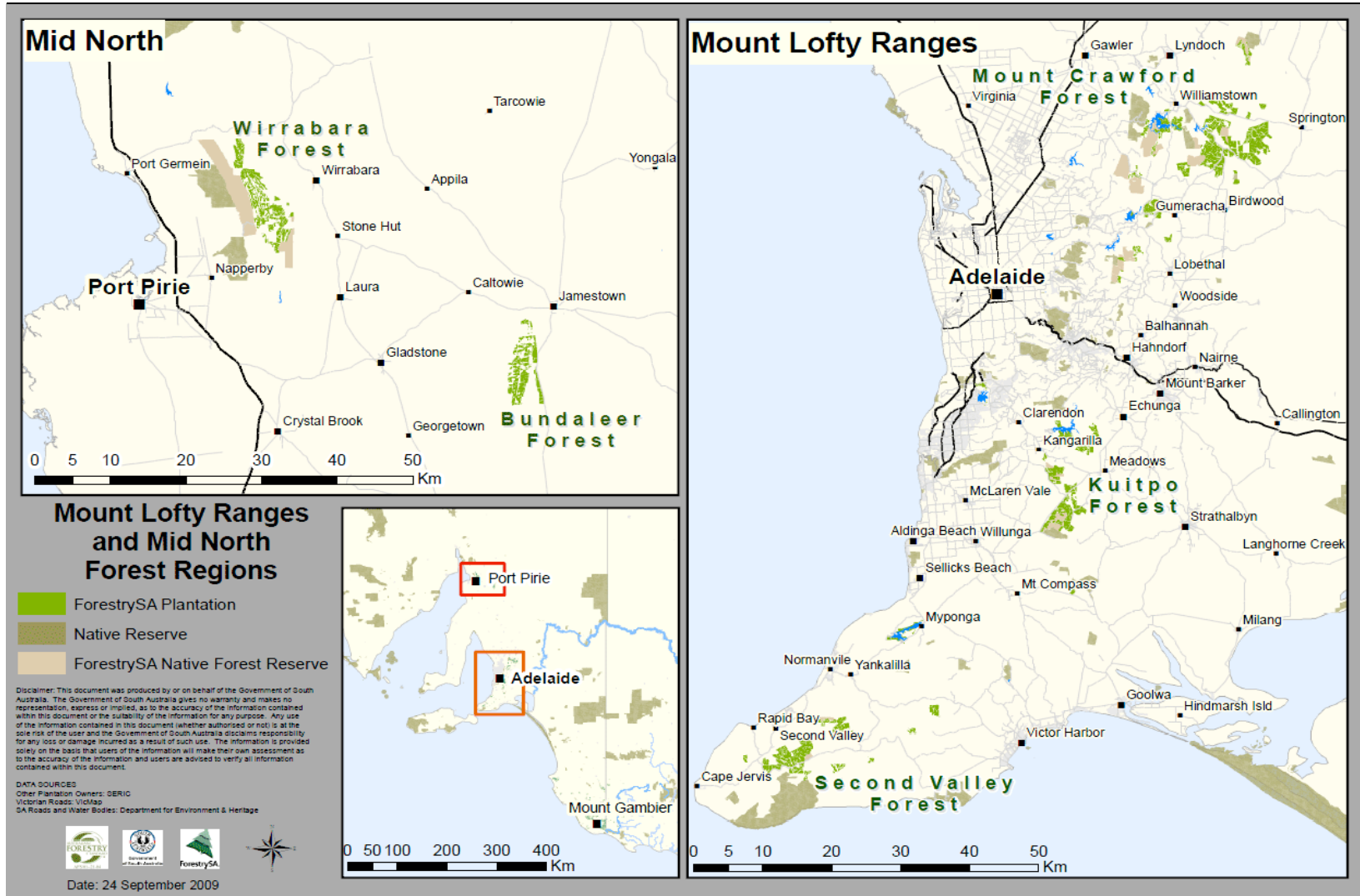
Figure 5 **South Australian Forestry Map**



Source: Forestry SA website, <http://www.forestry.sa.gov.au/maps.stm>, accessed 5 February 2011.



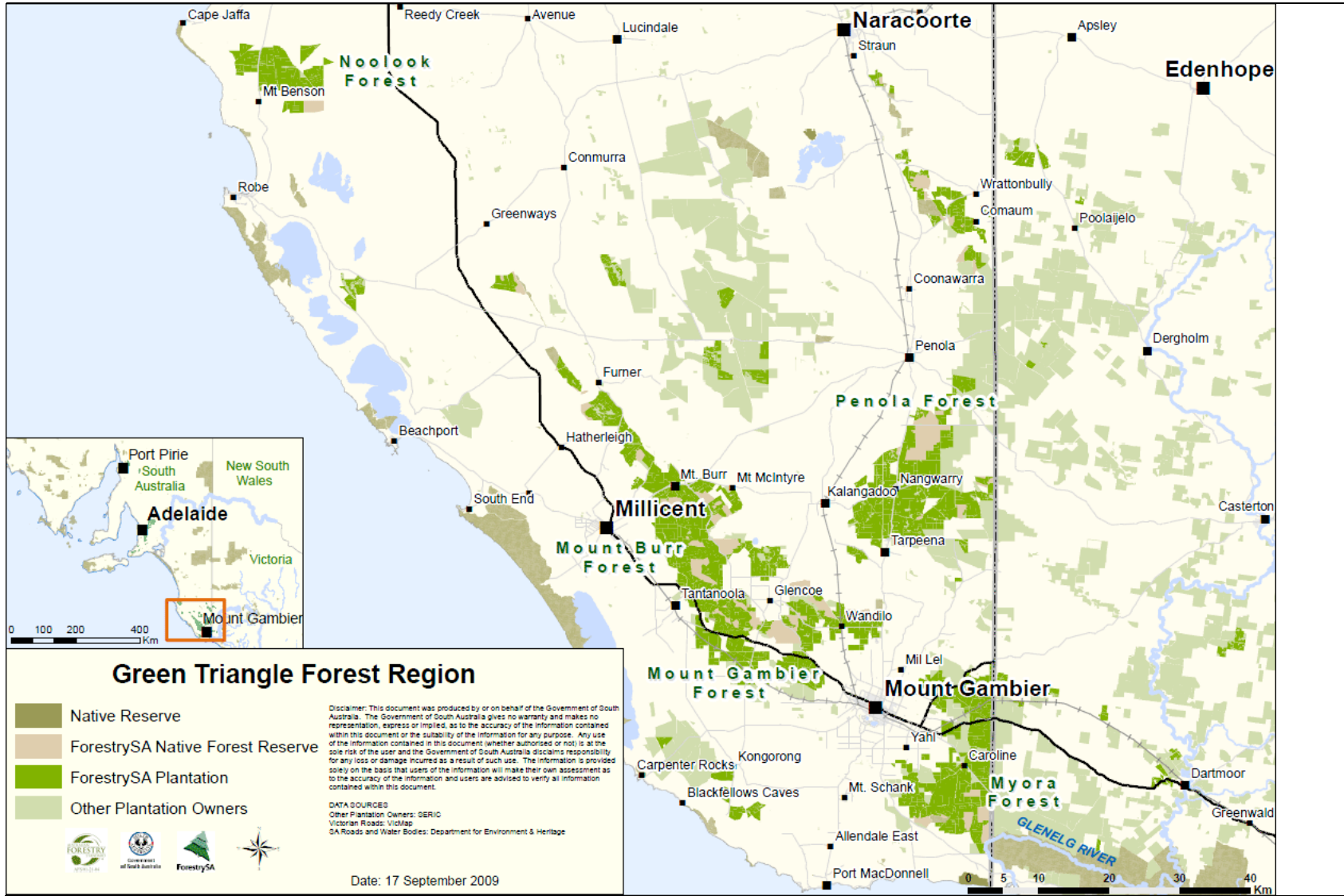
Figure 6 Plantation forests in Mt Lofty Ranges and Mid North



Source: Forestry SA website, <http://www.forestry.sa.gov.au/maps.stm>, accessed 5 February 2011.



Figure 7 Plantation forests in the lower South East



Source: Forestry SA website, <http://www.forestry.sa.gov.au/maps.stm>, accessed 5 February 2011.

As is apparent from the maps in Figure 6 and Figure 7 above, the vast majority of South Australian plantation forests are in the lower South East of the State, centred approximately around Mt Gambier. This region forms part of what is referred to as the Green Triangle, which reaches from Port Campbell (in Victoria) in the East, to west of Cape Jaffa to Dimboola in the North (see Figure 9).

Figure 8 **The Green Triangle**



Data source: (URS Forestry, undated)URS report for DAFF, http://www.daff.gov.au/_data/assets/pdf_file/0008/37565/green_triangle_investment_ver8.pdf , accessed 5 February 2011

At present, there are approximately 166,000 ha of softwood plantation in the Green Triangle. Four companies own this plantation estate. The largest two, Forestry SA and Gunns, control 67 per cent of the total. Forestry SA owns approximately 43 per cent of the total. The estate produces about 2.0 to 2.1 million tonnes of sawlogs annually. Each company's production is approximately the same proportion as its ownership of the estate.

Gunns processes virtually all of the timber it produces in its mill at Tarpeena. It also purchases a portion of its mill requirements from Forestry SA.

Most (approximately 60 per cent, by plantation area) of the total wood in the region that is tendered out is supplied by Forestry SA.

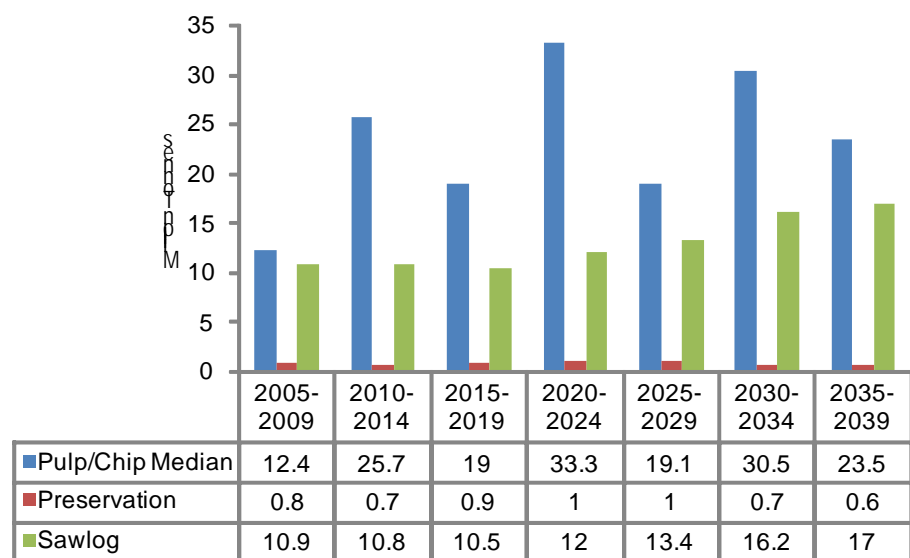
Wood flow

Figure 9 shows projections, published by Regional Development Australia, of wood flow from the Green Triangle forest resource, in five-year blocks out to

2039. It shows that there will be a peak in pulp/chip production in the early 2020s and that sawlog is expected to remain flat until after this time, unless the estate is expanded. The timber supply forecasts from 2020, used by the Limestone Coast report, assume a softwood expansion of the estate by 2,000ha per annum in South Australia and Victoria, and 2,000 and 5,000ha for hardwood respectively.

However, the forecasters do not explain why they have chosen this figure, or if the plantation owners would be able to acquire the land at a price that makes forestry commercially competitive.

Figure 9 **Green Triangle Future Wood Production**



Data source: (Regional Development Australia, 2004)

It is important to note that Forestry SA has had an approved budget of \$12.0m to invest in softwood plantation expansion in the region but has not been able to find economically viable acquisitions. This is because land prices have been strong in the region and financial assessments of potential investments have not met hurdle rates of return.

Actual levels of forestry expansion by Forestry SA have been variable over the last 10 years ranging from none to 1,000ha.

6.1.2 Harvesting and Transport

When a tree reaches maturity, or when it is removed as part of a thinning process, it must be felled, prepared for transport and hauled to a processing facility or, where it is bound for overseas markets, to port. In the South East, a number of fairly small, independent businesses provide harvesting and transport.

Harvesting and Transport businesses are based on heavy machinery, harvesters and trucks, and are relatively capital intensive. The necessary equipment is quite specialised, with few, if any, alternative uses.¹³

As time passes, these businesses are increasingly employing technology to optimise the production of high value products from a given stand of trees. For example, new technology harvesters determine the optimal way to break down a log, by measuring the log itself and optimising across the last 100 logs felled in a given area. In doing this, the harvester takes account of the value of different end products.

As a general proposition, the harvesting and log transport businesses are unlikely to suffer any adverse effects if log exports from the region increased. In fact, they could stand to benefit, as transport distances to port are longer than from forest to mill. Therefore, in a direct sense, this industry would be a beneficiary rather than a loser. As part of the community, though, it would share in any indirect effects of an increase in exports. It would also be exposed to other changes that may occur as a result of the sale, such as changes in the approach to contracting or in payment terms.

Notwithstanding the fact that they appear to be less exposed, transport and harvest contractors participated in protest activities in support of members of the community who could possibly suffer more adverse effects.

6.1.3 Timber Processing

Forest products can be processed either for sawn timber (structural or visual grade), for preservation (into things like posts and rails), or for pulp (and eventually paper products). In the lower South East, there are twelve timber processing plants covering the range of processing activities. These are listed in Table 3.¹⁴ As is discussed in Box 2, different mills are geared towards different ‘types’ of sawlog.

As the data in Table 3 shows, the processing sector is dominated by mills designed to process sawlog and pulpwood, with only a small amount of preservation.

In the pulp sector, Kimberly Clarke recently announced the closure of the two oldest of its paper product processing lines and the sale of its softwood chipping plant at Tarpeena. The Tarpeena mill is very small by world chipping plant standards. This will result in the proportion of pulpwood processed in the region declining, unless alternative uses for that timber appear in the region.

¹³ Generally speaking, the prime mover has alternative uses, but not the other equipment.

¹⁴ Some of these are currently inactive and others are very small.



Table 3 Summary of processing capacity in the Green Triangle

Product	Locations	Companies	Current Processing Level (tonnes)
Log sawn and veneer	Mount Gambier	South East Pine Sales, Whiteheads Timber Sales, NF McDonnell and Sons, Carter Holt Harvey, Green Triangle Forest Products,	2.1 million
	Dartmoor	Green Triangle Forest Products	
	Nangwarry	Carter Holt Harvey	
	Tarpeena	Auspine	
	Portland	Export	
Preservation - Round	Kalangadoo	Auspine	130,000
	Millicent	Miland	
	Mount Gambier	Carter Holt Harvey, Whiteheads Timber Sales, Osmose	
	Dartmoor	Green Triangle Forest Products	
	Mumbannar, Heywood,	McVilly Timbers, Portland Pine Products	
Chip / Pulp	Portland	Export	2.4 million
	Mount Gambier	Carter Holt Harvey Particleboard	
	Millicent	Kimberly-Clark Australia	
	Dartmoor	Green Triangle Forest Products (used as sawn material)	
	Tarpeena	Auspine (used as sawn material)	

Data source: Based on (Regional Development Australia, 2004)

In the sawlog sector, two large mills dominate processing in the region. Based on our discussions with a wide range of millers it appears that CHH and Auspine account for between 80 and 90 per cent of total sawlog processing capacity in the region and approximately 70 per cent of total forest product demand.

There are three smaller sawmills in Mt Gambier. These millers typically have business models based on a steady supply of shorter, smaller diameter log than the larger millers (see Box 2). As discussed in section 9.1.4, this makes them an important means of adding value to Forestry SA's estate. It also makes their concerns different to those of the larger millers.

Box 2 **Plantation Forestry - different grades of log**

Logs are a diverse product. They differ from one another in many different ways, including knot size, intermodal distance and fibre density.

For the purposes of this report, we distinguish between logs based on two main parameters, length and diameter. While these provide for a (two-dimensional) continuum of logs, we identify three broad categories of logs, which are referred to throughout this report. These are:

1. Structural sawlog - These are generally long logs, with large diameter. They are ideally suited for processing into structural timber in the larger sawmills in the South East region as they contain a large proportion of high density material.
2. Shorter, smaller diameter logs - Shorter and smaller than structural sawlogs, these logs still contain some material suitable for processing into structural timber but the proportion is lower and the final length shorter. This category also includes some logs of very large diameter, which are too big for the larger sawmills to process.
3. Pulpwood - typically, in very small logs, thinnings or other material, pulpwood contains a very small proportion of material suitable for use as structural timber or other sawn products.

These categories are broad and the lines between them are 'blurred', with significant potential overlap. In some ways, this overlap depends on market conditions. For example, it may be technically possible to produce many of the same products from shorter, smaller logs as from structural sawlogs, but the cost would typically be higher, so it would not always be profitable to do so.

6.1.4 Other industries

A number of other industries provide direct support to these three central industries. For example, there are numerous engineering businesses in the region involved with maintaining and repairing harvesting, transport and processing machinery.

Still other industries benefit from the existence of the forestry industry, providing hospitality, retail and numerous other goods and services in the region.

The regional economy benefits from the existence of a strong forestry industry in other ways as well; for example, through the demand for dwellings that flows from strong employment in the industry.

7 Government involvement in the South Australian forestry industry

Government forestry intervention - Key Points

- The Government's forestry intervention in the SE has existed for almost 140 years
- Forestry SA is a statutory corporation and is governed by a charter. Under its Charter Forestry SA has three broad areas of responsibility:
 - Maximise the commercial value of the forest estate
 - Develop the regional timber industry
 - Provide community services as directed by the Government
- However, the Forestry SA charter is silent on how it should facilitate industry development, or how success will be measured. This places a great deal of discretion with the board of Forestry SA as to how its dual mandate should be discharged
 - Forestry SA does not publish any guidance on how it discharges its role or the criteria it uses to assess timber or harvesting and cartage tenders
 - This creates a significant lack of transparency in the SE timber market
- Forestry SA is not free to reinvest the surpluses it produces into its own business. Proposed capital expenditure must be approved by the Forestry Minister for amounts of \$1.1m or more and by Cabinet for amounts in excess of this. Cabinet must also approve its budget each year.

Forestry in South Australia traces its origins to the *Forest Trees Planting Encouragement Bill 1873*; the appointment of the first Forestry Board in 1875; initial tree planting at Mt Gambier, Wirrabara and Bundaleer in 1876; and the formation of the South Australian Woods and Forests Department in 1882.

In the early days of the forestry industry, the Government was also involved in the saw milling industry. The Mt Burr sawmill was opened in 1931.

The Government-owned forests generated their first annual surplus of income over expenditure in 1941.

More recently, Forestry SA sustained a substantial loss of pine plantation in the Ash Wednesday bushfires of 1983. Two years later, the Government passed the *Native Vegetation Act 1985*, which stopped the clearing of native forest in South Australia.

In 1993 the Government exited the sawmilling industry and sold its sawmills to Carter Holt Harvey.

Until the passage of the *South Australian Forestry Corporation Act 2000 (the Act)*, Forestry SA was an administrative unit within the Department for Administrative and Information Services. From that time on, it has been a

statutory corporation overseen by an independent board. It operates subject to the standard framework for Public Non-Financial Corporations, as set out in the *Public Corporations Act 1993* and in other places. Pursuant to the Public Corporations Act, Forestry SA is also governed by a charter, which is discussed further in the next section.

Today, the Government owns and manages more than 93,000 ha of plantation land through Forestry SA. Most of this is in South Australia, although some is in the Victorian portion of the Green Triangle region.

The majority of Forestry SA's forest estate is softwood (*Pinus Radiata*). A significant minority of its plantation forest is planted with hardwood species, mainly blue gum, but this is being phased out over time.

Forestry SA's head office is in Mt Gambier and it employs approximately 200 full time equivalent staff (not all located in Mt Gambier).

Forestry SA operates under a charter that has three limbs.¹⁵ It requires Forestry SA to:

1. Operate commercial plantation forests with a view to selling the logs to maximise their value (the commercial forestry limb)
2. Facilitate regional economic activity based on forestry (the industry protection limb)
3. Operate forests and pursue other activities for community benefit (the community service limb):
 - a) Native forests for conservation benefit
 - b) Forests as recreation reserves/ quasi-national parks
 - c) Fire protection

In line with the commercial forestry limb, Forestry SA's strategic plan was recently revised, with emphasis placed on capturing greater value from the business. The broad goals adopted are set out Box 3. The strategic plan is broadly consistent with what might be expected of a commercial forester.

¹⁵ These three limbs are a summary of its three strategic directions and five economic directions. For more detail, see Forestry SA's charter, available at www.forestry.sa.gov.au.

Box 3 **Forestry SA 2009/10 Strategic Plan - broad goals**

Strategy 1: Maximise return to the shareholder through business development

1. Grow the financial return to the South Australian Government
2. Achieve best value use of the forest resource
3. Increase plantation area under management
4. Maximise the sustainable harvest

Strategy 2: Continue to improve business productivity

1. Maximise plantation productivity
2. Continue to develop financial and business management systems and skills
3. Improve productivity through research application
4. Enhance employee capacity, engagement and contribution to business requirements

Strategy 3: Develop organisational culture and reputation

1. Enhance the Forestry SA brand
2. Enhance customer satisfaction through commercial relationships
3. Maintain community support for Forestry SA
4. Engender values of information sharing, customer service and ethics amongst employees

Source: (South Australian Forestry Corporation, 2010)

In seeking to understand the importance of the commercial forestry limb, it is also helpful to consider the approach it is currently taking to offering logs to the market.

Consistent with its strategic objective to capture greater value from the business and maximise returns to its shareholder, Forestry SA undertook an exercise to improve its understanding of its forest resource. It sought to maximise the annual allowable cut, without jeopardising long-term supply. This process, undertaken in 2009/10, led to Forestry SA increasing its annual allowable cut of sawlogs in 2010 to 1.1 million cubic metres per annum.

Following on from this increase, and due partly to the impending expiry of certain supply contracts, at the time of writing, Forestry SA was in the process of marketing additional log supplies. Forestry SA has invited tenders for annual log volumes ranging from 300,000 m³ to 820,000 m³ out to 2020/21.¹⁶ A consideration of this process and the way Forestry SA intends to evaluate tenders is informative about its log sales strategy.

¹⁶ This includes sawlog shorter than 3.65m

According to the request for proposal document for this sale, the evaluation criteria for this process will include, but not be limited to, the following:

- Net Revenue to ForestrySA
- Commercial risk
- Organisational capacity of the respondent
- Compliance with the various conditions of supply
- Financial viability of the respondent
- Conflict of interest
- Emerging risks
- Industry considerations

In the request for proposal document, Forestry SA says that these are not listed in order of priority and no indication is given of the relative weight to be given to one criteria over another or the way that they will be interpreted. This places this document in contrast with other tender processes used by the South Australian Government and other Governments.

It is unclear from this process the weight that Forestry SA will place on the commercial forestry limb, as distinct from the industry protection limb, in allocating logs. However, when read in context with Forestry SA's strategic plan and its vision "to be a leading forestry business"¹⁷ it appears reasonable to surmise that significant weight will be placed on the commercial forestry limb, with relatively less weight placed on the industry development limb. This is consistent with the view that Forestry SA is taking an increasingly commercial focus and with experiences related to us by some of the smaller millers during consultations, that Forestry SA has been increasingly commercial in recent price negotiations. From a financial point of view, Forestry SA carries substantial equity on its balance sheet. However, as a Public Corporation it is subject to Government financial management requirements, which place limits on the discretion open to Forestry SA's board in approving expenditure.

Each year, Forestry SA's operating budget is approved by the Government. However, regardless of that budget, Treasurer's Instruction 8 prevents the board of Forestry SA (and all other Government departments and authorities) from authorising expenditure greater than \$1.1 million.¹⁸

¹⁷ See <http://www.forestry.sa.gov.au/overview.stm>

¹⁸ Government of South Australia, Department of Treasury and Finance, "Treasurer's Instruction 8 Financial Authorisations", available at http://www.treasury.sa.gov.au/dtf/financial_management/financial_publications_and_downloads/treasurers_instructions.jsp, accessed 4 February 2011

Expenditure that is within budget and greater than \$1.1 million must be authorised by either the Minister or Cabinet depending on the amount.

Therefore, regardless of the financial position of Forestry SA itself, the broader financial position of the Government affects the evaluation of commercial decisions applicable to Forestry SA. In practice, the equity carried on Forestry SA's balance sheet is likely to be offset by the tighter budgetary position applicable to the Government more generally. By this process, Forestry SA tends to be less able to make capital purchases than it might be if it was a standalone entity.

That is, Forestry SA is not able to autonomously reinvest the profits from its business back into forestry innovations or, more particularly, on expanding the estate, without first gaining approval from the relevant Minister or Cabinet.

7.1.1 The industry protection limb

There is very little clarity as to what the industry protection limb means in practice. The direction given by the Charter is vague and does not specify any objectives that Forestry SA must meet in discharging its charter obligations.

There are no industry development policies, published or unpublished, used by Forestry SA. Nor is there any direction given in tender documents as to how tenders for timber will be evaluated against both the commercial and industry development obligations established for Forestry SA.¹⁹

This lack of policy at the Act, Charter and management level of Forestry SA, creates a great deal of uncertainty as to how it discharges its obligations and places a great deal of discretionary power in the hands of the Forestry SA board.

This lack of transparency also creates considerable differences of view as to what it *should* mean, and, perhaps more importantly, the extent to which Forestry SA has been able to foster the timber industry in the SE of SA. This may lead some to overstate the contributions made by the activities of Forestry SA in promoting the industry.

In addition, there are questions as to how effective Forestry SA can be at achieving the objective of industry development, given the policy levers at its disposal. We deal with each of these issues in turn.

As noted above, there is little clarity in the community on how Forestry SA discharges the industry protection limb of its charter.

¹⁹ See the description of the current request for tender document (above) for an example.

The key question here is whether Forestry SA has given (and would continue to give) preferential treatment to local mills. For example, that treatment may take the form of lower price or more favourable terms in log supply agreements than would otherwise have been provided. In addition, the fact that Forestry SA has been Government owned has enabled industry members to rely on political pressure to influence Forestry SA from time to time.

Whether a political solution is in fact open to those unable to reach a satisfactory solution through direct negotiations is open to conjecture. However, the regional timber industry, by seeking a political intervention, is responding in a rational way to the incentives given to them by the charter.

Discharging Forestry SA's charter - Forestry SA as an industry development lever

In addition to uncertainty about the way that Forestry SA has previously discharged its charter, a number of other questions should be considered. They include: the incentives that the industry protection limb creates for industry players; Forestry SA's effectiveness in achieving this objective; and, related to this, whether Forestry SA could reasonably have prevented some of the recent changes that have occurred in the industry, such as the closure of the mill at Nangwarry and the closure and impending further closure at Tantanoola.

In relation to the first of these points, industry protection policy can easily have the perverse effect of dissuading innovation and advancement in the industry being protected. This can be seen in cases where industry participants have pursued political, rather than commercial, solutions to resolving issues in the market.

In relation to the second point, we note that several processing facilities have closed in the South East in recent years. A further closure was announced during the course of this study. Kimberly Clark Australia (KCA), one of Forestry SA largest customers, announced the closure of two of its processing lines and an intention to sell off its Tantanoola softwood chipping plant. We understand that, in future, KCA will only use imported hardwood pulp for its mill. This removes it from the group of firms dependent on the South East softwood industry.

These closures point to the international forces that act on the wood processing industry. While industrial facilities such as these usually close for a cocktail of reasons, it appears that several of these closures were due to decisions by global companies to close less efficient facilities in favour of more efficient facilities. This was the main reason for the KCA mill restructure. Another example is the decision by Gunns to close its facility at Dartmoor and divert the logs to its other plants in Victoria

It is notable that these closures occurred in spite of the industry protection limb. While it is conceivable that Forestry SA could have prevented, or delayed, them, this seems unlikely. Further, given Forestry SA's business, the only levers it has at its disposal to intervene in this type of situation, are to adjust the price or other terms of sale of logs. Simply put, the only way Forestry SA might have been able to prevent the closure of the mills is by reducing the price it charged for logs, and this may not have worked, or may not have worked for long.

As discussed in section 2, Forestry SA has only three levers it can use to develop the industry:

1. The price at which it sells forest products
2. The way it allocates the forest products to different buyers
3. The length of contract it is willing to provide.

Forestry SA also invests in R&D, which benefits the industry. One example of the contribution to forestry R&D was improving second rotation yields by, amongst other things, retaining forest floor organic material²⁰. However, provision of R&D by the Government can be independent of ownership of the forward rotations.

All of the non-R&D levers relate to the price that Forestry SA is willing to accept for the timber products it produces. Modifying the terms of contract has implications for the net price received, as does allocating logs to companies based on non-price criteria. As price is essentially the only lever Forestry SA has to facilitate regional development, two issues arise.

First, even if Forestry SA had reduced the price of log further, it is not clear that this would have been effective in preventing the mill closures. They may have closed anyway, or their closure may only have been delayed for a short time.

Second, even if the mills had been kept open by a cut in log price, this would have involved a cost to the community in two ways; one direct, the other deferred. The direct cost is the revenue lost by not selling the same log to another buyer for a higher price. Offsetting this is the fact that, if that buyer had been overseas, the flow on benefits from processing the log would also have been transferred overseas.

The indirect cost is that, by 'propping up' an inefficient mill, Forestry SA would have made it more difficult for a new, more efficient or larger, mill to be established. This is known as the 'crowding out' effect.

²⁰ See (Hehir & Nambiar, 2010)

Selling logs at below market prices would also create disincentives for existing and potential new plantation owners to expand the estate.

7.1.2 The community service limb

Bushfire is a significant concern for the forestry industry. As was seen during the Ash Wednesday fires of 1983, a large fire can have catastrophic implications for a plantation forest. The long-term nature of the forestry business means that those effects can be felt for many years to come. Forestry SA is still feeling the effects of the Ash Wednesday fires, which happened almost thirty years ago.

It is, therefore, in the interest of all foresters to take steps to protect their forests from bushfire. This includes preventive measures, such as maintaining proper firebreaks, and mitigation measures, such as maintaining a fire fighting capability.

As the largest forester in the South East region, Forestry SA also has the largest fire fighting capacity. It owns and maintains numerous fire towers and fire trucks. In the event of fire, all of Forestry SA's staff members have fire fighting responsibilities and Forestry SA's on-ground fire crews are trained by the CFS to meet international standards for fire fitness.

Fire will obviously spread from one forest to another without regard for ownership. Therefore, fire fighting tends to be a cooperative effort, with serious incidents managed in a concerted way between commercial foresters, Forestry SA, (other) Government employees and the Country Fire Service.

The community sees the role of Forestry SA as different to that of the other foresters in the region. In part, this may be due to Forestry SA's large size, but there appears to be more to it than this. Forestry SA receives a community service obligation payment from the Government for fire fighting, which indicates that the Government also expects more of Forestry SA in this area than would be provided commercially.

Forestry SA also supports conservation, habitat rehabilitation, and pest and weed control initiatives in its plantation forests, through either direct financing or obtaining grants from other agencies. For instance, in 2008-09 Forestry SA won a \$105,000 grant under the Australian government "Caring for our Country" program for the Mount Burr Habitat Rehabilitation Project. It also received \$115,000 in supplementary funding from the South East Natural Resource Management Board (Building Our Natural Estate Investment Program). Moreover, Forestry SA contributes to collaborative planning through several Natural Resources Management boards, and is participating in

the initiation of a South Australian Weed Hygiene Code of Practice (Forestry SA, 2010).

8 Contribution of forestry to the region: distribution and contribution

Economic contribution - Key points

- There is no doubt that forestry, and forest product processing is a significant part of the South East regional economy
 - With KCA moving to import all its pulp needs, the direct employment dependent on the softwood plantations in the region from 2011 will be 1,940 and 11 per cent of Gross Regional Product (GRP)
 - When indirect contributions are taken into account, forestry supports approximately 2,674 jobs (direct and indirect) and approximately 19 per cent of GRP
- Other industries that compete with forestry for land and labour, such as grazing, dairy and general agriculture, have higher 'multipliers'. That means that, per dollar of output, these industries contribute more to the local region
- These industries also compete with forestry in the Green Triangle for land, water and labour

There are three local government areas where the majority of the plantations and processing activities are located. They are the District Shires of:

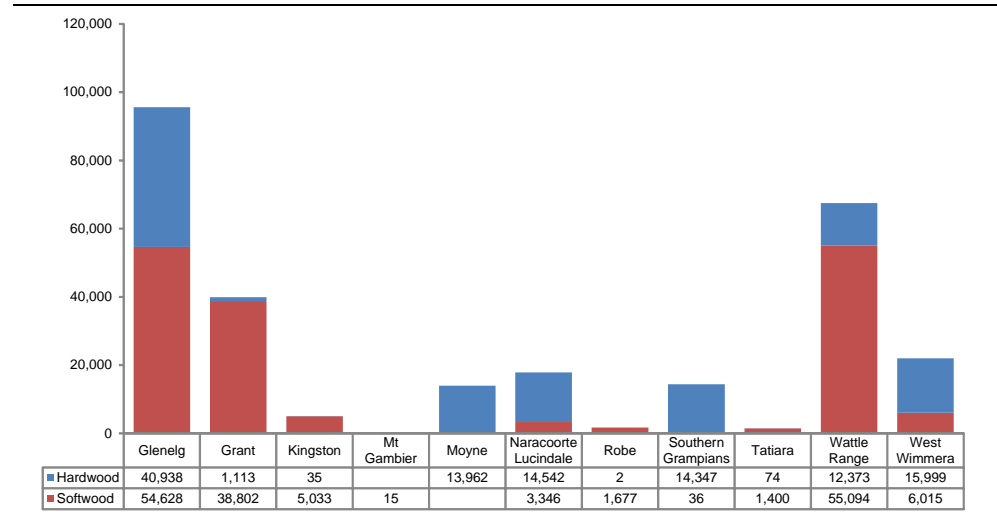
- Wattle Range
- Grant
- Mount Gambier - the shire with the largest concentration of processing capacity (see Figure 10).

The Glenelg Shire is just over the border in Victoria. The majority of softwood plantations in Glenelg are not owned by Forestry SA and therefore are not part of the sale.

The location of the softwood and processing facilities is only an approximate guide to potential impacts, as labour is mobile and people can live close to a regional (or state) boundary and travel to work in neighbouring areas. For example, if a large processing facility were to be built just over the Victorian border, the South East region would still be a significant beneficiary. Many of the goods and services purchased by the plant would be sourced from South Australia and people would be able to travel across the border to work.

From an economic and employment point of view, the boundary is artificial. The forestry region crosses the border.

Figure 10 **Plantation Area by Local Government Area**



Data source: (Regional Development Australia, 2004)

This section provides an overview of the Grant, Wattle Range and Mount Gambier Local Government Areas (LGAs), with a particular focus on the contributions made to the local economy by the forestry and forest products sectors, and other major contributing industries.

The regional subset of the South East Statistical Division encompasses the Local Government Areas (LGAs) of Grant, Wattle Range and Mount Gambier, all located in the far South East corner of South Australia (see Figure 11).



Figure 11 Primarily affected Local Government Areas (LGAs)



Source: ABS and ACIL Tasman

8.1 Population Characteristics

Table 4 shows the population values for the three LGAs. Mount Gambier, with a population of 25,216, accounts for over 50 per cent of the region's total population. The remaining two LGAs of Grant and Wattle Range contain populations of 8,652 and 12,554 respectively.

The total population of the region accounts for 2.9 per cent of South Australia's total population. However, Mt Gambier is South Australia's largest regional city.

Table 4 Population by LGA 2009

	Population	Share of Region (%)	Share of South Australia (%)
Grant	8,652	18.6	0.53
Mt Gambier	25,216	54.3	1.58
Wattle Range	12,554	27.0	0.79

Data source: Australian Bureau of Statistics, 1379.0.55.001 National Regional Profile, 2005-2009.

The ABS census data presented in Table 5 suggests the distribution of age brackets across each of the regions is broadly consistent with the rest of South Australia.

Table 5 **Age structure 2009**

	0-14 Years	15-24 Years	25-34 Years	35-44 Years	45-54 Years	55-64 Years	65-74 Years	75-84 Years	85 + Years
	%	%	%	%	%	%	%	%	%
Wattle Range	20.65	11.16	11.54	14.62	14.47	12.15	8.43	5.1	1.87
Grant	21.93	11.48	10.67	16.11	15.97	12.89	6.58	3.35	1.03
Mt Gambier	20.65	11.16	11.54	14.62	14.47	12.15	8.43	5.1	1.87
South Australia	18.54	13.26	12.27	14.47	14.32	11.74	7.6	5.77	2.02

Data source: Data source: Australian Bureau of Statistics, 1379.0.55.001 National Regional Profile, 2005-2009.

8.2 Workforce Characteristics

At the time of the 2006 Census, the forestry and forest products industries were important employers in the local region - comprising almost 14 per cent of total employment (see Table 6 and Figure 12). Approximately 2 per cent of workers in each region were involved in the forestry and logging industry with a further significant percentage involved in producing a range of manufactured forest products.

The 2006 Census data is ageing, with the next census due in 2011. However, it remains the most comprehensive data set available on the region. ACIL Tasman is not aware of significant forest industry or other developments in the region that would render the 2006 Census data significantly inaccurate. Given recent mill closures, the 2006 Census data may slightly overstate the employment contribution the industry makes to the region.

Within the Wattle Range LGA in 2006, approximately 15 per cent of the total workforce were employees of the paper containers and products industry, although the recent line closures are likely to reduce this percentage to 11 (448 workers).

Approximately 18 per cent of the total workforce in Grant and 6 per cent in Mt Gambier, worked in the sawmill products industry. In the region as a whole, the sawmill products sector was the largest employer in the forest and forest products sector, and accounted for 6.5 per cent of total employment.

Table 6 **Employment by industry (by place of work)**

	Wattle Range	Grant	Mt Gambier	Total region
	No.	No.	No.	No.
Forestry & logging (harvesting)	94	41	253	388
Sawmill products	174	338	711	1,223
Other wood products	64	29	225	318
Pulp, paper & paperboard	11	0	0	11
<i>Total regional plantation dependent employment from 2011</i>	<i>343</i>	<i>408</i>	<i>1189</i>	<i>1940</i>
Paper containers & products (based on imported pulp from 2011-12)	618	0	3	621
Other Industries	4,221	1,483	10,506	16,210
Total	5,182	1,891	11,698	18,771

Note: For the 2006 Census, a technique was applied by the ABS to avoid identification of individuals, which results in small introduced random errors. Tables that have been randomly adjusted will be internally consistent. However, comparisons with other tables containing similar data may show minor discrepancies. This is the case for both customised tables and standard products. These small variations can, for the most part, be ignored.

Data source: ABS 2010, 2006 Census of Population and Housing, Customised Data Report

The forestry specific transport sector is not a separate ABS category and cannot be separated from total transport without undertaking a detailed survey. Given that many of the harvesting companies also provide transport services, the logging section of the Forestry and Logging category is likely to contain a significant proportion of the transport employment statistics.

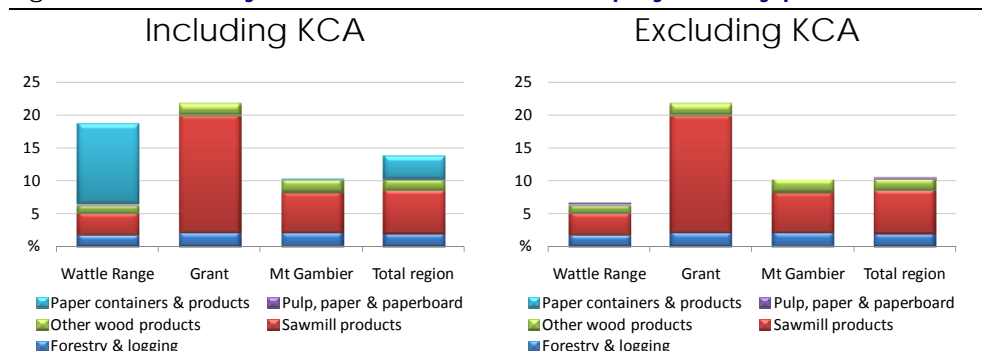
Expenditure on road transport by forestry and processing industries is shown in Table 7. The majority of the road transport services shown are purchased by the forestry and logging and paper industries. However, as noted, it is likely that, given the integrated nature of the forestry and logging services, that this amount is understated.

Table 7 **Expenditure on road transport per year**

Industry	Expenditure on road transport in 2006/07 (\$m)	% of total intermediate input usage
Forestry and logging	2.6	10.5
Pulp paper and paper board	0.2	14.7
Paper containers and products	4.7	9
Other wood products	1.7	11
Sawmill Products	22.2	17

Data source: ABS

Figure 12 **Forestry industries share of total employment by place of work**



Source: ACIL Tasman calculations based on ABS 2010, 2006 Census of Population and Housing, Customised Data Report

8.3 Economic Contribution of Forestry

The forestry and forest product industries are important contributors to the regional economy, with the forest product industries featuring in the top ten contributors to GRP for the Wattle Range, Grant and Mt Gambier LGAs. Their importance is also reflected in the fact that a significant number of the businesses in each region are based in the agriculture, forestry and fishing industry (Table 8).

Table 8 **Number of businesses per industry (2006 Census)**

	Wattle	Mt Gambier	Grant
Agriculture, forestry and fishing	804	324	432
Mining	3	6	6
Manufacturing	57	90	33
Electricity, gas and water supply	0	0	0
Construction	120	375	81
Wholesale trade	42	105	21
Retail trade	96	393	24
Accommodation, cafes and restaurants	54	78	18
Transport and storage	21	126	24
Communication services	6	15	0
Finance and insurance	36	141	30
Property and business services	114	465	63
Education	0	15	0
Health and community services	18	90	3
Cultural and recreational services	3	42	0
Personal and other services	18	84	6
Total businesses	1 392	2 349	741

Data source: Australian Bureau of Statistics, 1379.0.55.001 National Regional Profile, 2005-2009.

Table 9 and Table 11 present the estimated direct and indirect contributions by the forestry, wood and paper products industries to the regional economies' employment and GRP, respectively. These details are prior to the restructure of KCA, which has effectively removed that company from the regional softwood timber market.

Table 10 and Table 12 show the regional contribution to employment and GRP by the forestry, wood and paper products industries dependent on softwood plantations in the region, after the KCA restructure. The post KCA restructure is the regional employment and economic contribution that must be used to assess the proposed forward rotation sale. It represents the economic and employment contribution of the regional industries reliant on softwood plantations in the region. That is, those industries that would potentially be affected by the proposed sale.

Table 9 **Forestry and forest products contribution to employment (2006-07)**

	Wattle Range	Grant	Mt Gambier	Region ^b
	No. of jobs	No. of jobs	No. of jobs	No. of jobs
DIRECT CONTRIBUTION				
Forestry and logging	94	41	253	388
Wood and paper products	867	367	939	2,173
Total forestry, forest products	961	408	1,192	2,561
Percentage of region total	19%	22%	10%	14%
INDIRECT CONTRIBUTION ^a				
Industrial support effect				
- Forestry and logging	29	10	94	145
- Wood and paper products	159	40	209	636
Consumption effect				
- Forestry and logging	20	2	91	147
- Wood and paper products	184	10	149	647
Total indirect contribution	391	63	544	1,575
Total contribution (direct plus indirect)	1,352	471	1,736	4,136
Percentage of region total	26%	25%	15%	22%

^a To prevent double counting the estimates of the indirect contribution of each sub-sector exclude the effects of use of local forestry and/or forest products by the forestry and/or forest products industries. For example, forestry output is a major input into sawmilling and summation of the indirect contribution (as estimated by I-O multipliers) of each individual sector will result in double counting, with the effect that the sum of the indirect contribution of all industries appears significantly greater than the total employment in the region.

^b It should be noted that the indirect contribution for the region as a whole (when estimated using I-O multipliers) is greater than the sum of the individual regions as a result of trade between them.

Data source: ACIL Tasman estimates. Direct employment sourced from ABS 2010, 2006 Census of Population and Housing, Customised Data Report.

Table 10 **Forestry and forest products contribution to employment (2006-07) post KCA restructure**

	Wattle Range	Grant	Mt Gambier	Region ^b
	No. of jobs	No. of jobs	No. of jobs	No. of jobs
DIRECT CONTRIBUTION				
Forestry and logging	94	41	253	388
Wood and paper products - excl. KCA	249	367	936	1,552
Total forestry, forest products	343	408	1,189	1,940
Percentage of region total	7%	22%	10%	10%
INDIRECT CONTRIBUTION ^a				
Industrial support effect				
- Forestry and logging	29	10	94	145
- Wood and paper products - excl. KCA	50	40	208	328
Consumption effect				
- Forestry and logging	20	2	91	147
- Wood and paper products - excl. KCA	31	10	148	327
Total indirect contribution	130	63	541	947
Total contribution (direct plus indirect)	473	471	1,730	2,887
Percentage of region total	9%	25%	15%	15%

a To prevent double counting the estimates of the indirect contribution of each sub-sector exclude the effects of use of local forestry and/or forest products by the forestry and/or forest products industries. For example, forestry output is a major input into sawmilling and summation of the indirect contribution (as estimated by I-O multipliers) of each individual sector will result in double counting, with the effect that the sum of the indirect contribution of all industries appears significantly greater than the total employment in the region.

b It should be noted that the indirect contribution for the region as a whole (when estimated using I-O multipliers) is greater than the sum of the individual regions as a result of trade between them

Data source: ACIL Tasman estimates. Direct employment sourced from ABS 2010, 2006 Census of Population and Housing, Customised Data Report.

Table 11 Forestry and forest products contribution to GRP (2006-07)

	Wattle Range	Grant	Mt Gambier	Region ^b
	\$m	\$m	\$m	\$m
DIRECT CONTRIBUTION				
Forestry and logging	12.5	6.3	34.4	54.1
Wood and paper products	120.0	43.6	94.3	262.3
Total forestry, forest products	132.5	49.9	128.7	316.4
Percentage of region total	23%	21%	11%	16%
INDIRECT CONTRIBUTION ^a				
Industrial support effect				
- Forestry and logging	3.4	1.4	11.0	17.5
- Wood and paper products	15.7	6.7	29.9	89.2
Consumption effect				
- Forestry and logging	3.0	0.8	12.5	20.7
- Wood and paper products	25.9	5.2	35.1	104.6
Total indirect contribution	48.0	14.1	88.5	231.9
Total contribution (direct plus indirect)	180.5	64.0	217.2	548.3
Percentage of region total	31%	26%	19%	28%

a To prevent double counting the estimates of the indirect contribution of each sub-sector exclude the effects of use of local forestry and/or forest products by the forestry and/or forest products industries. For example, forestry output is a major input into sawmilling and summation of the indirect contribution (as estimated by I-O multipliers) of each individual sector will result in double counting, with the effect that the sum of the indirect contribution of all industries appears significantly greater than the total GRP of the region.

b It should be noted that the indirect contribution for the region as a whole (when estimated using I-O multipliers) is greater than the sum of the individual regions as a result of trade between them.

Data source: ACIL Tasman estimates.

Table 12 **Forestry and forest products contribution to GRP (2006-07) post KCA restructure**

	Wattle Range	Grant	Mt Gambier	Region ^b
	\$m	\$m	\$m	\$m
DIRECT CONTRIBUTION				
Forestry and logging	12.5	6.3	34.4	54.1
Wood and paper products - excl. KCA	25.0	43.6	93.8	162.2
Total forestry, forest products	37.5	49.9	128.2	216.4
Percentage of region total	6%	21%	11%	11%
INDIRECT CONTRIBUTION ^a				
Industrial support effect				
- Forestry and logging	3.4	1.4	11.0	17.5
- Wood and paper products- excl. KCA	3.8	6.7	29.7	57.1
Consumption effect				
- Forestry and logging	3.0	0.8	12.5	20.7
- Wood and paper products- excl. KCA	5.6	5.2	34.9	65.0
Total indirect contribution	15.8	14.1	88.2	160.3
Total contribution (direct plus indirect)	53.3	64.0	216.4	376.7
Percentage of region total	9%	26%	19%	19%

a To prevent double counting the estimates of the indirect contribution of each sub-sector exclude the effects of use of local forestry and/or forest products by the forestry and/or forest products industries. For example, forestry output is a major input into sawmilling and summation of the indirect contribution (as estimated by I-O multipliers) of each individual sector will result in double counting, with the effect that the sum of the indirect contribution of all industries appears significantly greater than the total GRP of the region.

b It should be noted that the indirect contribution for the region as a whole (when estimated using I-O multipliers) is greater than the sum of the individual regions as a result of trade between the individual regions.

Data source: ACIL Tasman estimates.

In total, estimates indicate that the forestry and forest product industries directly contribute approximately 16 per cent of the region's GRP and approximately 23, 21 and 15 per cent of GRP for the Wattle Range, Grant and Mt Gambier LGAs, respectively.

- At \$316.3 million, the industries' total direct contribution to GRP accounts for just over half of South Australia's forestry and forest product industries output.
- The direct employment generated by the forestry industry for the region was 2,561 jobs in 2006-07. This was approximately 14 per cent of total employment for the region.
- The forestry and forest products industries accounted for approximately 19, 22 and 10 per cent of total employment for Wattle Range, Grant and Mt Gambier LGAs respectively.

As mentioned in section 2, the I-O multiplier technique was employed to estimate the impact that output from the forestry industries has on the wider

economy (see Box 4 for a definition of input output tables and multipliers). ACIL Tasman constructed IO tables for the three LGAs and for the region as a whole. A range of GRP and employment multipliers were then estimated from the IO tables and were used to estimate the indirect contribution of the forestry and forest products industries to regional GRP and employment (see Table 9 and Table 11).

- The estimates of the industrial support effect indicate that output from the forestry and forest product industries within the region induces an additional \$106.6 million in GRP, via the forestry industries' demand for factor inputs and the associated production for related industries.
- The consumption effect incorporates the impact of the increased production induced by the forestry industries, as well as the resulting increase in consumption associated with higher factor incomes. When this is taken into account, the estimated total flow on effect from forestry and forest product industries within the region is estimated to be \$231.9 million.
- An estimated 1,575 additional jobs were generated by the forestry and forest product industries, via flow on effects when the consumption effect was accounted for, and 782 when only flows from industrial support effects were incorporated.

In total, allowing for all potential direct and indirect effects, it is estimated that the forestry and forest product industries contributed 4,136 jobs throughout the regional economy and generated \$548 million in GRP in 2006-07. This is the equivalent of approximately 28 per cent of the region's GRP and 22% of total employment.

8.4 Forestry contribution in context

It is clear that forestry in total is a significant contributor to the regional economy and underpins many of the other sectors of the economy, such as dwellings, wholesale trade, education, etc.

The impacts of the KCA restructure are clear and demonstrate the contribution that the timber industry has on the region. By removing itself from the local softwood market by moving to source 100 per cent of its pulp requirements from hard wood plantations and selling its softwood pulping plant, the softwood plantation dependent employment in the region fell from 22 to 15 per cent. Similarly, softwood dependent industry's contribution to GRP fell from 28 per cent to 19 per cent.

Table 13 **Total contribution to combined GRP by industry**

Region		
	\$m	% share
Ownership of dwellings	173.25	8.76
Retail trade and retail repairs	148.30	7.50
Sawmill products	138.51	7.01
Paper containers and products	100.01	5.06
Wholesale trade and wholesale repairs	93.79	4.74
Education	91.87	4.65
Health services	91.20	4.61
Construction trade services	72.37	3.66
Road transport	66.33	3.35
Other agriculture	61.81	3.13

Data source: ABS

While the forestry industries are a strong component of the GRP for the whole region, alternative agricultural industries have strong growth potentials. Tables 1 and 2 illustrate that few agriculture-based industries feature within the combined region's top ten contributors to GRP. However, in value added per \$m of production, other alternative agricultural industries compare favourably to the forestry industries (see Table 14).

Thus, the forestry industry is not at the frontier of productivity within the agricultural industries in this region. It appears that dairy and meat production produce more value added per \$m of output.

Table 14 **Selected agricultural industries' value added per \$m of production**

	Value added per \$m output
Other agriculture	0.6456
Pigs	0.6024
Poultry	0.5890
Forestry and logging	0.5570
Dairy cattle	0.5351
Beef cattle	0.5336
Grains	0.5268
Sheep	0.5014
Other wood products	0.4264
Pulp, paper and paperboard	0.4191
Sawmill products	0.4011
Paper containers and products	0.3500
Fruit and vegetable products	0.3091
Meat and meat products	0.2195
Dairy products	0.1917

Furthermore, Table 15 and Table 16 highlight the absence of forestry industries from the combined region's list of highest industry value multipliers. These Tables give an overview of the multiplier values across agricultural industries.

It is important to remember that the value added multiplier values provide a proxy of the average, not the marginal, effects of an additional unit of output from an industry. They do not take account of economies of scale, unused capacity or technological change.

Table 15 shows that, on average, an additional \$1m of value added produced by the dairy products industry induces an additional \$3.63m of GRP within the region. An additional \$1m of value added produced by the sawmill products industry induces an additional \$2.12m of GRP.

The higher multiplier values for alternative agricultural industries essentially reflect the greater degree of interdependence between those industries and the regional economy as a whole, compared to forestry. Essentially, this is driven by the larger purchases and sales of industry output from within the region by alternative agricultural industries, based on estimates of transactions from input output tables.

Table 15 **Estimated Type 1B value added multipliers for selected industries**

Oils and fats	2.87
Dairy products	2.83
Other construction	2.81
Meat and meat products	2.77
Flour mill products and cereal foods	2.56
Confectionery	2.56
Leather and leather products	2.30
Cement, lime and concrete slurry	2.28
Knitting mill products	2.24
Basic chemicals	2.19

Data source: ACIL Tasman

Table 16 **Estimated Type 2A value added multipliers for selected industries**

Dairy products	3.63
Oils and fats	3.58
Other construction	3.55
Meat and meat products	3.54
Confectionery	3.34
Flour mill products and cereal foods	3.25
Knitting mill products	2.99
Cement, lime and concrete slurry	2.90
Medicinal and pharmaceutical products, pesticides	2.86
Water transport	2.86

Data source: ACIL Tasman

Table 17 **Estimated Type 1B value added multipliers for agricultural industries**

Industry	
Dairy products	2.83
Meat and meat products	2.77
Fruit and vegetable products	2.08
Sawmill products	1.64
Other wood products	1.47
Grains	1.40
Pulp, paper and paperboard	1.39
Forestry and logging	1.32
Paper containers and products	1.32
Poultry	1.28
Sheep	1.25
Beef cattle	1.22
Dairy cattle	1.19
Other agriculture	1.17
Pigs	1.16

Data source: ACIL Tasman

Table 18 **Type 2A value added multipliers for agricultural industries**

Industry	
Dairy products	3.63
Meat and meat products	3.54
Fruit and vegetable products	2.71
Sawmill products	2.12
Other wood products	1.96
Pulp, paper and paperboard	1.83
Paper containers and products	1.72
Forestry and logging	1.71
Grains	1.54
Poultry	1.51
Sheep	1.38
Beef cattle	1.37
Other agriculture	1.36
Pigs	1.35
Dairy cattle	1.34

Data source: ACIL Tasman

Therefore, in productivity and interconnectedness with the regional economy, alternative agricultural industries tend to outperform the forestry industry. For example:

- The pig industry produces an estimated \$0.045m of value added per \$1m of production more than the forestry and logging industry.
- The meat and meat products industry, for an additional \$1m of value added, contributes an estimated \$1.42m more to GRP than the sawmill products industry.

The industries that compete with forestry for land are grazing and dairy production. The fact that the forestry industry has recently been unable to buy land at desirable prices suggests that these industries add more value per dollar of output and have higher regional multipliers. Regional land price is said to be unaffordable for forestry at present; that land price is supported by, amongst other things, competition from dairy and grazing farmers. This indicates that dairy farming can make a satisfactory return on investment at higher land prices than forestry. This suggests that marginal changes between forestry and dairy or grazing may increase gross regional product.

The competition for land from these industries, in the high rainfall areas of the district, is not likely to abate. The southwest region of Victoria and SE South Australia are likely to see dairy production expand as competition for water in northern Victoria increases.

Box 4 **Input-output tables and multipliers**

An input-output table provides a summary, or a “snapshot”, of the transactions occurring within an economy over a selected period. In simple terms, an input-output table shows, for a given industry, which other industries it purchases from and which other industries it sells to. The table also shows payments to labour by industry and returns to the capital employed by industry. These payments to labour and capital are summed to estimate value-added, which is the building block of Regional and Gross State Product.

In addition to being a useful tool for describing a state or regional economy and the industries within it, input-output tables can also generate input-output multipliers, which are used to conduct economic impact analysis. Input-output multipliers capture the direct and indirect effects of an economic stimulus on a region. For example, if output from an industry increases, input-output multipliers can be used to estimate the total impact of this change on output (turnover), employment, and value-added in the economy of interest.

Input-output multipliers are derived by using matrix algebra on the intermediate usage matrix of the input-output table, to demonstrate the direct and indirect effects of an expansion in a particular industry.

Input-output multipliers that capture the flow-on effects of inter-industry interactions are called simple or Type I multipliers. Where the multipliers also capture the impacts of increased employment and a subsequent increase in private consumption, then the multipliers are termed total or Type II multipliers. Because “consumption induced” effects are included in total/Type II multipliers, they are larger than the corresponding simple/Type I multipliers.

The total economic impact that can be identified using input-output multipliers includes the direct effect of the initial change and the indirect (or “flow-on”) effects. These flow-on effects result from the linkages between industries in the economy. For example, a business located in Perth purchases inputs from other industries in Perth and the rest of Western Australia. If that industry’s output increases, it will need to increase its purchases from other local businesses that also must, in turn, increase demand for inputs, some of which will be from other local firms, and so on.

Total or Type II multipliers capture the impact of additional private consumption, which is stimulated by additional wages or salaries. These multipliers, however, do not capture the impact of private consumption, which is stimulated by other sources of income, such as profits made by individuals.

It should be borne in mind that there is an element of double counting in output multipliers, because one industry’s output can become another industry’s input. For this reason, an industry’s overall impact on the economy is generally better considered using value-added and employment multipliers, which avoid double counting.

9 Impact assessment - evaluation of concerns

Evaluation of concerns – key points

Exports

- The community's strongest concern is that a substantial quantity of logs would be exported, with consequential job losses. If this was to occur, the impact would be significant
- However, we consider it unlikely that a more significant amount of logs would be exported than would otherwise be the case if the sale were not to proceed.
- The only way Forestry SA could prevent the export of logs is to offer the logs to domestic processors at a considerable discount to the export price. This would create strong disincentives to planting more timber and significantly reduce the likelihood of a future expansion of the forestry estate.

Log quality

- The processing sector has concerns regarding log quality. The chief concern is that the rotation length would be shortened considerably, resulting in lower quality logs
- These concerns can be addressed contractually between processor and forester. This is already beginning to happen

Stability

- The downstream sectors have concerns regarding the loss of stability if Forestry SA loses commercial control over the forest estate.
- In our assessment, as with the log quality concern, these concerns arise from the commercial operation of the forest estate. Given the future direction of Forestry SA, they are likely to be present regardless of whether the rotation sale proceeds.

Other concerns

- The community's other concerns flow from their primary concern, that log would be exported and jobs lost
- Given that we consider this unlikely, we also consider it unlikely that these other concerns will be realised
- The major impact at present comes from uncertainty over the sale. This will be resolved by a decision to either proceed or not. This is independent of the sale itself.

9.1 The likelihood that a significant proportion of logs would be exported

As discussed above, probably the largest single concern in the community is that a new owner of Forestry SA's rotations would shift a substantial

proportion of logs to export, redirecting wood that is not contracted away from regional processors.

The Mayors of the three forestry dependent local governments have estimated that the proposed rotation sale would lead to the loss of 3,000 jobs. This estimate is based on a submission prepared by the three local councils in the region to this RIS, which estimates that this is the number of jobs in, or dependent on, that portion of the processing sector that is dependent on Forestry SA's logs.

The Mayors' submission²¹ is on the basis that all currently uncontracted logs sold by Forestry SA from now on would immediately be exported. The submission contains a log supply chart, showing the forecast Forestry SA sawlog and pulp wood harvest volumes and the amount of timber currently contracted, extending to 2027-28²². The submission does not take account of the quantities of logs that are currently out to tender, which covers all of the logs not currently contracted between 2011 and 2021.

Other estimates have been that job loss would be 8,000 (Don't Privatisise SA Forests Stakeholder Group, 2011) or 4,000 (see <http://www.dontprivatisesaforests.com.au/>).

While the basis of the above estimates, other than the Mayors', is unclear, the rationale underpinning each is common, i.e. each author:

1. Estimates that a certain number of jobs in the region, mainly in the processing sector, depend on Forestry SA's logs
2. Assumes that when Forestry SA is sold, all uncontracted logs will be exported and processed overseas
3. Concludes that when the logs are exported, the jobs that depend on them will be lost.

The critical step is the assumption that the proposed rotation sale will lead, inevitably, to the exportation of Forestry SA's entire output.

It would be rational for a profit maximising forester to export logs if it could reasonably expect to earn a greater return by doing so, than by selling logs locally. To achieve this, a better price must be obtained for the logs in question on international markets than is currently achieved domestically, net of the extra costs associated with export that must also be taken into account.

As we show in section 9.1.1 below, export log prices have been consistently lower than domestic prices. We can see no reason to expect this to change in

²¹ The source of this figure is not referenced in the Mayors' submission

²² The chart is not referenced in the report

future, with domestic demand for log (tied to housing demand) forecast to remain strong, albeit with cyclical fluctuations. Therefore, we do not expect that any more logs would be exported post-sale than currently are being exported.

This conclusion is examined in further detail in the sections that follow. Section 9.1.1 compares domestic and export prices over the last decade, showing that it is unlikely to be profitable to export a large quantity of Australian sawlog while domestic demand remains strong.

Section 9.1.2 considers the extent to which existing transport infrastructure is sufficient to support large-scale export and raises the possibility that further costs would be incurred.

Section 9.1.3 considers the possibility that a new owner of the estate may improve the efficiency with which the estate is managed and considers the impact this might have on the likelihood that log is exported. Section 9.1.4 broadens the analysis by considering different types of log.

While we do not expect that large quantities of log would be exported if the proposed sale went ahead, we do not suggest that no log will ever be exported. Small quantities of logs are exported from most softwood plantations in Australia. Our consultations have revealed that the reasons logs are exported appear to be:

- A surplus of lower quality logs that the log market does not require or cannot process economically
- A mismatch between long-term log supply contracts and short-term changes in demand for sawn timber in the domestic market. Under current take or pay contracts, if a processor is unable to take the logs it incurs a penalty. When this occurs, the mill is likely to offer the logs to the local market and/or export the surplus logs
- Where export market prices are in excess of the net returns of milling the logs locally, usually of lower quality logs
- A combination of all three of the conditions listed above.

Forestry SA has at times exported logs where there is limited local demand for surplus logs. The opportunity to export logs also introduces another competitor to what is a highly concentrated local processing market.

9.1.1 The economics of log exports from Australia

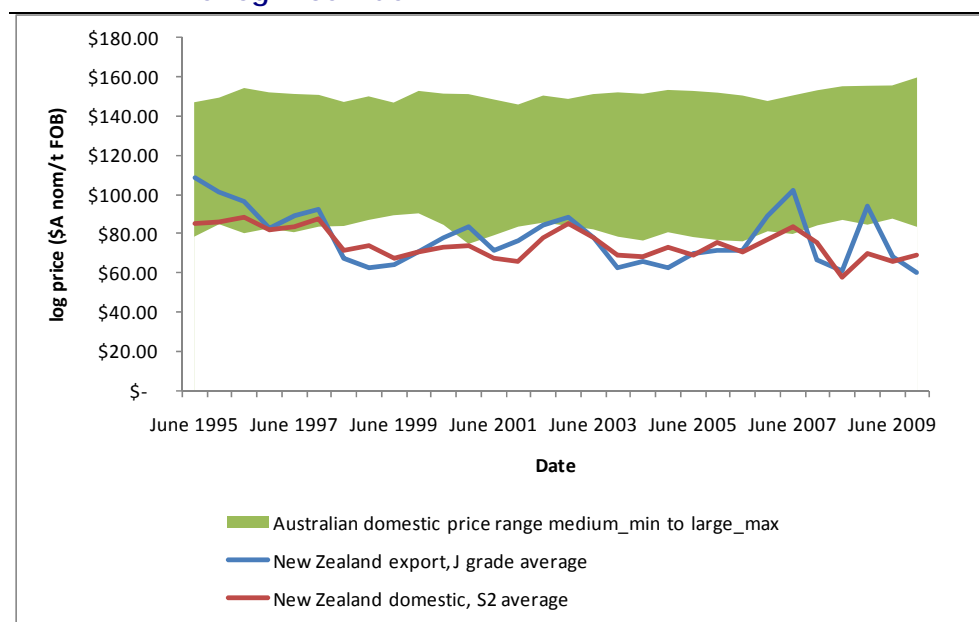
An analysis of the economics of sawlog exporting begins with a comparison of domestic and export log prices. However, the international market in pine logs is generally not transparent. There is no definitive source of price data, such as exists in other industries (for example the London metals exchange, or the

Chicago Board of Trade). Therefore, any comparison of this type is necessarily subject to some assumptions about the price that would be achieved if logs were sold into the export market.

For these purposes, the most valid comparison with Australian saw logs appears to be New Zealand sawlogs, as New Zealand exports a significant quantity of the wood it produces and has an open market based on short-term contracts. Therefore, NZ prices are likely to reflect international prices.

In export terms, NZ is located close to Australia, so international shipping costs would be similar. A comparison of the international and Australian sawlog prices is shown in Figure 13. In making this comparison we have allowed for the additional costs that would be incurred to export log rather than sell it domestically.²³ These are spelled out in Table 19.

Figure 13 **Comparison of international log price (ex NZ) and the Australian Pine Log Price Index**



Data source: (KPMG, 2010) and (Ministry for Agriculture and Forestry (New Zealand), 2010)

²³ In addition, New Zealand sawlogs are typically grown under different conditions, with different silvicultural practices. One result is that the timber is less dense and thus less useful for structural purposes. We understand that, as a rule, New Zealand timber is not suitable for producing Machine Grade Pine 10 (MGP10), rather it would typically be graded as MGP 8 if such a grade existed in Australia. Another challenge that would be faced in exporting Australian log is that the better quality of the Australian sawlogs might not be recognised in international markets.

One of the more striking features of Figure 13 is the divergence between the Australian and New Zealand log prices over time. The Australian price has been largely flat (in nominal terms) while the New Zealand price has declined.²⁴

Where there is temporary convergence in the international and Australian prices, it appears to coincide with an increase in log exports according to ABARE statistics (see Figure 14). This is evident in the rise in the export of round logs nationally in 2002-03, 2006-07 and a slight rise in 2008-09. However, the movements in the export volumes are small, between 1 and 2 per cent of total timber harvested.

Table 19 **Export parity comparison**

	Medium max average (APLPI)	Medium weighted ave (APLPI)	Breakeven stumpage price to export price	
Average stumpage	\$90.98	\$65.57	\$44.57	AUD/m ³
m ³ to tonnes	1.167	1.167	1.167	m ³ /t
Harvest and haulage to mill	\$14.00	\$14.00	\$14.00	t
Mill door price	\$120.17	\$90.52	\$66.01	t
Additional haulage to port	100			km
Haul cost	\$0.10			c/km
Additional total haulage cost	\$10.00	\$10.00	\$10.00	t
Australian FOB costs	\$15.00	\$15.00	\$15.00	t
Australian FOB price	\$145.17	\$115.52	\$91.01	t
Average NZ J class FOB price	\$91.01	\$91.01	\$91.01	t
Difference	\$54.16	\$24.51	\$0.00	t
	\$45.79	\$21.00	\$0.00	m ³ /t

We understand that Forestry SA estimates the cost of transporting saw logs at slightly above \$0.10 per tonne per km. Given that the nearest port to Forestry SA's forests, the Port of Portland, is approximately 100km from Mt Gambier, it would cost approximately an additional \$10 per tonne to deliver saw logs to Portland rather than to mills in the Mt Gambier region.

In addition, there are also costs associated with unloading, storing and loading the ship at port. There are also customs, agents and other export related fees and charges (often referred to as FOB²⁵ or fobbing costs) that are not incurred if the log is sold domestically. Therefore, based on this analysis, anyone wishing to export logs from Forestry SA's plantations could reasonably expect

²⁴ While the trend lines are not shown on the chart, trend analysis clearly supports this observation.

²⁵ FOB is Free on Board and refers to the value of the commodity loaded onto the ship and ready to sail.

to receive the prevailing international price less transport, wharf costs, and other export charges. These charges could amount to as much as \$20 to \$25 per tonne.

A sawlog exporter would also take on the risk of currency fluctuations, commercial risks of dealing with overseas customers, changes in bulk blue sea freight costs and the volatility of international log prices.

At times, international sawlog price volatility and currency fluctuations would mean that a higher price might be achieved for some types of logs and logs could be sold at a premium. This is clearly the case, as Australian low grade sawlogs have been exported at times. However, the export trend is volatile and is generally a small percentage of total domestic annual log production and consumption.

Using the average 1995 to 2009 APLPI (based on stumpage prices received by the major softwood plantation owners in Australia, as reported by KPMG, and the NZ Ministry of Agriculture and Forestry export log prices), we have calculated the average domestic - export log differential, based on the costs incurred in getting the log from the forest to the ship and ready to sail. The calculations are in Table 19

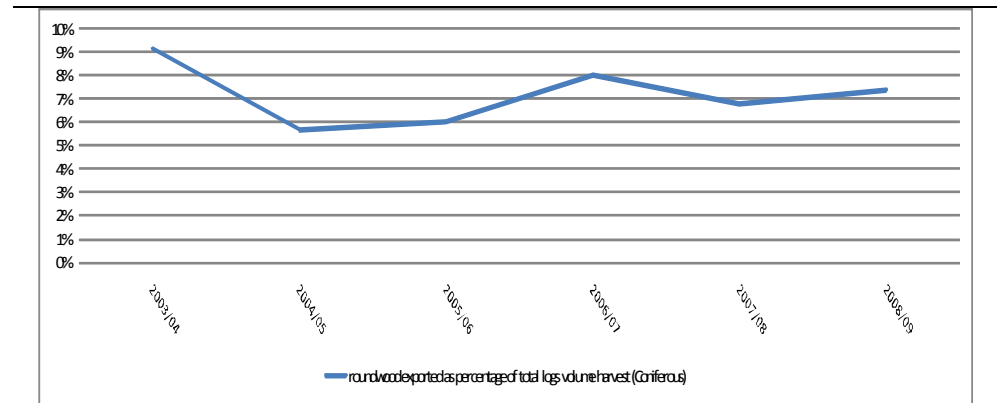
Table 19 shows that, based on the last 14 years in Australia and NZ, the domestic price has been considerably higher than the prevailing export price. This shows that, on average, the export market has been offering prices for sawlogs \$45.79 below the domestic market price, net of exporting costs.

For the export market to have been consistently attractive over this period, the average SE stumpage price would need to have been \$44.57, approximately \$45 less than the price actually paid, on average, over this period.

Comparing international and Australian prices reveals a number of things:

- There is considerably more variability in international prices (as represented by the NZ price) than in the Australian prices (due largely to the longer-term nature of pricing mechanisms in the Australian market)
- At times the Australian and international prices converge, which means that at these times it is more likely that logs will be exported; provided the convergence is sufficient to cover the additional transport and wharf costs. Conversely, where the prices diverge it would be expected that log exports would be uneconomical
- There are few instances in the period represented in the chart where Australian and international log prices do converge
- Over the period 1995 to 2009, the Australian and NZ prices have diverged in nominal terms. The Australian price is flat to slightly increasing, while the NZ price appears to be trending down.

Figure 14 **Roundwood exported as percentage of total log volume harvested from 2003 - 2009 (national)**

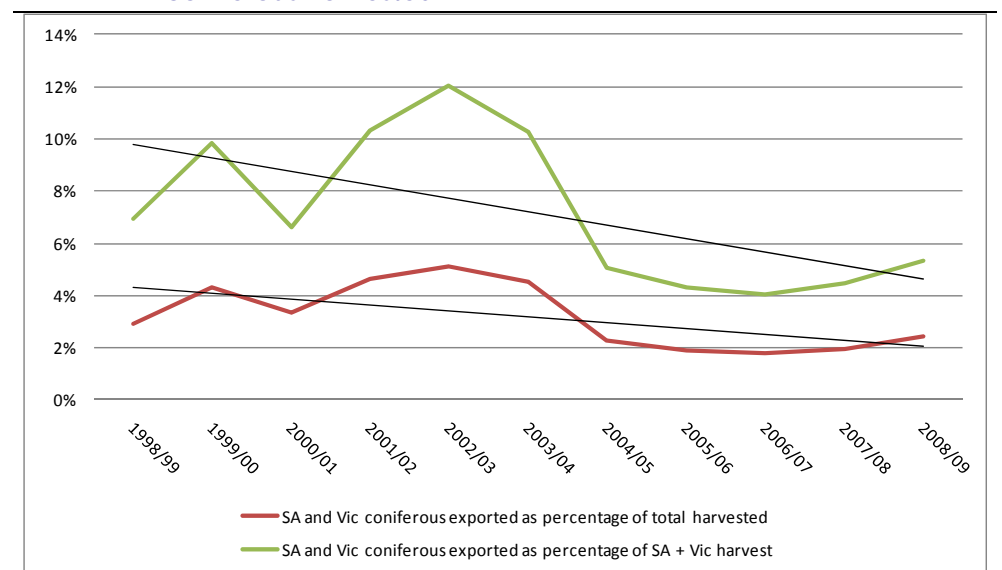


Data source: (ABARES)

The quantity of log exported from Victoria and South Australia is shown in Figure 15. This chart shows the quantity of log exported as a proportion of total logs harvested in both states. The reason the states have to be combined in the chart is that all SA logs are exported through the Port of Portland, which is in Victoria. The chart also shows that the quantity exported is trending down between 1998 and 2009, with some volatility, even though 50 per cent of the logs in the region are privately owned by Gunns and HVP.

The declining trend in export sawlog volumes to total volume, and as a proportion of sawlog harvested, is consistent with the trend in the divergence between the Australian and NZ sawlog prices.

Figure 15 **Proportion of Vic and SA log exports as a proportion of total coniferous harvested**



Data source: (ABARES)

The reasons why log exports account for, on average, 4 per cent to 6 per cent of total logs harvested, is partially explained by the relative price differences between domestic and export markets and the costs that contribute to that price difference.

9.1.2 Transport infrastructure costs

Another factor to consider is that, given the location of the forest estate, it seems likely that any exports would go through the Port of Portland. This is the current departure port for the forest products from the Green Triangle region.

The Port of Portland is a deep-water bulk port, located just on the Victorian side of the border with South Australia. Its focus is on serving the Green Triangle region.

According to Portland's Port Land Use Strategy (the Strategy), the port's volume is expected to double over the next five to ten years. As a result, the Port of Portland recently prepared a land use strategy, showing how it would adjust its operations to accommodate this increase. It is notable that, while forestry and timber exports are among the key sources of growth identified in the strategy, this refers to the impending harvest of the hardwood forest estate for wood chip and the possible construction of a pulp mill at Penola. While some logs are exported through the port (from berths nos. 5 and 6), the strategy does not refer to possible large-scale exports of saw logs. Therefore, it is likely that any substantial increase in the quantity of saw logs exported through Portland would require further, currently unanticipated, augmentations to infrastructure. This would, presumably, be reflected in the costs payable by the exporter. The price analysis discussed above deals with the price for logs delivered to the port; it does not canvass costs associated with port infrastructure, stevedoring, etc., so these costs would also need to be overcome.

9.1.3 Efficiency gains

Implied in the Government's consideration of selling the forward rotations, is the possibility that a private sector owner would be able to improve the (technical) efficiency of Forestry SA's operations. In the analysis here, there is a possibility that a new owner of the rotations would be able to produce logs for export at lower cost than Forestry SA. The previous section explained that Forestry SA (or another owner of the rotations) is unlikely to find it profitable to export saw logs. This leads to a temptation to consider whether a purchaser could reduce costs sufficiently to be able to do so.

This question is a distraction from the central issue, though.

If a purchaser could reduce costs in this way, it would be more profitable than Forestry SA, regardless of how it sold its log. However, even if it could reduce costs sufficiently, it does not follow that a purchaser would sell its logs on the export market just because it could do so profitably. Rather, the new purchaser would still seek the highest price possible for its logs.

As discussed in more detail in section 9.1.1 above, the recent experience is that the highest available price (net of transport costs) is on the domestic market. This said, as with any export analysis, it depends on relative exchange rates. It is widely known that the Australian dollar is currently stronger than it has been since the dollar was floated. Any reversion toward historical average levels would, all else being constant, increase the profitability of potential exports.

9.1.4 Diversity of log

The discussion elsewhere in this report refers to ‘logs’ as a homogeneous product for simplicity. However, the output of a forestry plantation is not homogeneous (see Box 2).

Nor do different grades of logs face the same export prospects. Our understanding, based on consultations within the industry, is that, generally speaking, the international market is focused towards logs at the lower end of the quality spectrum and is indifferent to log density. Offshore processors typically enjoy lower costs of production than do their domestic competitors, in many cases due to differentials in labour cost between Australia and other countries.

One result of the diversity in sawlogs is that the processing facilities in the South East region are not homogeneous either, with some having been built, or modified, based on their owners’ expectations as to the type of log that would be available.

Log diversity, and the possibility that it might change under a new owner of the rotations, is a source of concern to the processing industry generally, although the nature of that concern differs with the nature of their processing equipment.

The larger millers have concerns about deterioration in log quality, due to changes in plantation management and silvicultural practices. These are discussed in section 9.2.1 below.

Smaller millers have a different set of concerns arising from log quality. These concerns are discussed in section 9.2.2 below.

9.2 The likelihood of changes in management practices to the detriment of log quality

Forestry SA and the industry more generally, regard Green Triangle pine logs as one of the best sources of quality softwood logs in the world. This is due to numerous factors relating to plantation management and silvicultural practices and Forestry SA's long-term view of the resource and the relevant industry.

In summary, Green Triangle logs, and Forestry SA logs in particular, are considered to yield a higher proportion of high value timber than logs found elsewhere.

9.2.1 Implications for larger millers

There is a concern among the processors focussed on producing structural timber products from high-grade structural sawlogs, that a new owner of the rotations might adopt different plantation management and silvicultural practices. These processors, generally the larger processors, are concerned that log quality would deteriorate if that happened. In particular, large millers focused on structural timber see a risk that, if rotation length is shortened too much, the proportion of high-density fibre, in a log of given length and diameter, will decline. As this proportion declines, the value of the log to these millers also declines, as the amount of high value product that can be produced from each log, and thus from a given mill in a given time, decreases. For these millers to produce a given quantity of structural timber, a decline of this type would require an increase in the piece count (throughput) of the mill and thus in the cost of production.

It would be possible to allay these concerns contractually in the market, with price reflecting the quality of the log. Our understanding is that the current contracts between Forestry SA and the larger millers tend to specify the length and diameter of logs to be supplied, but not other quality specifications. If the contracts specified the log quality that the millers receive at present, this would go some way to addressing these risks.

While the technology to measure a log's structural timber qualities is not available in the field at this stage, Forestry SA has indicated that research is being conducted by Forestry SA and others and some technologies appear promising. There are significant commercial incentives for a plantation owner to assess log structural qualities and increase the amount of timber that falls into structural grades, as can be seen in Table 20. An increase of 10 per cent in the proportion of timber from lower grades that is suitable for pallet and box (non-structural) manufacturing to higher grades, would allow an increase of six per cent in the price per cubic metre.

Therefore, it is clear that the forest owner has considerable incentives to increase the proportion of timber sold per ha that falls into higher priced grades. This also shows that reducing the rotation age brings revenue forward but that there are significant price penalties if the proportion of logs falling into lower grades increases as a result.

Table 20 **Wood Density Metrics showing changes to average price as two different proportions of grades**

Log grade	Log returns per ha	Proportion of logs in each grade
MGP10	\$460.17	60%
MGP12	\$508.10	20%
Green Pallets & Boxes	\$210.63	20%
Total	\$419.85	100%
MGP10	\$460.17	70%
MGP12	\$508.10	20%
Green Pallets & Boxes	\$210.63	10%
Total	\$444.80	100%

Note: Indicative grade out-turn TMS prices as at June 2010

Data source: Forestry SA

9.2.2 Implications for smaller millers

As noted above, the timber processors are not a homogeneous group. The smaller millers are focused towards shorter, smaller diameter logs and are exposed to changes in plantation management in a different way.

The logs that these processors take are a lower value product than structural sawlogs. There is a concern that a new owner of the rotations would reduce the quantity of this product produced to obtain the increased average price shown in Table 20. The incentive to do this would tend to offset the concern, held by the larger millers, that a new owner of the rotations might adopt lower quality plantation management and silvicultural practices.

As discussed in section 3.2, Forestry SA is likely to continue to reduce the extent to which it produces this lower grade product in future, regardless of whether the sale proceeds. Therefore, this impact is largely independent of the sale process, although it depends on Forestry SA's application of the second limb of its charter.

The smaller millers typically have business models based on a steady supply of shorter, smaller diameter logs.

They are exposed to competition from overseas markets in a different way to processors focused on structural sawlogs. Given the relative importance of labour costs, smaller processors may be less able to 'keep up' with offshore

competition than larger processors, for whom processing is (relatively) a more capital-intensive business.

9.2.3 Does the log quality concern indicate inefficiency in plantation management?

From an economic perspective, it is tempting to assume that a change in plantation management to yield logs of different qualities would only happen if it increased the profitability of the plantation. From here, it is tempting to conclude *either*:

- That Forestry SA is currently operating the plantation as profitably as possible, so a new owner of the rotations could not improve profitability by changing the way it is operated, *or*
- That the fact that these profitability changes exist (if they do), proves that Forestry SA is currently managing the plantation inefficiently (in an economic sense).

The shortcoming in this type of analysis is the relative value of profit earned now and that earned in the future; or, in economic terms, the time value of money. This concept is summarised in the discount rate.

In our consultations, Forestry SA repeatedly emphasised the fact that it takes a long-term view of the forest resource. This is evident in the fact that Forestry SA operates longer than typical rotation lengths and in other aspects of its plantation management, in particular soil management. In economic terms, Forestry SA appears to have a lower discount rate, valuing future profits similarly to current profits.

By contrast, a private sector operator may have a higher discount rate, leading it to take a shorter-term view of its investment. It would be rational for an operator with a higher discount rate to bring forward revenue more quickly than for one with a lower discount rate. However, a plantation owner that shortened the plantation rotation to the point that it affected log quality, would eventually see the quality decline reflected in the price local processors were willing to pay for the timber.

For Forestry SA or the new owner to shorten the rotation, the increase in the short-term financial returns would have to offset any potential decrease in contract price over the entire number of rotations it purchased.

The export market is not as sensitive as the local market to log density, as structural grades in international timber markets do not appear to be as stringent as in Australia. Therefore, the new plantation owner would have to consider the shortening of the rotation in relation to the potential quality

reductions and the relative price difference between selling to local processors or the export market.

If the combination of the export market price and a shorter rotation were attractive to the new plantation owner, then export volumes could increase.

This appears to have been the case where, following the purchase of the Victorian Government's softwood plantations, HVP is reported to have shortened the rotations to 28 years. In doing this, the cut increased. However, this timber appears to have been processed in Victoria and not increased the amount of wood exported from Victoria. In fact, it appears that the amount of wood exported from SA and Victoria as a proportion of total logs harvested has fallen (see Figure 15).

In summary, a commercial owner of the forest would act to maximise its returns from the plantation. This may involve reducing the rotation length, which Forestry SA has begun to do already. If a commercial forester has a higher discount rate than Forestry SA (i.e. values money in future less than Forestry SA) they may be inclined to increase the cut in the short term more than Forestry SA. Given that there will be an obligation to replant this should have no significant consequences on the resource itself, although there may be an adjustment phase required to transition out of the shorter rotation length if this is desired later.

It should also be noted that as contracts came up for renewal, a plantation owner would face financial consequences if the log quality had declined significantly as a result. In this way the market for log, and domestic demand for higher quality log would be expected to be reflected in the forester's decisions. However, the market does not currently express log quality well, partly because this is difficult to measure objectively. The Government may wish to consider targeting a particular rotation length to increase certainty regarding this issue.

9.3 Stability

The downstream industries, in particular harvesting and transport, consist of a relatively large number of fairly small, very capital intensive, businesses.

These businesses are not likely to be substantially affected one way or another by the sale of the rotations. Regardless of rotation ownership, trees will need to be harvested and the logs transported. In the event that an increased quantity of logs is exported, the transport task would increase due to the greater distance from the forests to the port.

However, these businesses have concerns regarding their commercial relationship with a new owner. They typically regard Forestry SA as a stable,

reliable customer that pays its bills on time and is easy to work with. There are some concerns that a private operator may extend payment times and may be less predictable on harvest quotas and other operational issues. For the small businesses involved in these industries, this would represent an increase in the cost of doing business.

In addition, these businesses are concerned that a new operator would not be willing to enter into contracts with suitable terms²⁶ to underwrite the capital investment necessary for them to operate. Related to this is uncertainty on whether a new operator would be sympathetic to requests for contractual support for necessary reinvestment in capital or necessary technological upgrades.

The extent to which a new owner would behave differently with respect to contractors depends in part on the way Forestry SA applies the second limb of its charter. To the extent that Forestry SA operates as a commercial forester it would be expected to deal with its suppliers in the same way as a new owner. On the other hand, if Forestry SA has been giving suppliers concessional treatment, this may not continue with a new owner.

However, it should also be noted that the rotation owner is dependent on its suppliers as well. The value of the estate is only accessible if there is a viable contracting industry to harvest, transport and process it.

9.4 Water

Trees are substantial water users, although the amount they use differs depending on their growth stage. The sheer size of the plantation forestry estate in the lower South East makes it a significant water user and the South Australian Department for Water²⁷ has identified plantation forests as an issue for sustainable water resource management in the Lower South East, among other areas. (Government of South Australia, 2009).

The Government has made it clear that it intends to ensure that water resources are managed within sustainable limits, and that all water-affecting activities will be included in this management. However, it is currently unclear what this will mean for foresters in the lower South East. The key source of information in this respect is the Government's policy framework "Managing the water resource impacts of plantation forests" (the water policy framework) and water allocation plans, or draft plans, for the relevant Natural Resource Management regions. (Government of South Australia, 2009)

²⁶ This refers to both the terms and the length (term) of the contract.

²⁷ At the time it was the Department for Water, Land and Biodiversity Conservation

The water policy framework is a guide to government agencies, particularly Natural Resource Management boards, to assist them in managing water resources in line with Government expectations.

The water policy framework makes it clear that water resources are to be managed in a framework that recognises existing user rights. The aim in developing future policy will be (presumably among other aims) to provide users with a reasonable degree of certainty about future access. In addition, the water policy framework makes it clear that actions to address over-allocation should prioritise historical water use.

There are a number of other elements of the water policy framework. These include ensuring:

- sustainable management of water resources
- that water is used in a way that returns greatest benefit to the community
- that policy approaches are consistent, transparent, and in line with best practice for regulation,
- that markets are used wherever possible
- that policy is informed by the best available science.

At face value, the water policy framework appears to suggest that future water management approaches will use a market/ trading approach based on tradeable instruments representing an entitlement to use water. There is a significant unanswered question about the transition from the current approach to the way that these entitlements will be allocated in the future. However, the water policy framework suggests that, aside from areas where water is currently over-allocated, the initial allocation will be based on historical use and will be at no cost to existing users.

A key element of this policy framework is that it would allow for trade in water, which would see water used in the way that delivered highest value.

As this report was being prepared, the Lower South East Natural Resource Management Board released a discussion paper relating to its draft water allocation plan for the region.

In summary, while changes in water policy are a significant issue for the forestry industry, they apply equally whether the sale proceeds or not. Therefore, the impact of water on the sale process, and the impact of the sale on water policy are both zero.

9.5 Greenhouse emissions policy and carbon value

One issue raised in consultation and raised also by the community more generally, is the value of the carbon stored in Forestry SA's trees.

Carbon policy, or greenhouse gas emissions reduction policy, has been a high profile, controversial issue for some time. While this report was in preparation, the Prime Minister announced her intention to introduce a carbon price in 2012. This announcement provoked widespread community debate.

If carbon rights are to be sold along with the trees, two questions are presented. The first is whether those carbon rights have a positive value (independent of the trees themselves). The other is whether the Government would be foregoing that revenue.

We deal with each of these questions separately below.

9.5.1 What is the value of carbon stored in trees

Greenhouse gas emissions are, in economic terms, an externality. In other words, the environmental and social cost of greenhouse emissions is not borne by those who produce them. For example, when a power station burns fuel to generate electricity, it pays for the fuel (or the cost of mining it). Regardless of the price at which it sells electricity, the power station operator has an incentive to minimise the cost of fuel it uses to generate electricity to maximise profit. This incentive has led to Australia's electricity market being heavily reliant on cheap fuels, such as brown coal.

Burning brown coal to generate electricity creates a significant quantity of greenhouse gas emissions, mainly carbon dioxide (often referred to just as carbon). Other fuels, such as natural gas, can be used to generate electricity with lower levels of greenhouse gas emissions (per quantity of electricity generated). In other words, they are less greenhouse gas emission intensive. However, they are also typically more expensive, so industry has tended to avoid them.²⁸

In a free market, one way to influence business decisions when there are externality costs is to internalise them. In this case, charging greenhouse gas emitters a carbon price on their emissions will alter the balance between

²⁸ Strictly speaking, this analysis relates to baseload electricity generation. There is significant gas fired electricity generation capacity in Australia. Most of this has been built to take advantage of the fact that gas fired generation can be brought on and off line quickly in response to fluctuations in electricity demand. Gas fired generation is the lowest cost means of meeting the variable portion of electricity demand.

different fuels in favour of less greenhouse gas intensive options, over more greenhouse gas intensive options.

At the same time, carbon policy could be extended to allow technologies that remove carbon from the atmosphere, or that prevent it from being released, to earn a carbon price when they do so. This is known as an offsets regime. As trees contain a substantial quantity of carbon in their chemical structure, growing trees as carbon sinks is one of a number of offset mechanisms that is often considered.

It is important to note that there would be no carbon price without some form of Government carbon policy. Further, forestry could not earn any revenue from carbon unless the carbon policy permitted it. At the moment, there are numerous policy instruments in Australia in the general area of greenhouse emissions reduction, but only one, the New South Wales Greenhouse Gas Abatement Scheme, allows forestry to create offsets. There is also the possibility for Australian forestry ventures to create offsets under the Kyoto Protocol, which includes a regime to create a global carbon price. However, the Kyoto Protocol expires in 2012 and it is unclear what form, if any, its successor will take. Therefore, any discussion of the potential future value of carbon stored in trees will be inherently speculative.

If we assume that the Kyoto Protocol will be extended in its current form, and that an Australian approach to offsets is consistent with it, we have the basis to examine the potential for Forestry SA to create forest-based offsets.

The most advanced proposal in Australia for a carbon-pricing regime is the Commonwealth Government's proposed Carbon Pollution Reduction Scheme (CPRS).²⁹

In summary, the CPRS placed a liability on certain emitters of greenhouse gases to obtain permits³⁰ to match their greenhouse emissions. The permits would be surrendered to Government and destroyed.

The CPRS included a mechanism for forest-based offsets. Under this approach, a forest planted on land that was clear in 1997³¹ can be used to create permits. Emitters with a greenhouse liability can then use these permits.

²⁹ This regime was proposed in 2008. It was then shelved in 2009. As this report was being prepared, the Government had (just) announced a replacement policy. To the extent that details were available at the time of writing, the replacement appeared broadly consistent with the CPRS. Further, the issue of forestry-based offsets was not a controversial aspect of the CPRS, so it seems reasonable to assume that it would be treated similarly in the replacement policy.

³⁰ Permits would be sold, given away free and created by offsets.

³¹ This is a Kyoto Protocol requirement.

Plantation foresters were to be given the choice of opting in to the CPRS or not. The reason was that if permits were created, the trees would need to remain standing for 100 years. If they were felled, this would be treated as a greenhouse emission and permits would need to be acquitted. The accounting mechanism is such that the same number of permits produced at the beginning is required at harvesting.

In part, this is due to the Kyoto protocol recognising carbon stored in trees, but not in wood products. When a tree is felled, the carbon stored in it is not released, but remains in the timber. Whether the carbon will ever be released, depends on what happens to the timber. If it is pulped and used for paper, it is quite likely that at least a significant portion of the stored carbon will return to the atmosphere relatively quickly. On the other hand, if the tree is used for structural timber or furniture, the carbon could remain stored for many years. Notwithstanding this, the Kyoto protocol treats tree felling as an emission and therefore so did the proposed CPRS.

The need to acquit permits on felling substantially reduces the carbon potential of a plantation forest. In effect, the forester needs to make a judgement as to whether they will get a better return on their investment by harvesting the forest and selling the timber, or by selling the permits for the stored carbon and leaving the forest in place.

In practice, it may be possible for a forester to sell a parcel of permits without necessarily identifying particular trees that would be left standing, but this would depend on the details of the offset rules. If this were permitted, a forest estate would be able to sell carbon permits for a portion of its forest, as long as it could ensure that the quantity of timber in place at any one time stayed at or above this level.

For these reasons, and mainly because there would be no carbon revenue without a carbon price, it is not possible to comment conclusively on whether the Government would be able to produce carbon permits from Forestry SA's operations.

It is also important to note that the Kyoto Protocol is soon to expire, with no clear direction as to what, if anything, may take its place.

9.5.2 Would the Government forego the Carbon revenue?

If we make the assumption, regardless of the complexity discussed above, that the Government could create greenhouse permits backed by its plantation forests, it does not necessarily follow that the Government would lose this revenue by selling the forward rotations.

The sale of Forestry SA's rotations could potentially include or exclude the carbon credits. As a legal issue, it would be possible to separate the rights to the carbon stored in the trees from the right to harvest the trees themselves, although separation would create practical complexities.³²

In summary, there is no reason to conclude that the Government would forego any value that may exist in the carbon stored in its forest estate due to the sale. This is a decision that could be made during the sale process itself.

9.6 Fire protection

Fire protection has been raised a number of times during our consultations as an area where Forestry SA has provided services in excess of what a commercial operator of the forests might provide.

It must be remembered that the new owner would have an interest in protecting the forest from fire and the same obligation to do so as other foresters. However, the community expressed the view that Forestry SA provides a higher level of fire protection than that required of, and provided by, other foresters.

Where the sale may lead to a reduction in fire protection services in the region the Government would have the option of continuing to provide increased fire protection services. It could purchase these by agreement with Forestry SA, which would have operational control of the forest, or from another party as was appropriate at the time.

9.7 House prices and other economic impacts

Several of those consulted, claimed that housing prices had already been affected by the proposed sale. The District Council of Grant (DC Grant) provided ACIL Tasman with confidential house sale and price data to support this claim.

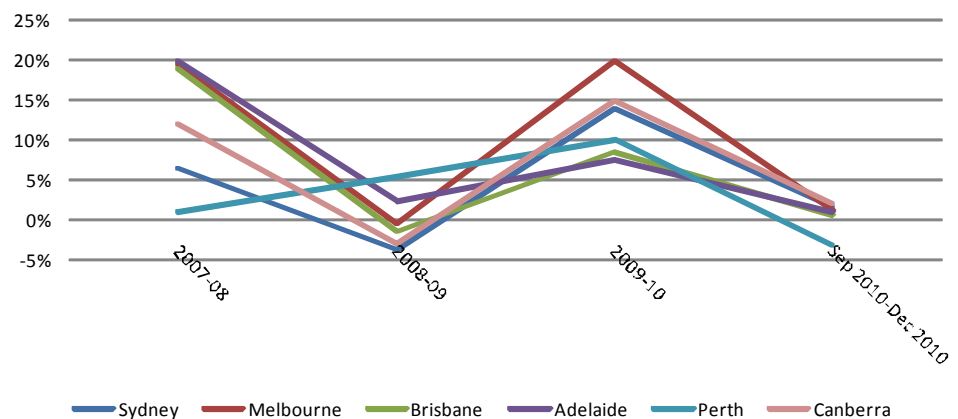
In a submission, DC Grant refers to a letter from a real estate agent quoting confidential data to the effect that the announcement of the sale has affected confidence in the region. The real estate agent claimed that, as a result, real estate sales in the region are down in both volume and price. Statistics provided show a reduction in both median price and sales volume in the region between late 2009 and late 2010.

³² We understand that South Australian legislation allows the separation of carbon property rights from other property rights.

While we were asked not to publish the data due to its confidential nature, there are several points to be borne in mind.

The first is that a decline in real estate prices was not unique to the South East region. Growth in real estate prices slowed or declined across the country in late 2010 (see Figure 16).

Figure 16 **Capital city house price trends**



Data source:

[http://www.ausstats.abs.gov.au/ausstats/meisubs.nsf/0/9B864FED34EAA2A1CA2578290011674C/\\$File/64160_dec%202010.pdf](http://www.ausstats.abs.gov.au/ausstats/meisubs.nsf/0/9B864FED34EAA2A1CA2578290011674C/$File/64160_dec%202010.pdf)

The second point is about DC Grant's chosen statistic. The median price is simply the 'middle' price in a range of sales prices. It is one of three measures of central tendency in common use (the others being the mean and the mode), each of which has its strengths and weaknesses. The median price is commonly used for real estate prices because, compared to the mean, it is less susceptible to bias from a relatively small number of very high value sales.

A weakness of the median price, though, is that a large number of unusual sales can skew it.

The third point is that interest rates were significantly higher in late 2010 than in late 2009, which we would expect to cause a reduction in real estate sales volume. The Reserve Bank's target cash rate was 3.5% in November 2009 compared to 4.75% in November 2010.

It is interesting that in November 2009, the Reserve Bank's Monetary Policy Committee noted that house prices had shown strong growth in August 2010, but that the future expectation was weaker. This was attributed to the application of tighter lending standards by Banks. In December 2010, the Reserve Bank noted that measures of consumer confidence were down around the country and that auction clearance rates were also down.

The fourth point is that the letter appears to compare confidence immediately after announcement of the sale, with confidence a year later. Former Treasurer Foley first floated the Forestry SA sale in November 2008. However, DC Grant compares prices in 2009 (one year after the announcement) with prices in 2010 (two years after the announcement).

Following the logic espoused by DC Grant, that the announcement of the sale caused confidence to deteriorate and that this is reflected in the real estate market, we would expect the decline to have started when the sale was first announced, not twelve months later. This said, during our consultations DC Grant said that the community was sceptical about the sale until October 2010, when the (then) Forest Minister spoke to a forum in Mt Gambier.

It is highly speculative to attribute recent fluctuations of the house prices in the region to the proposed forward rotations. Over the period of analysis presented by the DC of Grant there were significant national house price movements that are consistent with those put forward.

10 Managing the impacts of the sale

Management of impacts - Key points

- If Forestry SA is selling logs at below market rates (and there is little evidence that it is), then a private operator would increase log prices to maximise commercial returns from the forest. An increase in prices would reduce processing demand but may stimulate a supply response, where other plantation owners may increase plantation area
- If the plantation area contracted as a result of the sale (we believe this to be unlikely and contrary to the replant obligations of the sale), due to competition from the expansion of other high land uses, this would, at least partially, offset the economic impact of a reduction in forestry activity
- If contract lengths were shortened (as current contracts expire over the next 5 to 15 years), an increase in shorter-term contracts might be desirable for a commercial plantation owner. If this were the case, it would be easier for new entrants to enter the market on both the processing and plantation sides, due to:
 - more resources being available that could be bid for on a more frequent basis
 - greater transparency of prices

10.1 Offsetting the concerns - natural hedges/adjustments

Our analysis has revealed that there may be some 'natural hedges' in the forest products market in the South East. A natural hedge in this situation can be defined as an adjustment in the market that results from the potential forward rotation sale that may offset some, or all, of the potential effects of the sale.

These adjustments are an important component of an impact assessment, as they demonstrate ways in which the economy seeks to reallocate resources in response to price changes and changes to government policy.

10.1.1 Price adjustments and supply response

Forestry SA's charter puts pressure on it to provide favourable volumes, contract terms and quality specifications to local processors. This is likely to influence the rest of the forestry market in the Green Triangle, given Forestry SA's size.

If Forestry SA were to provide favourable terms to its customers to meet its regional development obligations, then the return the Government would receive on the asset would be lower than a commercial operator might expect.

In this scenario, a commercial operator, unencumbered with regional development obligations, may not offer the same terms and, as a result, may receive a higher return over time whether from the export or domestic markets. This increased return would provide a strong signal for expansion of the timber supply. It may also place pressure on the processing sector to improve its efficiency, given that it faces the prospect of import competition (from sawn timber). Evidence was recently given to the Australian Senate that sawn timber imports are as large as \$1 million per day. (Eastment, 2011) In this respect, it is important to consider the difference between protecting an industry and protecting the existing firms in that industry (see Box 5).

Box 5 **Protect the industry or protect the current members**

As discussed in various places in this report, Forestry SA has several obligations under its charter, one of which is to encourage and facilitate regional economic activity based on forestry. This is an industry protection objective.

Industry protection is a fairly common objective for Government policy, although it has lost some favour recently due to the conflicts it presents with economic efficiency.

In the current context, it is important to consider the difference between protecting an industry and protecting the individual players that make up an industry at a particular time.

The underlying aim in industry protection is usually to preserve, or increase, the amount of economic activity in a particular place, usually by preventing it from being moved elsewhere. In this case Forestry SA's industry protection objective is, broadly, to preserve or increase the amount of economic activity in the South East and other regions in South Australia that flow on from the forestry sector.

Economic activity can be measured in a number of ways. Common examples are gross product, value added, or employment measures such as the number of jobs in an industry.

It is important to note that industry protection is not the same as protecting the individual members of an industry. For example, a new project in an industry might have the effect of increasing the economic activity in that industry while, at the same time, competing vigorously with existing players to the extent that they reduce their size or, in an extreme case, leave the industry.

In the current context, the introduction of a large, world scale mill in advance of a substantial increase in the size of the South Australian forest estate (whether due to Forestry SA or the private sector), is likely to place pressure on existing mills. They would be competing with a new player for a finite log supply.

This may lead to closure or cutbacks among the incumbent processors or to changes in the type of log they process and the products they produce, especially given the age of the existing processing facilities.

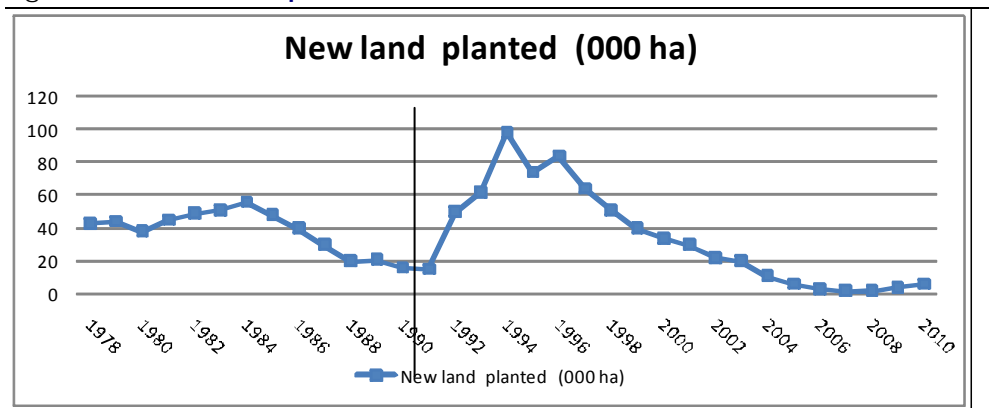
In our view closures of this type would not be inconsistent with the second limb of Forestry SA's charter given the difference between facilitating growth in an industry and protecting individual players in that industry.

There are other complications as well. For example, if a new venture adopts a technology that is more capital intensive and less labour intensive than existing methods, economic activity might increase but employment might decrease.

An expansion of the timber supply in the Green Triangle would increase transport, harvesting and silvicultural activity, and, at least partially, offset any impact due to adjustment in the local processing sector.

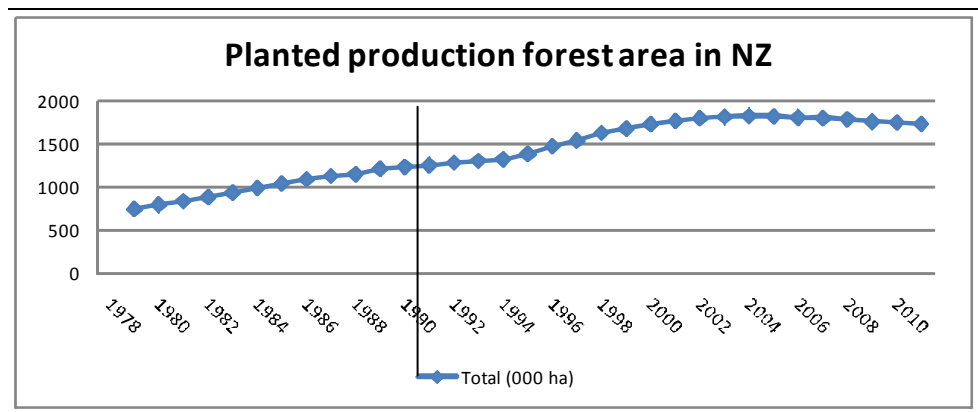
This possibility is supported by the fact that substantial supply increases were experienced in both Chile and New Zealand following public forestry privatisation. Figure 17 shows the rate of new forest planting between 1978, when NZ went through a period of deregulation and privatisation, and 2010. Figure 18 shows the rate of forestry replanted during this period. The figures show that the rate of new forest planted grew rapidly after privatisation in 1990.

Figure 17 **New land planted in NZ between 1978 and 2010**



Data source: MAF and FITEC

Figure 18 **Total planted production forest area in NZ between 1978 and 2010**



Data source: MAF and FITEC

Commenting on the increases in Chile and New Zealand, Brown (1997) said:

Chile was one of the first countries in the World to introduce a widespread policy of privatisation and was also the first country to embark on a policy of deliberate forest plantation privatisation. Forest plantations held by the *Corporacion Nacional Forestal* (CONAF) were sold, along with land, nurseries and machinery, during the period 1975-1979. An interesting side effect of the new policy environment was a major acceleration in forest plantation investment by the private sector. For example, as Clapp (1995a) notes:

The proportion of reforestation performed by the state fell from a high of 91 per cent in 1973 to almost zero in 1979, while the rate of plantings soared. New plantation areas averaged almost 80,000 hectares annually from 1974 to 1990, more than 3 times the rate from 1960 to 1973

10.1.2 Expansion of alternative land uses

An issue that was raised repeatedly during consultation in the region is that land suitable for forestry has been too expensive for foresters to afford. In other words, at current land prices, forestry is not a sufficiently profitable activity to make an acceptable return on investment.

This has prevented the estate from expanding in recent years. For example, notwithstanding the fact that Forestry SA has an annual budget for land purchases, it has been unable to spend this budget for some years.

It appears that land prices have risen due to a number of factors:

- **Competition from the hardwood plantations** – most of these were expanded due to generous tax concessions provided through their Managed Investment Scheme Status. The competition from this sector has now largely evaporated, as most of the hardwood timber schemes have collapsed due to a lack of retail investment interest. It is likely that much of

the land used for hardwood plantations could become available after the current hardwood rotations.

- **Strong prospects in the dairy sector** – the South West of Victoria and South East South Australia are forecast to be strong growth areas for dairy production
- **Generally good prospects in agricultural commodity prices** supporting demand for agricultural land generally.

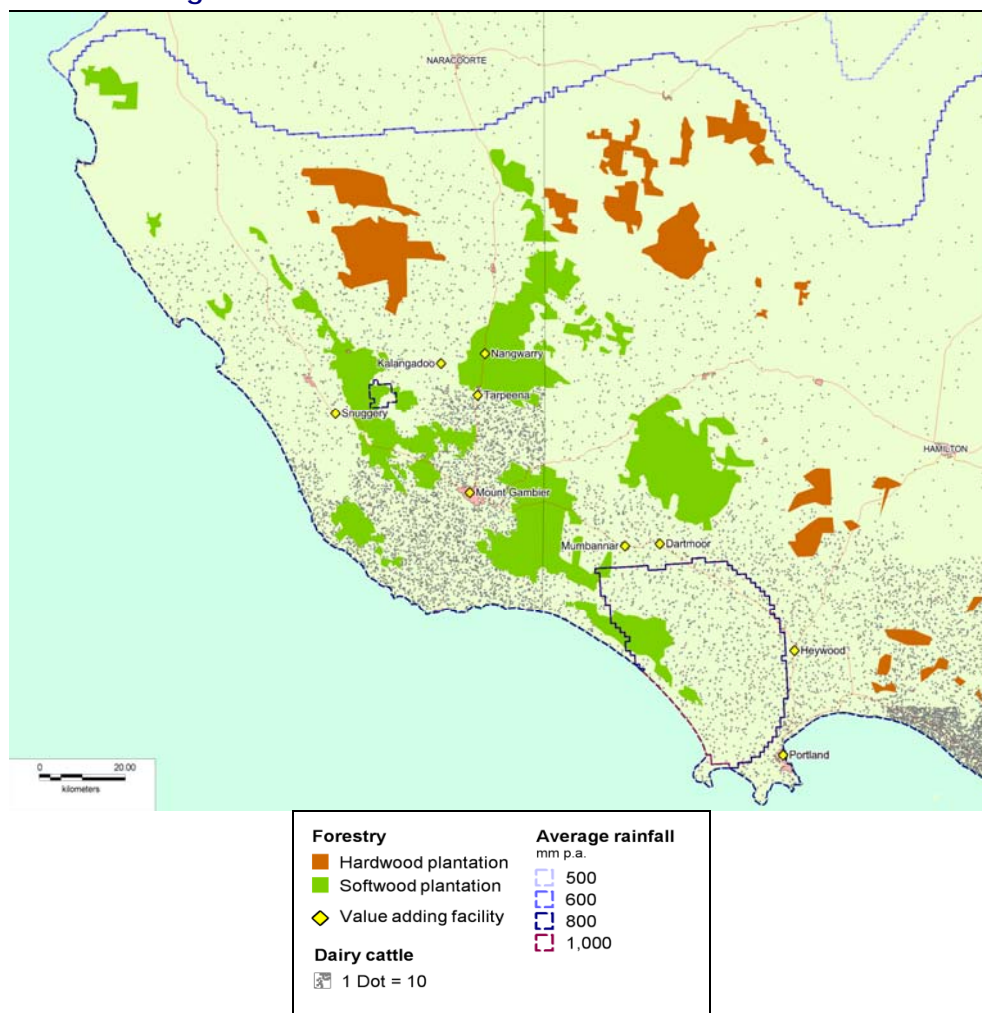
All of these points suggest that there is considerable competition for land due to the returns that can be earned by enterprises other than forestry. This suggests that, in the unlikely event that the forestry area was to contract following the proposed sale, at least equal or even higher value uses of the land would occupy the forested area. As discussed in section 8.4, the main competitors for land have higher value adding and regional multiplier characteristics.

However, contraction of Forestry SA's plantation is unlikely to occur, given the Government's intention to include and enforce replant obligations in the sale terms.

It should also be noted that the softwood plantations in the region occupy high rainfall land co-locating with a number of other land uses in the region, including dairy. Plantations also compete for the water resources of the region, which are sought after by irrigators. The map in Figure 19 shows the rainfall in the region and the intensity of dairy production.



Figure 19 Distribution of plantation forestry, rainfall and dairy cattle in the region



Data source: ACIL Tasman

10.1.3 The volume of timber under contract

The volume of contracted timber would also determine the rate at which changes to the industry could progress. Generally, the slower the changes, the more time the economy would have to adjust and the lower the present value of the impacts. A summary of a selection of forest production countries' contract length and adjustment mechanisms is presented in Table 21. It shows that open markets generally have shorter-term contracts and do not have to rely on price adjustment mechanisms. It also shows that longer-term contracts dominate in countries with significant public ownership of plantations.

Table 21 **Contract terms and price adjusters, by country, by region**

Country	Contract term	Price adjuster
USA-West Coast	1-2 years	Open market
USA-East Coast	1-2 years	Open market
Canada-West Coast	1-25 years	AWWPI
Canada-Central	1-25 years	AWWPI
New Zealand	1-2 years	Open market
Australia-NSW	5-15 years	CPI/WWI
Australia-Qld	3-20 years	CPI/WWI
Forestry SA	5-25years	CPI/PPI/WWI

Note: CPI = Consumer price index, AWWPI = Average Weighted Wood Price Index, WWI = Weighted Price Index, PPI = Producer Price Index

Data source: (Quayle, 2003)

Another feature of longer-term contracts is that they tie up resources for long periods, which presents significant barriers to entry for new entrants and those processors wishing to expand.

10.2 Who is best placed to manage the risks?

In most instances, those placing capital at risk have the strongest incentives to manage those risks. Risks are already being managed, as the industry has been making investment decisions since 2008 on the basis that the sale may proceed (this includes purchasing new machinery, investing in repairs and maintenance, etc.). However, as there is little clarity in the public domain about the timing of the sale, its terms, or any restriction on who might be able to purchase the forward rotations, some risks cannot be managed commercially.

In addition, the current dual mandate of Forestry SA creates incentives for regional businesses reliant on the plantation to seek political solutions if negotiated settlements with Forestry SA are not resolved to their liking.

The dual mandate also reduces the transparency of the log market in the South East. The market for sawlogs in the South East of South Australia lacks transparency in the way that sawlog prices are established and reviewed. This lack of transparency extends to the harvest and cartage contracts in the region. However, the whole Australian log market is not transparent when compared to open markets in the NZ and the US, where several commentators regularly provide highly detailed log market data for a fee.

The lack of transparency creates a substantial barrier to entry for new mills and plantation owners. It is therefore quite likely that it would hold the industry back in the region. Partly to avoid this, Forestry SA is becoming increasingly commercial in its operations.



The proposed sale would only go a certain way to improving transparency. There are other steps the Government might consider taking, that could provide benefits to the forestry industry generally. These could include:

- Government should clearly outline the sale process, key risks, adjustment measures, terms of sale and tender process, provision of community service obligations (costs, funding and managing agency)
- Introduce a price reporting service, to increase the transparency of the market. Confidential market information could be collected by a Government agency or the ABS and published in a way that does not breach any confidentiality
- Consult with major processors to determine what major constraints they face and develop strategy to reduce them where possible, in conjunction with industry. Perhaps this could be facilitated through a high level round table advisory group drawn from the senior managers of the major companies and unions present in the region
- Consider introducing a structural adjustment package for the timber industry (safety net) on a case by case basis where applicants can demonstrate that:
 - economic loss has been incurred by the sale
 - economic viability

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Mr Richard Sage	Mayor of District of Grant
Mr Russel Peate	Chief Executive Officer, District Council of Grant
Mr Mitch Williams MHA	Shadow Minister for Water Security and Member for MacKillop
Mr Peter Gandolfi	Mayor of District of Wattle Range
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C The Australian market

C.1.1 Factors affecting the future supply-demand balance for New Zealand and Australian softwood

As discussed elsewhere in this report, our analysis of current prices indicates that significant increases in the export of Green Triangle logs are unlikely in the near term. In summary, this is because it appears that Australian foresters can achieve a similar price on domestic markets as would be achieved on export markets. This is possible at reduced cost, particularly due to transport, and without exposure to the additional risks inherent in export markets.

However, we note that there are numerous factors currently acting on world timber markets that may cause substantial changes over the medium and longer terms. These were summarised by New Forests (2010). The key factors are:

An increase in the importance of plantation timber as the economically marginal source of supply

1. The relative stability of Australia and New Zealand and the resulting attractiveness of investing here
2. Growing timber demand in China, India and the United States of America
3. Uncertainty surrounding future (and past) supply from the former Soviet Union

In summary, New Forests' argument is that the international timber supply was once largely underpinned by naturally occurring forests that were harvested and sold at prices that did not reflect the cost of replacing them. This, it argued, established log prices at unsustainably low levels.

New Forests considers this increase in the cost of producing timber in the light of likely increases in demand for logs from China, India and possible increases in demand in the USA.³³ In addition, they note that timber supply from Siberia is uncertain for political reasons, in addition to an increase in the log export tariff.

Based on the above, New Forests concludes that log prices are currently at an unsustainably low level and that a number of factors will place upward pressure on prices in the medium to longer term.

³³ New Forests analysis is that the USA could see increases in both demand and supply. In net terms, the balance may change in either direction.

New Forests also considers that, if log prices do adjust, this will induce an increase in the area of plantation forest in operation. Given investment uncertainty in some of the prospective host countries, especially those in Latin America, New Forests argues that Australia and New Zealand are leading candidates to host a share of this investment.

C.1.2 Historic trends

Consultants KPMG prepare the Australian Pine Log Price Index (APLPI), using data provided by the four major Australian softwood growers: State Forests NSW, Forest Plantations Queensland, Forestry SA and HVP Plantations (Victoria). The index, which documents changes in pine log prices received by plantation growers, has been prepared for approximately 15 years.

The APLPI also provides volume data, including export volumes.

The APLPI categorises logs as sawlog, preservation log, pulp log and salvage log. Sawlogs are further categorised by size (small end diameter under bark, SED). The APLPI categories are summarised in Table C1.

Table C1 **APLPI log categorisation**

Category	Unit	Description
Sawlog (i.e. suitable for sawmilling)		
Small sawlog	\$/m ³	SED < 24.0cm
Intermediate sawlog	\$/m ³	24.0cm < SED < 31.9cm
Medium sawlog	\$/m ³	31.9cm < SED < 43.9 cm
Large sawlog	\$/m ³	43.9CM < SED
Other log (i.e. not suitable for sawmilling)		
Preservation log	\$/m ³	Logs sold for use as poles, rails and (mainly) posts
Pulp log	\$/tonne	Logs sold for domestic processing for paper, etc., and for export as woodchip
Salvage log	\$/m ³	All other logs (weighted average price across the category)
Export log		
Export sawlog	m ³	
Export Pulp log	Tonne	

Source: (KPMG, 2010).

Certain log categories are excluded from the index. These include hardwood and native forest products, small volumes of unrepresentative species and products, and pruned clearwood logs.

KPMG determines price by using an aggregated approach. Where growers sell logs on the stump, price is calculated by dividing total revenue by total quantity sold. Where sales are at the mill door or are otherwise “unusual”, net stumpage price is defined as delivered sale price less harvesting and transport costs.

The following sections provide an overview of log sales in Australia based on APLPI data.

In summary, they show that the volume of sawlogs produced in Australia grew over the index period. Average annual growth was 3.1 per cent. By contrast, all saw log categories experienced real declines in price. Over the index period, CPI grew at an average annual rate of 2.6 per cent, while sawlog price grew at rates between 1.0 and 1.5 per cent per annum, depending on log diameter.

In contrast to sawlog, preservation log maintained its real price, while salvage log achieved an increase. In volume terms, however, these are small categories.

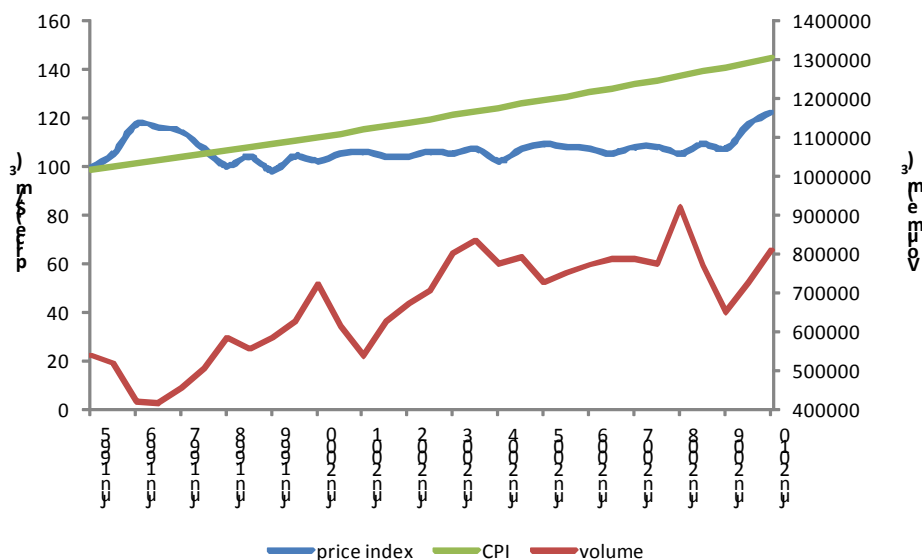
On the export market, volumes varied over the index period. On average, sawlog exports have been equal to approximately 2.8 per cent of Australian sawlog production (on a six-monthly basis) since 2000. During that time, the proportion of production exported (on a six-monthly basis) ranged from less than 0.5 per cent, to more than seven per cent.

Sawlog

As discussed above, the APLPI distinguishes three categories of sawlog. Each of these is discussed separately below. Summary comments follow.

Small sawlog

Figure C1 Small sawlog - APLPI data



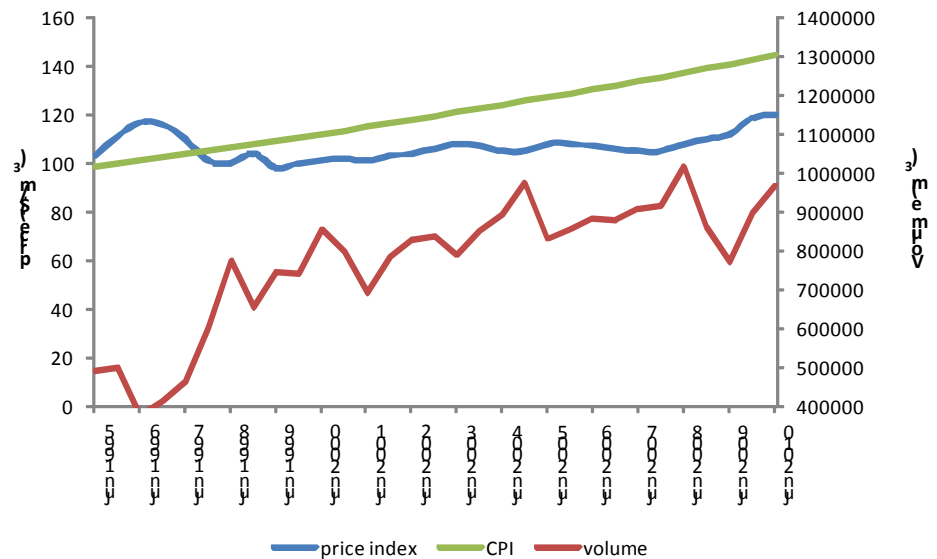
Source: (KPMG, 2010).

Figure C1 shows the APLPI data regarding small sawlog. It shows that the (nominal) price received for sawlogs has remained relatively flat, on average, for the life of the index. As is highlighted by the CPI (green) line, this represents a substantial decline in the real price received for sawlog over this period. The growth rate in nominal price for small sawlog was 1.4 per cent per annum over the life of the index. This compares to 2.6 per cent growth in the CPI over the same period.

In contrast to the price, the volume of small sawlog sold has grown significantly over the index period. Average annual growth has been 2.6 per cent per annum. This growth rate meant that, at its peak in the first half of 2008, small sawlog volume was almost double what it had been in the first year of the index (i.e. 539,820 m³ in the first half of 1995, compared to 920,386m³ in the first half of 2008). Since the peak, volume declined to below 700,000 m³. It has since regained some ground but, at approximately 810,00m³, has not yet regained its peak level.

Intermediate sawlog

Figure C2 Intermediate sawlog - APLPI data



Source: (KPMG, 2010).

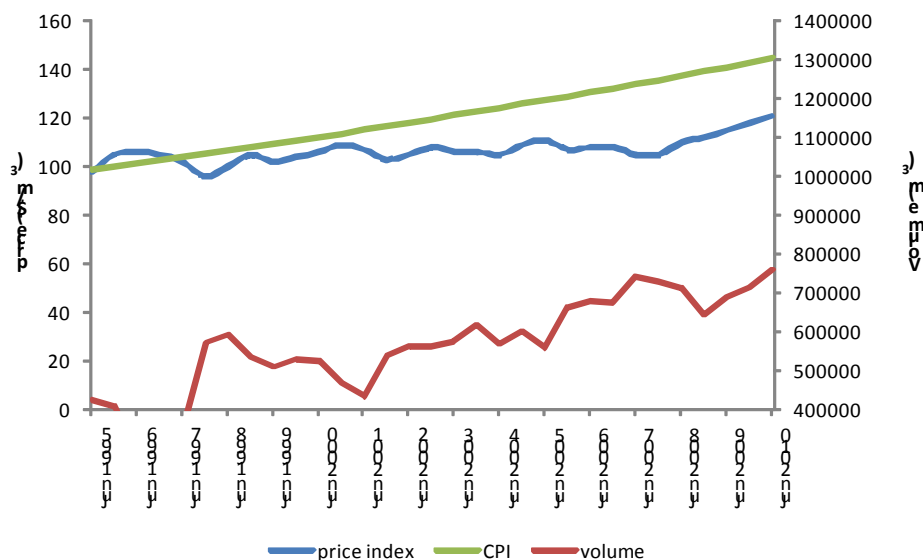
As Figure C2 shows, the experience for intermediate sawlog has been similar to that for small sawlog.

Over the life of the APLPI, the nominal price received for small sawlog has been relatively flat, representing a significant decline in real terms. Intermediate sawlog price grew at an annual rate of 1.0 per cent annually over the life of the index, compared to CPI growth of 2.6 per cent. This is the largest decline experienced by any of the sawlog categories.

In terms of volume, intermediate sawlog showed a similar growth pattern over the life of the index to the other sawlog categories, although in this case growth occurred early in the index period (i.e. in the late 90s) and has been slower since approximately 2000. The volume of intermediate sawlog sold grew by 4.6 per cent in annual average terms over the life of the index, but by only 1.3 per cent annually since June 2000.

Medium sawlog

Figure C3 Medium sawlog - APLPI data



Source: (KPMG, 2010).

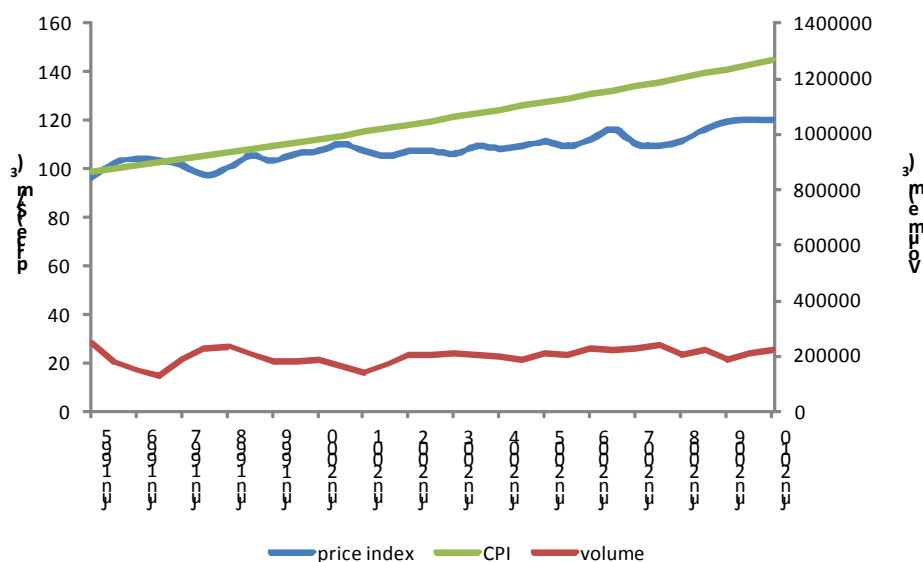
As Figure C3 shows, medium sawlog is a small, fast growing category relative to the other sawlog categories in the APLPI.

As with the other sawlog categories, medium sawlog prices were quite flat in nominal terms over the life of the index. In this case, average annual growth was 1.4 per cent. When compared to growth in the CPI over the same period of 2.6 per cent, this represents a substantial decline in real price.

In contrast to price, though, the volume of medium sawlog sold showed strong growth, roughly doubling over the index period. Volume growth in this category was more stable than the other sawlog categories. Generally, the other sawlog categories showed rapid growth in the first five years of the index, followed by a decline in the second five years, and a recovery in the last five years. By contrast, the medium sawlog did not show a significant decline in the second five-year period, and showed substantially increased growth in the last five years.

Large sawlog

Figure C4 Large sawlog - APLPI data



Source: (KPMG, 2010).

In volume terms, large sawlog is the smallest of the sawlog categories in the APLPI. While the other figures in this section use constant scale, it was necessary to alter the scale for this figure to show the data at all.

While the volume of logs sold in this category is smaller than the other sawlog categories, it still shows the same broad trend in price. The nominal price received for large sawlog grew at 1.5 per cent per annum in annual average terms over the life of the index, significantly slower than the 2.6 per cent annual growth in the CPI. Therefore, the real price of large sawlogs declined significantly over the index period.

Unlike the other categories of sawlog, though, the volume of large sawlogs sold also declined over the life of the index, with average annual growth of -0.7 per cent.

Sawlog summary

In summary, the APLPI shows that sawlog prices have been in decline over the last fifteen years. While the decline was slower over the last five years, price still failed to keep pace with inflation. This is evident from the growth rates set out in Table C2.

Table C2 **Sawlog prices, APLPI data, nominal growth rates**

APLPI index	Average annual growth rates		
	Jan 1995 to June 2010	June 2000 to June 2010	June 2005 to June 2010
small sawlog	1.4%	1.8%	2.3%
intermediate sawlog	1.0%	1.7%	2.1%
medium sawlog	1.4%	1.3%	1.7%
large sawlog	1.5%	1.2%	1.6%
CPI	2.7%	3.2%	3.0%

Data source: (KPMG, 2010).

The volume of sawlog sold has grown significantly over the period, although some categories have grown more strongly than others (see Table C3).

Table C3 **Sawlog volumes, APLPI data**

APLPI volume	H1 1995	H1 2010	Average annual growth rates		
	m ³	m ³	Jan 1995 to June 2010	June 2000 to June 2010	June 2005 to June 2010
small sawlog	539,820	807,100	2.7%	1.1%	2.2%
intermediate sawlog	491,287	968,050	4.6%	1.3%	3.1%
medium sawlog	426,860	760,920	3.9%	3.7%	6.3%
large sawlog	245,444	221,853	-0.7%	1.9%	0.9%

Data source: (KPMG, 2010).

Export logs

The APLPI treats log exports in two categories, sawlog and pulp log. These categories are discussed separately below and concluding comments follow.

In both cases, the APLPI is limited to volume data.

Export sawlog

The first time exports of Australian sawlog were recorded in the APLPI was the second half of 1995, when 310m³ was exported. From there, exports grew rapidly for approximately two years, before stabilising at a similar growth rate to production of sawlog between 1999 and early 2003. During this time, an average of approximately five per cent of Australian sawlog was sold for export in each six-month period.³⁴

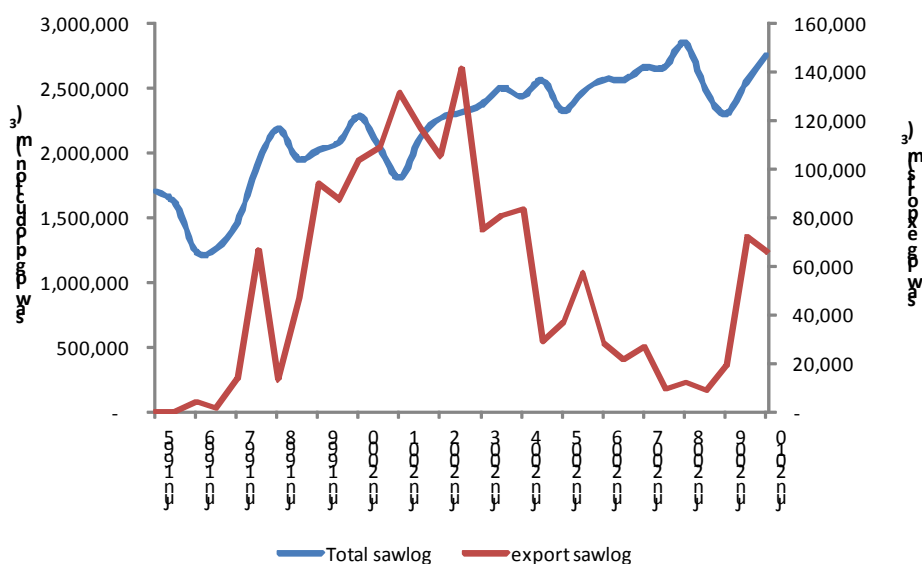
Beginning in mid 2003, the proportion of sawlog exported declined sharply. In the second half of 2004, slightly more than one per cent of Australian sawlog

³⁴ The APLPI does not go into detail as to which category of sawlog was exported.

was exported and exports have not exceeded three per cent since the first half of 2004. There was a noticeable increase in exports in the last twelve months for which data is available, although this declined to some extent in the last half. This is summarised in Figure C5.

The figure also shows that the total production of Australian sawlog grew at a relatively stable rate throughout the index period. This confirms that the volatility in the percentage of log exported is due to changes in the volume of exports rather than fluctuations in domestic demand.

Figure C5 **Export and domestic use sawlog - APLPI data**



Source: (KPMG, 2010).

Pulp log exports

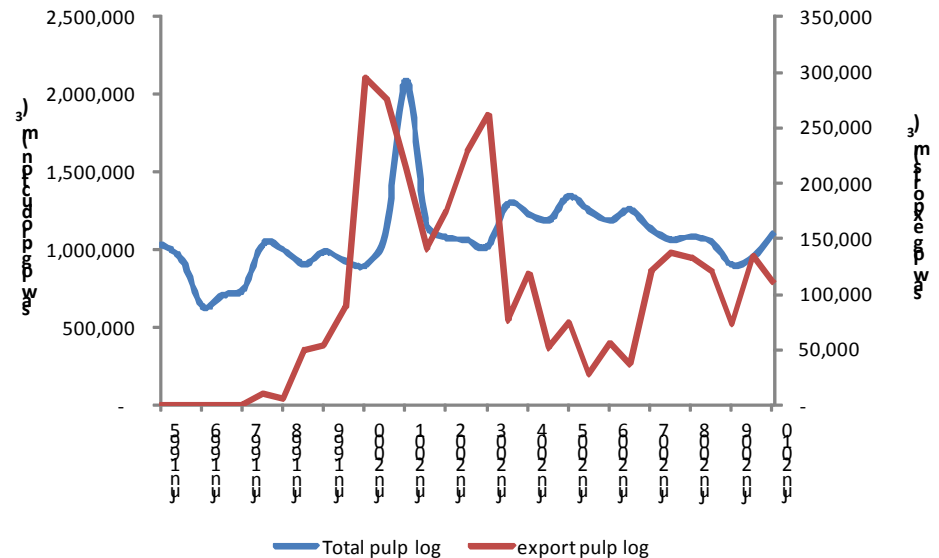
As with sawlog, no pulp log exports were recorded in the first few years of the APLPI. The first recorded exportation was in the second half of 1997, when slightly less than one per cent of pulp log production was exported.

The APLPI shows that pulp log exports then increased rapidly, peaking at almost 300,000 tonnes, or 33 per cent of Australian production in the first half of 2000.

Pulp log exports then fluctuated for several years, before returning to an average of approximately 90,000 tonnes between June 2003 and June 2010. This is summarised in Figure C6 below.

This figure shows that, unlike sawlog, the spike in pulp log exports coincided with a significant increase in Australian production of pulp log.

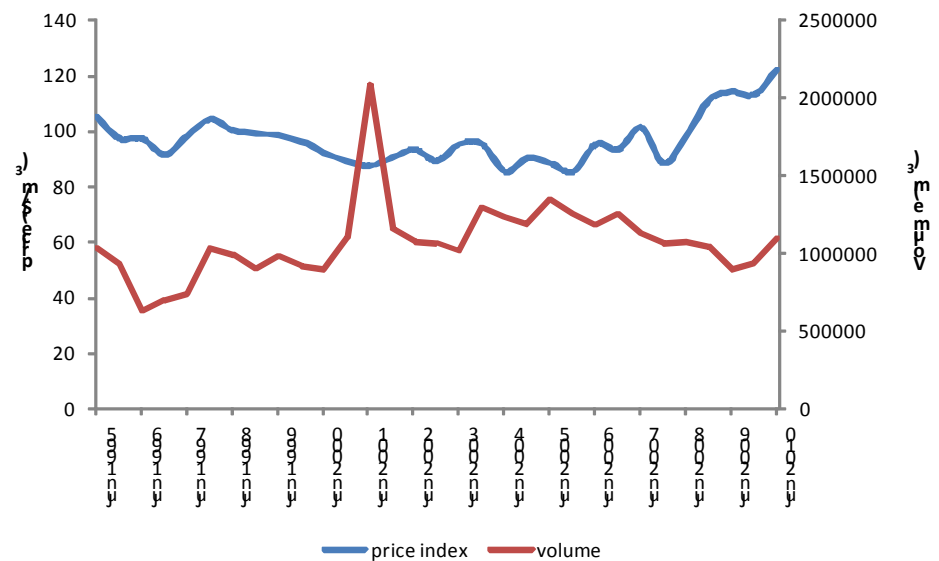
Figure C6 **Export and domestic use pulp log - APLPI data**



Source: (KPMG, 2010).

Figure C7 shows the domestic pulp log data. It shows that the price of pulp log on Australian markets has remained quite flat throughout the index period, with an average annual growth rate of 1.0 per cent over that time. This has changed in the last five years, when price growth averaged 6.8 per cent. It is notable that the spike in production in early 2001 does not coincide with any noticeable change in the domestic price.

Figure C7 **Price index and volume of Australian pulp log**



Source: KPMG APLPI

Other log categories

Preservation log

Figure C8 **Preservation log - APLPI data**



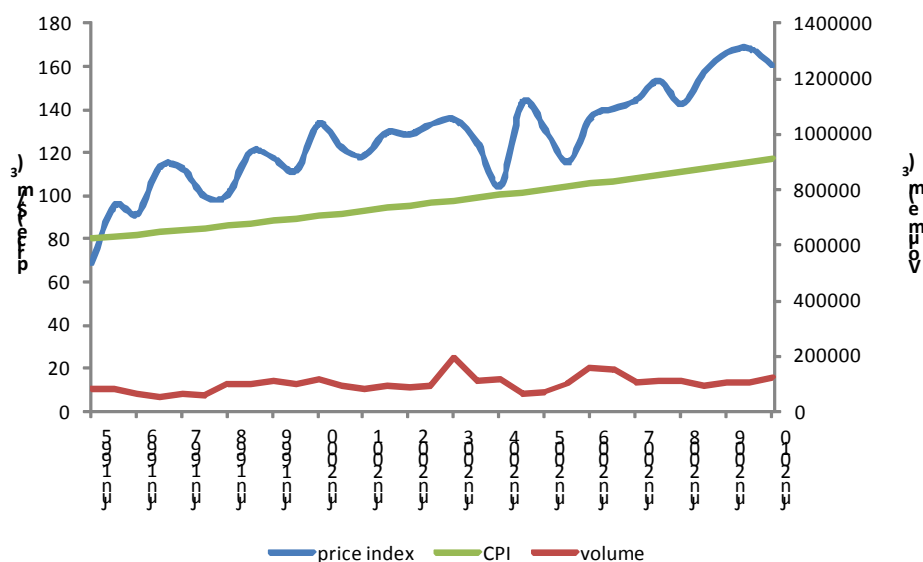
Source: (KPMG, 2010).

Figure C8 summarises the APLPI data on preservation log. Unlike the sawlog categories, the figure shows that the price of preservation log was roughly constant in real terms throughout the survey period; at times it was greater than the price received in the first period of the index. On average, preservation log price grew slightly in real terms, averaging 2.8 per cent growth, compared to 2.6 per cent growth in the CPI.

The figure also shows that preservation log is a relatively small category with a fairly stable volume over the index period.

Salvage log

Figure C9 Salvage log - APLPI data



Source: (KPMG, 2010).

Figure C9 summarises the APLPI data regarding salvage log. As the figure shows, this is a relatively small category with stable volume over the index life.

The figure also shows that, unlike the sawlog categories, the price received for preservation log experienced a significant real increase over the index period.

C.2 Sawlog and pulpwood production forecast 2005 - 2049

As at 2009, Australia was home to slightly more than 2 million ha of plantation forests, with approximately equal areas of hardwood and softwood.³⁵

The Australian forestry estate has grown each year in recent history, although growth has been below historical levels recently. After allowing for re-measurements and land use change following harvesting or bushfire, the growth in Australia's forestry estate in 2009 was 2.4 per cent.

By contrast, the estate increased by 51 per cent over the last ten years.

³⁵ Department of Agriculture, Fisheries and Forestry (2010) *Australia's Plantations, 2010 Inventory Update*, available online: <http://adl.brs.gov.au/mapserv/plant/2010updatecoverpage.phtml>, accessed 7 February 2011

The majority of this increase has been in hardwood, which grew by 150 per cent over the last ten years. Growth in softwood plantation area was slow, increasing by only eight per cent over ten years.

In contrast to projected growth in plantation forestry, the area of native forests available for wood production is projected to fall in the future. This is the result of government policies, adapting to extreme climate change events, and forecasting the destruction of native forests by bushfire. For example, Queensland will cease production from old growth forests; this is also currently been discussed in Western Australia. This shortfall in native wood supply is expected to be met by an increase in forest plantation resources (URS, 2007).

In line with the growth in the estate itself, Australia's plantation log supply almost tripled between 1990 and 2005 (Parsons, M, Frakes, I and Gavran, M, 2007).

RFAs led to significant increases in reserves and to reductions in sustainable sawlog harvest volumes from public native forests, but also enhanced certainty for some segments of the industry and provided funding for structural adjustment.

Expanding harvest volumes from softwood plantations facilitated a rapid expansion in softwood sawn timber production, as well as in other softwood products. This led to significant investment across all sectors of the softwood industry.

Recent expansions in the sawn wood industry have focused primarily on softwood timber production. The trend toward increased softwood sawmill capacity has helped reduce unit costs and maintain international competitiveness.

The decline in hardwood sawmills in Australia (the period from 1997 - 2007 saw a 43 per cent decline in processing capacity) was a result of modernisation of sawmills for native timber processing. Furthermore, new sawlog technologies can potentially support sawn wood production in the future. For example, in 2008 Forest Enterprise Australia established a large-scale sawmill using plantation hardwood (Kah low, 2010).

Log harvest trends for the last 19 years are reported below in Table C4(ABARE, September and December quarters 2009).



Table C4 Log harvest trends

Log harvested by type	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
	'000 m ³	'000 m ³	'000 m ³	'000 m ³	'000 m ³	'000 m ³	'000 m ³	'000 m ³	'000 m ³	'000 m ³	'000 m ³	'000 m ³	'000 m ³	'000 m ³	'000 m ³	'000 m ³
Native																
<i>Saw and veneer logs</i>	na	na	na	na	na	na	4 008	3 876	3 915	3 951	3 583	3 639	3 543	3 444	3 320	3 204
<i>Pulpwood</i>																
<i>For wood based panel products</i>	na	na	na	na	na	na	66	55	30	40	14	17	19	19	22	22
Plantation																
<i>Saw and veneer logs</i>	na	na	na	na	na	na	7	7	130	149	82	67	153	177	273	208
<i>Pulpwood</i>																
<i>For wood based panel products</i>	na	na	na	na	na	na	0	0	0	0	0	43	0	34	9	0

Data source: ABARE Export statistics

Australia exports a significant quantity of roundwood each year, averaging 1.1 million m³ per annum from 2007-08 to 2009-10. As shown in Table C5 and Figure C10 most of this was exported to China, with a significant proportion exported to the Republic of Korea.

As Table C5 shows, the quantity of Australian logs that China imports has increased dramatically in recent years. This is largely new demand and exports from Australia are not a diversion from other export destinations. The growth in trade reflects growing demand from the countries of Asia.

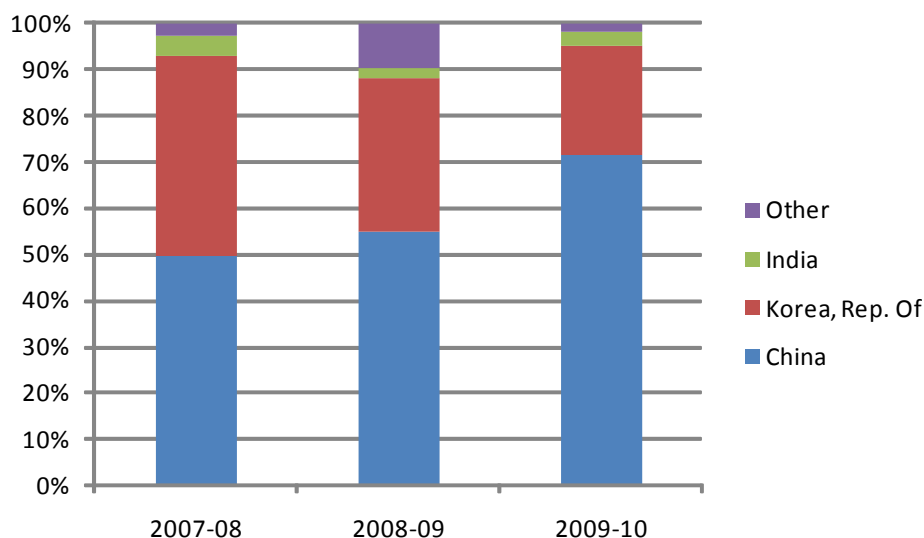
Table C5 **Australian log exports by destination**

Total roundwood ('000 m3) ^a	2007-08	2008-09	2009-10
China	517.9	542.9	983.6
Korea, Rep. Of	451.6	326.5	324
India	48.1	22.5	42.2
United Arab Emirates	3.3	0	13
Chinese Taipei	2.4	16.8	3.9
New Zealand	3.7	3.9	3.3
Hong Kong, China	1.5	66.5	2.6
Other	3.7	3.3	2.1
Philippines	3.7	2.8	1.9
Malaysia	1.8	0.6	0.7
Japan	7.1	0.5	0.4
Total	1044.9	986.4	1377.4

^a includes a small quantity of pulpwood

Data source: ABARE.

Figure C10 **Australian log exports by destination**



^a includes a small quantity of pulpwood

Data source: ABARE,

In addition to growing Chinese demand, the recent increase in log exports to China is due, at least partly, to a decline in the quantity of logs China has imported from Russia. This decline has been driven by increases in the log export tax levied by the Russian Government, which were applied in an attempt to shelter the Russian wood processing industry. More recently, the Russian Government delayed a further increase in log export tax, apparently to avoid barriers to international trade that would be adverse to its own economy and the economies of its trading partners.³⁶

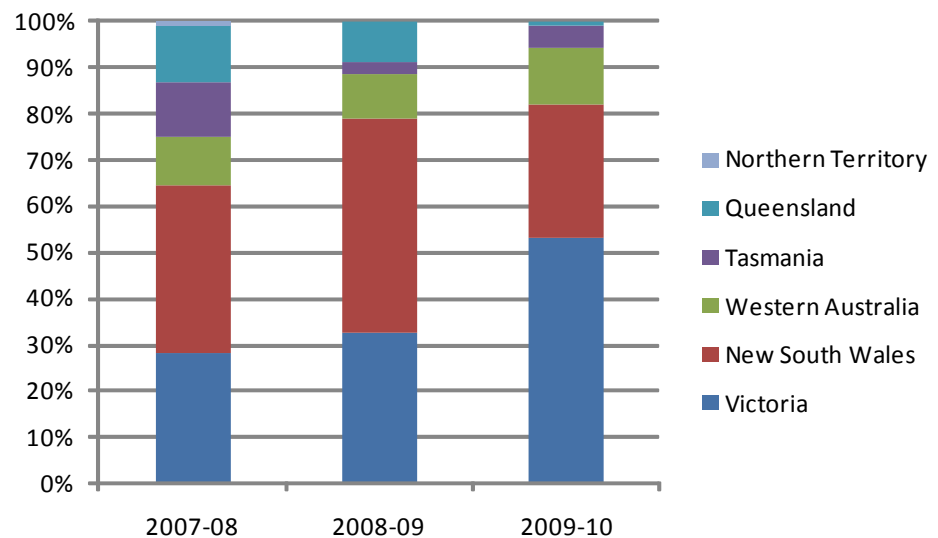
³⁶ This has been widely reported, see for example:

Wood Based Panels International, “*Russia shelves log export tax increase*”, 12/2/2009, available at: http://www.wbpionline.com/news/fullstory.php/aid/445/Russia_shelves_log_export_tax_increase.html

International Forest Industries, “*Russians log export tax deferred*”, 14/11/2008, available at: <http://www.internationalforestindustries.com/2008/11/14/russian-log-export-tax-deferred/>

RISI “*Russian log export tax increase delayed again*”, 27/10/2009, available at: <http://www.risiinfo.com/blogs/Russian-Log-Export-Tax-Increase-Delayed-Again.html?source=rss>

Figure C11 **Australian log exports by state of origin**



^a includes a small quantity of pulpwood

Data source: ABARE

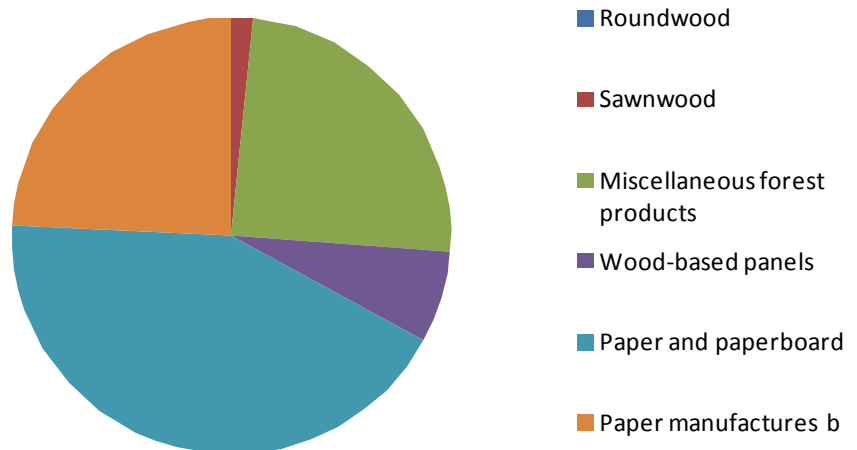
Figure C11 suggests that most of the saw log exported from Australia originates in Victoria. However, this is because South Australian exports are not shown separately and most of its logs are exported through Portland in Victoria. Therefore, the Victorian data actually captures both states, making it a summary of Green Triangle log exports. ABARE does not report the origin of logs themselves, so the state of origin of Green Triangle log exports is not entirely clear.

As an exporter of logs to China, Australia's main competitor is Russia, which accounts for the largest proportion of China's log imports (65% in 2005). Softwood accounted for 62 per cent of this, up from 47 per cent in 2000. The trend in global trade is now shifting towards processed products, with the largest growth trend in wood-based panels, including engineered wood products.

C.2.1 Wood product imports

Australia imported more than \$600 million worth of wood products from China in 2008/09 and 2009/10. These were mainly paper and wood panels as is shown in Figure C12.

Figure C12 **Australian wood product imports from China by type**

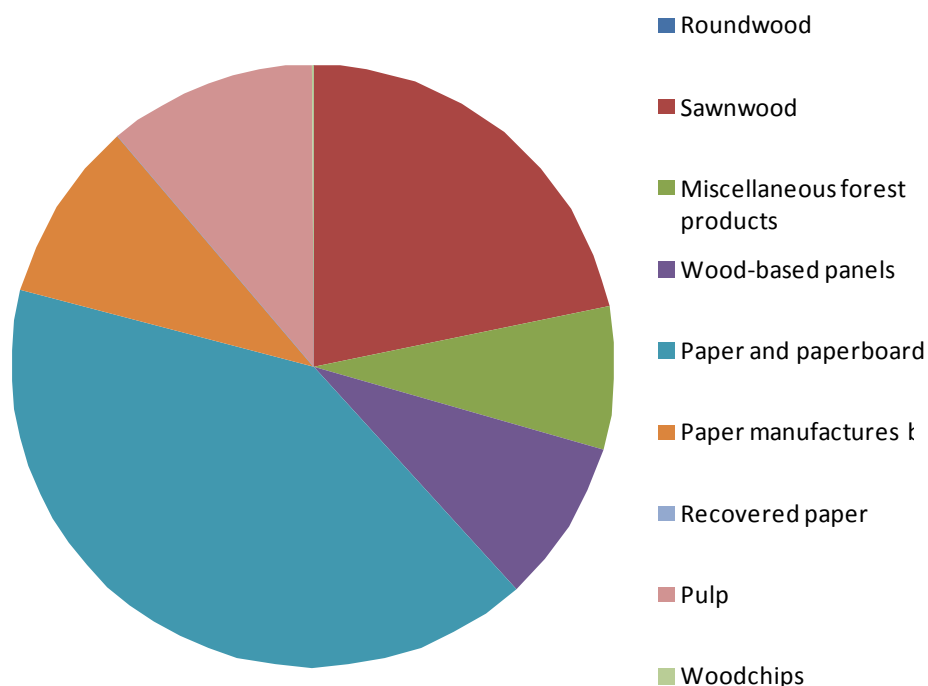


Note: Miscellaneous forest products include a wide range of products from doors, mouldings and builders' carpentry to shingles, cork, rosins, etc., and ornamental figures.

While China is the largest buyer of Australian wood product exports, New Zealand is a much larger source of imports into Australia. Total imports from New Zealand averaged approximately \$720 million over the last two years, approximately 20 per cent more than imports from China.

The breakdown of products imported from New Zealand in the last two years is shown in Figure C13.

Figure C13 **Australian wood product imports from New Zealand by type**



Note: Miscellaneous forest products includes a wide range of products from doors, mouldings and builders' carpentry to shingles, cork, rosins, etc., and ornamental figures.

New Zealand and China are Australia's two largest sources of imported wood products, with 27 and 24 per cent respectively. As the above figures show, the dominant product that is imported is paper and products manufactured from paper. In addition, Australia imports a significant quantity of sawn timber from New Zealand, but not from China.

C.2.2 Outlook

Australia is well placed to take advantage of the long-term expansion of wood and fibre markets in the Asia-Pacific region. Australia's domestic market also provides a solid investment platform for strategies to replace imports and develop export opportunities.

The high quality of Australia's production forest resource and world-competitiveness of supporting infrastructure, such as transport and manufacturing, make Australia's forest sector an attractive investment opportunity.

There is a range of future investment planned in Australia's forest industries, including investment in hardwood and softwood sawmills, pulp and paper mills, wood product export facilities and engineered wood product mills.

C.2.3 Hardwood

Hardwood pulpwood production from plantations is soaring. Supply is forecast to reach nearly 14 million cubic metres per year by 2010, about four times the volume harvested in 2005-06. Average supply beyond 2010 is forecast to be about 14 million cubic metres per year. Most plantation hardwood pulpwood is currently produced in Western Australia, Tasmania and Central Gippsland. By 2010, the major hardwood pulpwood-producing regions will be the Green Triangle and Western Australia (33% each of the national total), Tasmania (19%) and Central Victoria (5%). By 2010, the total national supply of hardwood plantation sawlogs will be about 358,000 cubic metres per year. Tasmania will produce about 53% of the total and Central Gippsland and North Coast New South Wales about 20% each. Hardwood plantation sawlog supply is forecast to exceed 1 million cubic metres per year after about 2020 and to peak at around 1.8 million cubic metres per year in 2030. However, this volume may not be reached if plantations established for sawlog production are not thinned and pruned (Parsons, M, Frakes, I and Gavran, M, 2007).

C.2.4 Softwood

The supply of softwood sawlogs, currently around 9 million cubic metres per year, is expected to be steady at 10-10.5 million cubic metres per year for the next 15-20 years, and to increase to around 12 million cubic metres per year beyond 2030. The major softwood sawlog-producing regions are the Green Triangle, South East Queensland and the Murray Valley. In 2010, the Green Triangle and the Murray Valley will each produce an estimated 20% of total national softwood sawlogs; South East Queensland will produce 17% and Western Australia, Central Tablelands New South Wales and Tasmania 7% each. Softwood pulpwood supply, currently around 5.0 million cubic metres per year, is forecast to be steady at around 5.4 million cubic metres per year until the mid 2020s. It will then decline to about 4.7 million cubic metres per year before increasing again after 2030 (Parsons, 2007).

Forecasts of log supply are based on plantation areas that are already established, and are presented in Table C6 below. The forecast is shown in thousands of cubic meters per year on average for each five-year period.



ACIL Tasman

Economics Policy Strategy

Forestry SA and the South East Region of South Australia

Table C6 **Forecast plantation log supply, Australia**

Period	2005-09	2010-14	2015-19	2020-24	2025-29	2030-34	2035-39	2040-44	2045-49
Hardwood									
<i>pulpwood</i>	4,596	13,759	12,823	14,599	14,402	12,313	15,658	13,928	15,260
<i>sawlog</i>	224	358	582	1,110	1,238	1,766	1,819	1,625	1,397
total	4,820	14,117	13,405	15,709	15,640	14,079	17,477	15,553	16,657
Softwood									
<i>pulpwood</i>	5,444	5,308	5,376	4,896	4,723	4,868	4,933	5,042	5,341
<i>sawlog</i>	10,079	10,303	10,544	10,395	10,775	12,292	12,150	11,791	11,854
total	15,523	15,611	15,920	15,291	15,498	17,160	17,083	16,833	17,195
overall total	20,343	29,728	29,325	31,000	31,138	31,239	34,560	32,386	33,852

Data source: (Parsons, 2007)

D Terms of reference

D.1 INTRODUCTION

The Department of Treasury and Finance supports the South Australian Government's key economic, social and financial policy outcomes through the provision of advice and coordination of resource allocation for government programs. It also provides financial services to the Government and the community, covering asset and liability management, collection of state taxes, insurance and superannuation.

In the 2008-09 Mid-Year Budget Review, the South Australian Government announced a package of measures aimed at realising some of the value of the State's assets. One of these measures would be an investigation into options to sell the harvesting rights of Forestry SA (FSA).

The Market Projects Unit (MPU), within the Department of Treasury and Finance is responsible for coordinating this investigation.

As part of a Cabinet Submission to be submitted in early 2011, a Regional Impact Statement is to be completed to assist Government in making a decision regarding the sale of Forestry SA rotations.

D.2 REQUIREMENTS AND SPECIFICATION

The Regional Impact Statement process is to apply to any decision by any Government agency that, when implemented, will result in a significant change in the standard or level of services provided to an affected rural and regional community.

The Regional Impact Statement (RIS) policy is based on the principles of:

- community and stakeholder consultation for open, accountable and responsible decision-making;
- transparency of administration;
- reasonable equity in accessing government services and facilities;
- degree of impact being relative to the population and size of the service delivery; and
- the area concerned (viewed from the perspective of those whom it will affect).

- 1.1 The Regional Impact Statement must assess the proposed divestment's impact on regional South Australia including:

- 1.1.1 the direct impact on a region or regions (for example, where changes in the way services are provided affects the ability of people in a particular region to access those services);
 - 1.1.2 the indirect impact on a region or regions (for example, where a reduction in services leads to fewer people coming into a regional town causing a reduction in retail business); and
 - 1.1.3 assess any regional issues that result from the sale of harvesting rights of Forestry SA plantations.
- 1.2 The Regional Impact Statement must include:
 - 1.2.1 a consultation undertaken in relation to regional issues;
 - 1.2.2 the impact of proposals on regions and regional interests;
 - 1.2.3 the full range of the costs and benefits of the proposals on the region and its community;
 - 1.2.4 strategies for managing the identified impacts and issues; and
 - 1.2.5 the impact of proposals on social inclusion and economic development within regions.
- 1.3 The consultation must include, but not be limited to, key stakeholders in the south east including local councils, timber industry representatives, key unions and chambers of commerce.
- 1.4 It is important to make an accurate assessment of the positive and negative economic implications of the proposed sale of harvesting rights to the region. The assessment will include:
 - 1.4.1 description of the current status;
 - 1.4.2 the implications for jobs and job creation;
 - 1.4.3 the implications if no action is taken (e.g. begin with a base of 'do nothing');
 - 1.4.4 what are the medium to long-term implications of the proposal in 5, 10 or even 20 years;
 - 1.4.5 what are the implications for existing businesses in terms of maintenance and expansion;
 - 1.4.6 will there be any withdrawal of business, capital investment;
 - 1.4.7 will business and capital be attracted to the region;
 - 1.4.8 will population size/demographics be affected;
 - 1.4.9 is there any known impact on the average income per capita;
 - 1.4.10 is there any flow-on effect in any of these areas; and
 - 1.4.11 will the decision put financial pressure on other organisations, particularly, local government.

- 1.5 It is important to consider the specific positive and negative social implications of the proposed sale of harvesting rights. The assessment will include:
 - 1.5.1 a description of the current status;
 - 1.5.2 implications for access to education, health, justice or community;
 - 1.5.3 implication for services (e.g. by town or region);
 - 1.5.4 particular social groups that may benefit or be disadvantaged (e.g. indigenous, disabled, multicultural, etc);
 - 1.5.5 how will the potential change ultimately affect people's way of life;
 - 1.5.6 how will these changes be of benefit, as opposed to not making the change;
 - 1.5.7 what are the implications for recreation and leisure activities; and
 - 1.5.8 flow-on effect in these aspects.
- 1.6 It is important to present an accurate indication of the positive and negative environmental implications of the proposed sale of harvesting rights. The assessment will include:
 - 1.6.1 description of the current status;
 - 1.6.2 impact on key environmental factors - water supply and quality, air quality, soil, vegetation; and
 - 1.6.3 flow-on effect in these aspects.

The template for completing the Regional Impact Statement is included in Attachment A.

- 1.7 The Regional Impact Statement is expected to be provided electronically in either Microsoft Office® or Adobe Acrobat® format. All spreadsheets must be provided in Microsoft Excel 2003 and be in read-write format. In addition, twelve hard copies of the Regional Impact Statement will be required. The Regional Impact Statement will be a public document once completed as required under the Regional Impact Assessment Statement Policy of Government.

Further details regarding Regional Impact Statements can be found on <http://www.southaustralia.biz/Regional-SA/Regional-Impact-Assessment.aspx>

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