



## Geddes Management Pty. Ltd.

• Quality Systems • Tree Farming • Industry Analyses

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Tony Treadgold  
Director  
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By email to [tony@primarysecurities.com.au](mailto:tony@primarysecurities.com.au)

Dear Tony

Following your instructions, I have reviewed the reports prepared by Pöyry Forest Industry relating to four of the Australian Growth Ltd timber projects, namely Projects 4 b & c and Projects 5 b & c. These projects are managed by RuralAus Plantation Management Pty Ltd.

Attached is my review with general comments on all four Pöyry reports together.

Yours faithfully  
Geddes Management Pty Ltd

David Geddes, BSc (For), AIMM, MACFA, CPMgr, RPF™

## Executive summary

In April 2009, Pöyry Forest Industry assessed the Australian Growth Managers Ltd Project 4b, 4c, 5b and 5c plantations that are located on Kangaroo Island. Essentially Pöyry used the following methods:

- Plantation area data (by project, by property and by species) was collected from the Manager.
- The plantations were inspected and information from historical measured sample growth plots combined with a series of sample plots measured in March 2009 was used to determine standing volume. Pöyry Forest Industry noted that the number of plots measured was less than ideal, but there was sufficient growth data to draw conclusions.
- Two growth models were used to calculate future volumes; a South Australian yield model for pines and the University of Melbourne yield model for eucalypts.
- Forest management costs were collected from the manager.
- Roundwood markets were analysed.
- Woodflows were developed for each project.
- Risks were identified.
- A cashflow model was developed in order to calculate a Net Present Value.

Geddes Management Pty Ltd generally supports the approach taken by Pöyry Forest Industry. A number of conclusions have been drawn about the work by Pöyry Forest Industry and these are presented in detail in this report below. Essentially the method of determining standing volume, determining future volumes and determining a future cashflow is appropriate. The Net Present Value method of plantation calculations meets the requirements of the Australian Standard for Valuing Commercial Forests.

Pöyry Forest Industry recognised there is a risk with existing market for softwood sawlogs on Kangaroo Island due current financial difficulties with the Timber Creek Pine sawmill. There is a substantial risk that the local Timber Creek Pine sawmill may no longer be operating by the time the Project 4c and Project 5c trees mature. Therefore it may be necessary to identify other softwood log markets. Pöyry has identified there are no other alternative markets. Given the high annual costs, there are financial opportunities for bringing forward harvest dates in Project 4c and 5c from projected 2026 to 2027. However, it is possible the product could be chipped and exported (from a hardwood woodchip facility) if there was a viable woodchip export facility on Kangaroo Island.

There is no current sawlog market for plantation grown eucalypt on mainland Australia. The nearest market is in Tasmania and at present the pulpwood price is higher than the sawlog price; it is clear the price of eucalypt sawlog is lagging behind the price of pulplogs. The woodchip market relies of a port being constructed on Kangaroo Island. Great Southern Ltd was planning to construct a port on the island by 2015, but GSL is currently in receivership.

Pöyry has calculated the Net Present Values of each project at an 8% Discount Rate to be:

- Project 4b trees planted in 2001: \$266/ha
- Project 4b trees planted in 2002: \$91/ha
- Project 4c trees planted in 2001: -\$1749/ha
- Project 4c trees planted in 2002: -\$1742/ha
- Project 5b trees planted in 2002: -\$236/ha
- Project 5c trees planted in 2002: \$745/ha

Clearly the projects with the longer rotations (4c and 5c) are less viable because of the high annual costs and low returns. It is interesting to note the improved Net Present Value in Project 5c compared with Project 4c. The main difference is that a large part of Project 5c is eucalypt plantation with a much earlier harvest date.

Pöyry provided Net Present Values using a range of Discount Rates. It is reasonable for higher Discount Rates than 8% to be used given the risks associated with establishing a port, the port pricing being competitive (possibly owned by a competitor and certainly a monopoly) and the estate not being

sufficiently large to get the economies of scale & competitiveness in transport & harvesting. Nevertheless, while higher Discount Rates will reduce the Net Present Values, they will not change the status of positive and negative returns of each project.

Geddes Management Pty Ltd undertook a modelling exercise to check if pine woodchip exports were a viable option (in the event the sawmill was no longer operational at time of harvest). Because the export softwood chip price is in \$US and is sensitive to the exchange rate, it was found woodchips can only return a positive Net Present Value when the US:Australian dollar exchange rate is down to 70c. At present the US:Australian dollar exchange rate is 90c. Some financial analysts are suggesting that the US:Australian dollar exchange rate is likely to remain high in the foreseeable future as the Australian economy improves compared with the rest of the world. But at some stage, it is possible the exchange rate will return to levels experienced in previous years, providing opportunities for export softwood chip sales, as long as there is an export woodchip available on Kangaroo Island.

## Background

Australian Growth Managers Ltd established forestry plantations on behalf of grower investors during the period from 1999 to 2005. The plantations are located in two regions; on Kangaroo Island in South Australia and near Bremer Bay, east of Albany in Western Australia. Five Projects were developed, mostly with the objective of growing eucalypt plantations as a fibre source for overseas paper makers. Unlike the earlier Projects which were pulpwood only plantations, Projects 4 and 5 each provided investors with three Scheme options; Scheme a (pulpwood over a 10-13 year period), Scheme b (eucalypt sawlog over a 17-20 year period) or Scheme c (radiata pine sawlog over a 25-30 year period). All sawlog Scheme plantations are located on Kangaroo Island.

Past drought conditions leading to poor growth in some plantations along with economic impacts of the Global Financial Crisis has potentially affected viability of the sawlog projects. In particular, the collapse of Great Southern Ltd (GSL) has impacted future operations on Kangaroo Island, given that GSL intended to construct a woodchip facility on the island which would be used for exporting woodchips from the Australian Growth Managers Ltd plantations. Also the only sawmill on Kangaroo Island, Timber Creek Pine, located near Parndana, is also in receivership. As a result, international forestry consultant Pöyry Forest Industry was asked by the plantation manager, RuralAus Plantation Management Pty Ltd, to provide an independent review of Project 4 schemes b & c and Project 5 schemes b & c. Pöyry Forest Industry prepared separate reports for each of the four sawlog schemes on 22<sup>nd</sup> June 2009.

Geddes Management Pty Ltd has been Independent Forester for all five Australian Growth Managers Ltd Projects and has inspected each plantation in each scheme once each year since the trees were planted. Reports of annual inspection findings have been provided each year.

Primary Securities Ltd, Responsible Entity of the five Projects, has asked Geddes Management Pty Ltd to comment on the Pöyry Forest Industry reports of the sawlog projects.

## Methodology used to review Pöyry reports

Geddes Management Pty Ltd checked each report for consistency, particularly taking into account our knowledge of tree growth from previous Independent Forester annual inspections of the trees in the last few years.

A sample of the Pöyry financial calculations was checked. Management cost information was checked with RuralAus Plantation Management Pty Ltd. The Administrator of the Timber Creek Pine sawmill (the pine sawmill located near Parndana on Kangaroo Island) was contacted in order to understand current viability

of the mill and to obtain current purchasing prices for softwood roundwood. Harvesting costs were checked against industry costs from other regions. Woodchip pricing was obtained from public available internet sources. Information on areas of eucalypt plantations on Kangaroo Island was gathered from discussions with the other forest owners. Hardwood sawlog pricing was obtained from several purchasers in Tasmania.

This report provides overall general comments on the structure of the four Pöyry reports (which are all structured in the same way). Conclusions are provided.

## Pöyry report overview

All four Pöyry reports have the same general structure.

### Pöyry Section 1: Resource description

This section provides an outline of the forest estate and an area statement. Pöyry seems to have correctly identified plantation areas, although in some cases they have included minor areas in some plantations that have been planted but not woodlotted (ie extra planted area).

Conclusion: We conclude that Pöyry has correctly identified the planted areas for each Project.

### Pöyry Section 2: Field inspections

Pöyry stated the plantations were inspected on 2<sup>nd</sup> April 2009; it is assumed they were actually inspected over several days. This section of the report provides general comments on plantation vigour and health. Geddes Management Pty Ltd is aware of past rainfall trends that have affected tree growth rates and supports most of the Pöyry tree growth comments. We agree with their comments about pruning quality and late timing of pruning for optimum clearwood production. The delay was caused several years ago during a period of uncertainty when the previous manager was in receivership. However, given the other Pöyry comments about poor prospects for future sawlog markets, pruning quality has no impact on project viability. Pöyry is suggesting that the eucalypt logs are sold as pulpwood (which do not require pruning) and the pine logs are sold for sawlog. There is no current market premium for pruned softwood logs for any mills within an economic transport distance from the plantations.

Conclusion: We conclude that:

- Pöyry has correctly identified that the trees are generally healthy, but there are some areas (particularly within the Shining gum plantations) with poorer growth.
- While pruning was later than ideal, in the current market circumstances, it will have no impact on project financial opportunities.

### Pöyry Section 3: Growth and yield

Pöyry used information from sample plots that RuralAus measured a few weeks prior to the field inspections, along with growth trend data from the Permanent Sample Plots that RuralAus has measured over the last few years. Pöyry used yield models for South Australia for pine modelling and the University of Melbourne yield model for eucalypt plantation growth modelling. Pöyry found that the additional sample plots established immediately prior to the field inspections had been accurately measured by RuralAus. Pöyry has not modelled a thinning in any of the projects due to lack of markets for products from thinnings; the eucalypt plantations are scheduled for clear felling as pulpwood at about age 15 years and the pines are scheduled for clear felling at age 25 years.

It was noted there is a minor error in the Pöyry report for Project 5c; Figures 3.1 and 3.3 are identical. It is thought that Figure 3.1 refers to plot data for Shining gum (not Radiata pine).

Conclusion: We conclude that:

- Pöyry has used a suitable system for estimating standing volumes. There were several plots measured with unusually low standing volumes, but Pöyry correctly allowed for such anomalies.
- Pöyry has recognised the number of sample plots measured is less than ideal, resulting in higher Probable Limits of Error. Better inventory information would be obtained from measuring more sample plots, but it is likely the result will be similar.
- The growth models used for both eucalypt plantation and pine plantation future growth estimates are appropriate, recognising there are no Kangaroo Island specific growth models for pine or eucalypt plantations.
- The relationship between Total Standing Volume and Total Recoverable Volume of 95% is appropriate to allow for losses during harvesting. Nevertheless, it is recognised that in plantations with low standing volumes, recoverable harvest volume can sometimes be less than this.
- Not modelling a thinning is a reasonable approach given the current difficult softwood market conditions on Kangaroo Island and lack of plantation grown eucalypt sawlog markets.
- Mean Annual Increment varies with age; Pöyry has taken a conservative approach to future growth rates both in the eucalypt plantation yield forecasts and in the pine plantation forecasts.
- For pine forecasts, Pöyry used stand tariff tables from Bulletin 23 (“Yield regulation in South Australian Pinus radiata plantations”); tables in this publication are based on plantations with initial stocking between 1400 and 2000 trees per hectare. Project 4c and 5c pine plantations are stocked at about 1000 trees per ha. It is likely that information from current standing volumes will slightly under-estimate future growth rates of pine trees at Lycurgus plantation.
- Pöyry used a blue gum density conversion estimate of 1040 gm/m<sup>3</sup> to convert from cubic metres to GMT. Other analysts use slightly different conversion factors, but the Pöyry estimate is considered reasonable.
- Eucalypt moisture content conversion from GMT to BDMT of 49% used by Pöyry is considered satisfactory.
- The Pöyry comment that access to the eucalypt sawlog market in Tasmania is likely to be prohibitively expensive is a valid observation. Current mill door prices for plantation grown eucalypt sawlogs in Tasmania are about \$80/GMT. This compares with a Tasmanian delivered pulpwood price of about \$91.14/GMT. (This is comparison is based on a price of \$207.40/BDMT, less 52% green recovery which equates to \$107.84/GMT, less 2.5% stockpiling losses which equates to about \$105.14/GMT, less port and port processing costs of about \$13 to 15/GMT which equates to about \$91.14/GMT). It is clear the price of eucalypt sawlog is lagging behind the price of pulplogs.

#### Pöyry Section 4: Forest management costs

These costs were provided to Pöyry by RuralAus Plantation Management Pty Ltd, as confirmed in discussions with Peter Kinnear of RuralAus Plantation Management Pty Ltd on 8<sup>th</sup> October 2009.

Conclusion: We conclude that Pöyry has used appropriate management costs.

#### Pöyry Section 5: Markets

Pöyry has provided commentary on both softwood and hardwood roundwood market prospects. The softwood sawlog market relies heavily on a viable sawmill on Kangaroo Island to process the logs. Pöyry noted that the Timber Creek Pine sawmill obtains its logs mainly from the SFMA pine plantations on Kangaroo Island, but there is a supply gap from the SFMA estate during the years 2022 to 2027. It is possible pine logs from Project 4c and 5c plantations could be used to fill this supply gap. Having discussed viability of the Timber Creek Pine sawmill with its Administrators, we agree with the Pöyry comments that there is a substantial risk that the mill may no longer be operating by the time the Project 4c and Project 5c trees mature. The Timber Creek Pine sawmill Administrators confirmed that log prices in April (at the time

of the report) matched Pöyry numbers, but advised since then stumpage prices have been significantly discounted. Further comments are provided in this report on an alternative market for the Project 4c and Project 5c pines.

The eucalypt woodchip market requires a port to be constructed on Kangaroo Island. A decade ago, some industry commentators considered an even age class area of 10,000 ha of blue gum plantations provided sufficient volume to support an export woodchip facility. Now it is considered that a larger area of plantations is required to justify an export woodchip operation. Prior to being placed in receivership, Great Southern Ltd had plans to develop a blue gum estate on Kangaroo Island of about 20,000 ha and to build an export facility in time for woodchip sales from about 2015. Unfortunately their planting program ceased in 2008 when the total blue gum resource on Kangaroo Island was only about 14,500 ha. The comments Pöyry makes about risks of port development now that Great Southern Ltd is in Receivership are valid. Pöyry did not provide comment about how they calculated the port costs of \$17.00/GMT or the port profit margin of \$13.92/GMT, but these costs are in line with our discussions with Great Southern Ltd staff early in 2009.

Conclusion: We conclude that:

- There is a substantial risk that the Timber Creek Pine sawmill may no longer be operating by the time the Project 4c and Project 5c trees mature. Therefore it may be necessary to identify other softwood log markets. Pöyry has identified there are no other alternative markets. However, it is possible the product could be chipped and exported (from a hardwood woodchip facility) if there was a viable woodchip export facility on Kangaroo Island.
- An export facility needs to be built on Kangaroo Island in order for plantation viability. The area of hardwood plantations on Kangaroo Island is at the low end limit to justify a port facility, particularly if the facility could be used to export softwood chip, either from existing plantations or as residue from the Timber Creek Pine sawmill.
- The FOB price for blue gum woodchip has been adjusted downwards by \$4.00/BDMT to \$203.70/BDMT to allow for additional shipping time from Kangaroo Island to Albany. This is a conservative approach (with other analysts using smaller adjustments), but is an acceptable assumption.
- Hardwood woodchip stockpile losses of 3% have been allowed by Pöyry. This is a conservative approach (with other large-scale operators using a 2.5% loss factor), but is an acceptable assumption.
- Hardwood harvesting and chipping costs of \$33/GMT have been used by Pöyry. This is a conservative approach (with independently sourced information suggesting \$30/GMT), but is an acceptable assumption.
- Stumpage prices for pine roundwood used by Pöyry were valid at the time of preparing their report. However, since then, Timber Creek Pine has been paying significantly reduced stumpages for all three roundwood products (preservation log, small sawlog and large sawlog) as a means to improve their viability.

#### Pöyry Section 6: Woodflows

Woodflows for the woodchip market require a port to be constructed on Kangaroo Island. Pöyry noted that annual fees are high and as a result, a better financial outcome is achieved by an early harvest. They commented on reducing the rotation length for the eucalypt plantations.

It was noted that Pöyry scheduled harvesting of Project 4b trees over two years. Also Project 4c pine harvesting was scheduled over two years.

The approach taken by Pöyry is generally supported, but more detailed comment is provided below, particularly for softwood log sales.

Conclusion: We conclude that:

- Eucalypt plantation woodflow assumptions used by Pöyry are reasonable. It is recognised a port needs to be developed before any product can be sold.
- There are financial opportunities for bringing forward harvest dates in Project 4c and 5c.

#### Pöyry Section 7: Risks

Pöyry has identified a number of agricultural and market risks applicable to the Projects which we generally support. Geddes Management Pty Ltd has two general comments applicable to risks. Firstly, monitoring of plantations and taking appropriate corrective action in the event of pest or disease outbreaks is an important plantation management requirement. This is what Pöyry is referring to in the first paragraph of Section 7 of each of the four reports. Secondly, Pöyry comments on potential climate change impacts; offsetting their negative comment is the fact that Kangaroo Island generally has a reliable rainfall due to its close proximity to ocean humidity influences. A risk not identified by Pöyry was a potential negative impact on Shining gum chip price. In Tasmania, the woodchip price is slightly less than that on the mainland. This is because most mainland plantations are blue gums (single species) while in Tasmania there is mostly Shining gum with some blue gum in the chip mix. Shining gum has a lower pulp yield than blue gum.

Conclusion: We conclude that Pöyry has appropriately identified most plantation risks.

#### Pöyry Section 8: Results

Pöyry has used a cashflow of expected future costs and revenue over the remaining modelled life of the plantation, and various Discount Rates in order to calculate Net Present Values of each plantation. This is an accepted methodology for calculating plantation values.

Pöyry has calculated the Net Present Values of each project at an 8% Discount Rate to be:

- Project 4b trees planted in 2001: \$266/ha
- Project 4b trees planted in 2002: \$91/ha
- Project 4c trees planted in 2001: -\$1749/ha
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- Project 5b trees planted in 2002: -\$236/ha
- Project 5c trees planted in 2002: \$745/ha

Clearly the projects with the longer rotations (4c and 5c) are less viable because of the high annual costs and low returns. It is interesting to note the improved Net Present Value in Project 5c compared with Project 4c. The main difference is that a large part of Project 5c is eucalypt plantation with a much earlier harvest date.

Pöyry provided Net Present Values using a range of Discount Rates. It is reasonable for higher Discount Rates than 8% to be used given the risks associated with establishing a port, the port pricing being competitive (possibly owned by a competitor and certainly a monopoly) and the estate not being sufficiently large to get the economies of scale & competitiveness in transport & harvesting. Nevertheless, while higher Discount Rates will reduce the Net Present Values, they will not change the status of positive and negative returns of each project.

The pine options (Projects 4c and 5c) use stumpage prices that were being paid by Timber Creek Pine sawmill at the time of the Pöyry study. Since then, pine stumpage prices have been heavily discounted. This will result in an even poorer outcome from these projects.

Conclusion: We conclude that:

- A discounted cashflow is an appropriate method in which to calculate a Net Present Value. This is an accepted plantation valuation method in Australian forestry and meets the requirements of the Australian Standard for Valuing Commercial Forests.

- It is appropriate in Net Present Value calculations to use pre-tax cash flows and to calculate the cash flows in real terms.
- The Net Present Values for the pine projects will be significantly worse if current discounted stumpages paid by Timber Creek Pine were used.

## Export softwood woodchip option

An export option for Project 4c and the softwood component of Project 5c is to chip all roundwood and sell as export softwood chip at the same time as the eucalypt chip is being exported.

Softwood chip export prices<sup>1</sup> for chips shipped from Portland, Victoria were US\$140.50/BDU (US\$129/odmt) in the first half of 2009. Australian softwood chips were close to the lowest cost chips delivered to Japan in the second quarter of 2009, only slightly higher than the price for Douglas-fir chips from the US. Radiata pine from New Zealand and spruce-pine-fir chips from Canada are currently the highest cost fibre delivered to Japanese pulp mills.

In order to convert US\$140.50/Bone Dry Unit to a green tonne price to the grower, a number of factors need to be taken into account including:

- the US:Australian dollar exchange rate (used 90c for this exercise)
- dry matter conversion (used 48% - this is normal for Radiata pine)
- chipping costs (used \$12.50 per green tonne) – based on chipping 150,000 tonnes per year
- transport from the chip mill to the wharf (used \$4.85 per green tonne)
- chipping loss factor (used 9%)
- a deduction for loading cost, losses & chip purchasers profit (used loading cost<sup>2</sup> of \$20.00 per green tonne).

On this basis, the after costs value to the grower of US\$140.50/Bone Dry Unit chip at wharf is Australian \$1.21 per GMT roundwood equivalent. This price is very sensitive to exchange rates; the equivalent return at a US:Australian dollar exchange rate of 70 c is \$17.89 per GMT.

Using Project 4c as an example, Pöyry calculated the Net Present Value at 8% Discount Rate to be minus \$1749/ha. With current US:Australian dollar exchange rate of 90 c, the Net Present Value is minus \$2689/ha. If the US:Australian dollar exchange rate was 70 c, the Net Present Value is positive \$132/ha; a significant turn around.

Some financial analysts are suggesting that the US:Australian dollar exchange rate is likely to remain high in the foreseeable future as the Australian economy improves compared with the rest of the world. But at some stage, it is possible the exchange rate will return to levels experienced in previous years, providing opportunities for export softwood sales, as long as there is an export woodchip available on Kangaroo Island.

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<sup>1</sup> Wood Resource Quarterly.

<sup>2</sup> Facility cost based on indicative prices suggested by Brett Joynes (National Infrastructure Manager for Great Southern Ltd) for volumes exceeding 150,000 tonnes per year, in a telephone discussion on 13<sup>th</sup> May 2009. More information needed. Mr Joynes said loading costs would be significantly less for higher annual throughputs.