

Contribution to the Tasmanian Round Table for
Sustainable Industries Project

Comments on the Forestry Tasmania / Gunns Limited Long Term Pulpwood Supply Agreement.

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Forestry Tasmania / Gunns Limited Long Term Pulpwood Supply Agreement

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1. Introduction

The Heads of Agreement for the Long Term Pulpwood Supply Agreement (LTPSA) was published on 18 October 2007. This report offers a preliminary analysis of the LTPSA in the context of earlier reports produced for the Tasmanian Round Table for Sustainable Industry Project. Among other things, these reports estimated the value of subsidies from Tasmanian taxpayers to Gunns Limited consequent on what we regarded as the low sale price of Forestry Tasmania (FT) pulpwood¹. The present report is preliminary, as the final version of the LTPSA will not be reached until 30 November 2007.

Until now third-party analyses of FT wood supply have been hampered by secrecy surrounding supply agreements, and subsidy estimates have necessarily been based on best-estimate assumptions as to tonnages and prices. Greater transparency is therefore welcome, and it is hoped that the final version of the LTPSA will also be made public.

Main conclusions

- (i) *Distribution of price risk*: Insufficient information is available to assess the distribution of price risk between the two parties to the contract.
- (ii) *Floor prices*: If CPI inflation averages 2.5% p.a. (the mid-point of the Reserve Bank target range) over the 20 year life of the agreement, the LTPSA provides for a *fall* in the real floor price of both native forest and plantation hardwood.
- (iii) *Average realised prices*: On the basis of FT forecasts of average selling prices over the life of the contract, it is likely that achieved average selling prices of hardwood pulpwood will *fall* in real terms over the life of the contract. Were that performance to be mirrored by average selling prices for the remaining 1.3m tonnes of sustainable FT annual harvest (i.e. wood supply not covered by the LTPSA), it is likely that the rate of return on FT assets will fall over time.
- (iv) *5-year contract renegotiation*: There are two significant ambiguities in the LTPSA, relating to FT rate of return on equity and the possible alternative use of the FT estate as carbon sink forest. Resolution of these ambiguities would help reduce sovereign risk under the contract.

¹ See the two earlier reports of the Tasmanian Round Table for Sustainable Industry Project: 'Sustainable Development in Tasmania: Is the Proposed Pulp Mill Sustainable?', and 'Response to Report 1'. Both can be downloaded from <http://www.lec.org.au>

2. Interpretation

Much of the LTPSA deals with wood-supply conditions such as rates of uptake, harvesting responsibilities, areas from which wood is to be sourced, and time-averaging of tonnages. In what follows we focus on pricing issues.

LTPSA includes separate pricing schedules for native forest (NF) and plantation (P) pulpwood, although the basic structure of the schedules is the same. In each case, LTPSA specifies a floor price which, in nominal Australian dollars, is a series of four to five-year steps over the 20-year life of the contract.

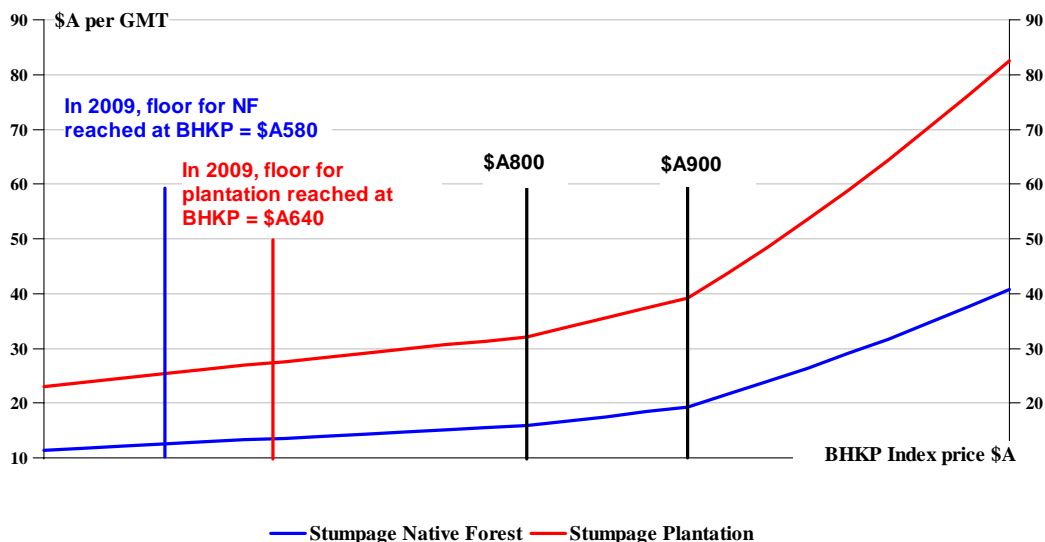
The price above the floor is indexed, in a nonlinear way, to the world price of bleached hardwood kraft pulp (BHKP). This price is expressed as the average 6-month BHKP PIX index value in Euros converted to Australian dollars at the 6-month Euro/Australian dollar exchange rate².

The stumpage schedule comprises three segments relative to the BHKP price – a segment up to the base BHKP price of \$A800, a segment for BHKP prices between \$A800 and \$A900, and a segment above \$A900. The two ‘kinks’ in the schedule – at \$A800 and \$A900 – are not indexed to Australian inflation and, unless changed by agreement between the parties as part of five-yearly contract reviews, are constant over the life of the contract.

The two schedules are illustrated in Figure 1, which has the BHKP price in Australian dollars on the horizontal axis, and the stumpage price per green metric tonne (GMT) on the vertical axis. At the base BHKP price of \$800, the corresponding base prices for native forest and plantation pulpwood are \$15.75 and \$32.00 respectively. The BHKP prices which correspond to the 2009 floor prices are also shown in the Figure.

An important feature of the pricing schedule is that it gets steeper as the BHKP price increases – in other words, the return to FT (and hence taxpayers) by way of stumpage increases by more if BHKP is, for example, \$100 above the base price than the fall in return to FT if BHKP is \$100 below the base price.

Figure 1 Forestry Stumpage Price Schedule
Nominal \$A



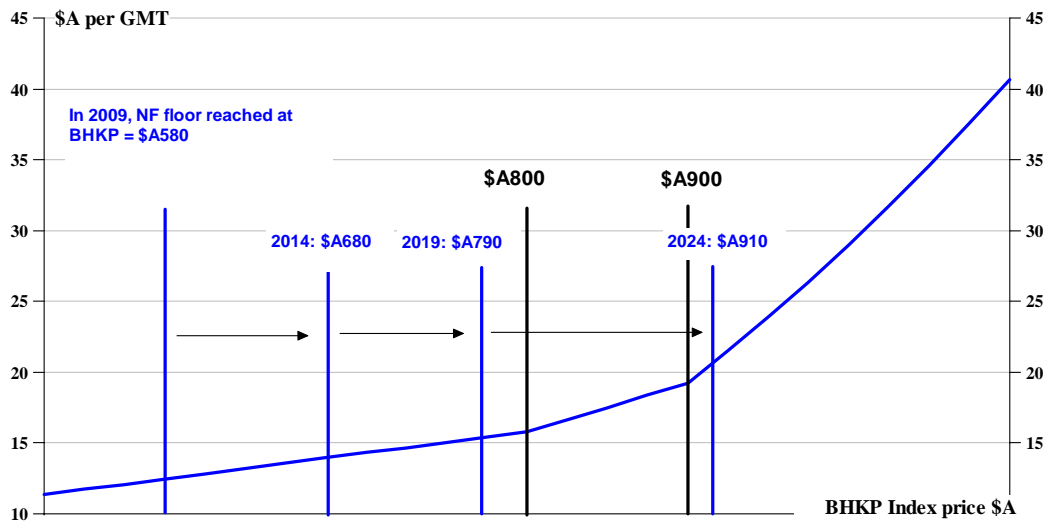
² This index is published by FOEX Indexes Limited.

The BHKP PIX index was first published in May 1998, at which time it stood at \$A722; since then it has exceeded \$A1200 and fallen below \$A650. Its current value (30 October 2007) is \$A818, which is slightly above the base price in the LTPSA. It can be inferred from Forestry Tasmania forecasts (in the *Fact Sheet* accompanying the release of the Heads of Agreement) that their forecast is for the BHKP index to average around \$A885 over the 20-year life of the agreement.

In principle it is possible to evaluate the degree to which the two parties to the contract are sharing price risk under the terms of the LTPSA, but in practice this is a very complicated exercise. It depends on two main factors:

- the expected volatility of the BHKP \$A price around its mean, which itself depends on the volatility and mean of the BHKP PIX index, the €/ \$A exchange rate, and the relationship between the two;
- the fact that the relevant section of the pricing schedule is changing over time. To illustrate this last point in terms of the NF schedule, Figure 2 shows how the effect of the 5-yearly rises in the nominal floor price is to 'chop off' successively larger lower-tail sections of the stumpage schedule. By 2024, the nominal floor price (\$A910) is greater than the forecast average price over the 20-year life of the contract (\$A885). In all likelihood this means that the contractors are forecasting the price to be close to the floor in the latter stages of the contract.

Figure 2 Shifts along the NF Stumpage Schedule as Floor Price rises
Nominal \$A

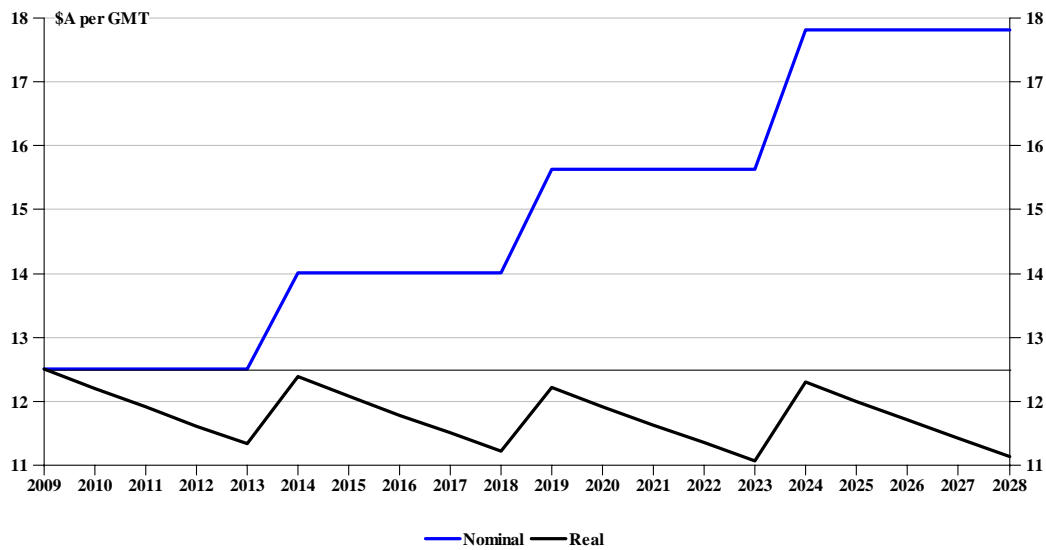


3. Forecasts of Real Prices

Rather than attempt to evaluate the distribution of price risk, this section focuses on forecast mean prices, and attempts to evaluate whether *real* floor and forecast prices are expected to rise or fall over time (all the data in Figures 1 and 2 are in nominal terms). The nominal floor prices specified in the LTPSA are shown in the top panel of Figures 3 and 4. For native forest timber, the floor price rises from a starting value of \$15.75 per GMT to \$17.80 at the end of the contract period; for plantation timber the nominal floor price rises from \$27 to \$37.80.

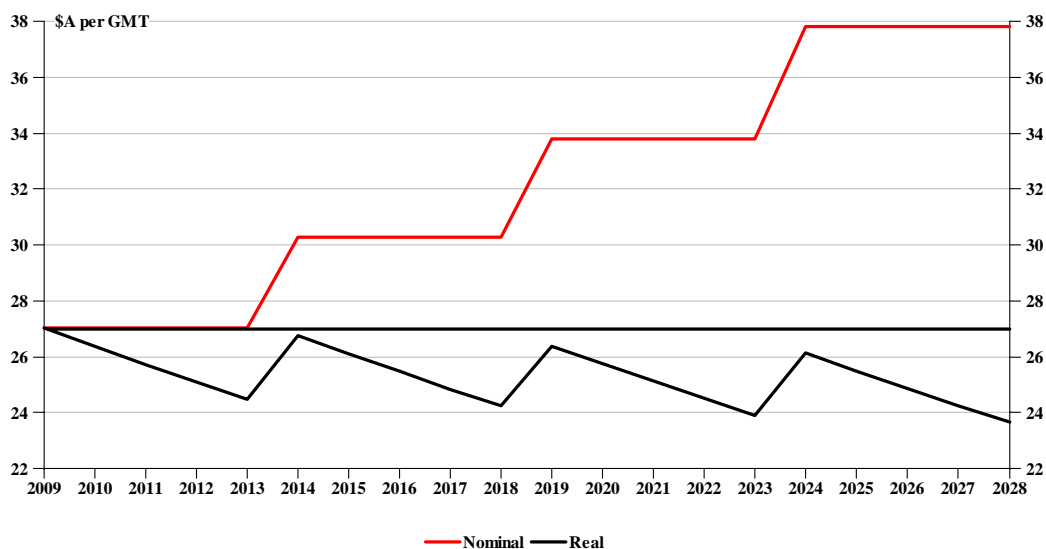
Of more interest, since they may be relevant to the determination of real returns to Forestry Tasmania, are the *real* floor prices – the prices after taking account of CPI inflation³. For this calculation it is assumed that, from the start of the contract period (2009) the rate of CPI inflation is 2.5% per annum, which is the midpoint of the Reserve Bank’s inflation-target range. As shown in the bottom panel of Figures 3 and 4, real floor prices decline over time. By the end of the contract period the real floor price for both NF and P pulpwood is around 10% lower than at the beginning. So if BHKP prices turn out to be low enough that the floor price is binding for most of the contract period, the contract implies falling real prices.

Figure 3 Nominal and Real Floor Prices
Native Forest Pulpwood



³ Whether the real floor price is binding depends on realised values for BHKP over the contract period.

Figure 4 Nominal and Real Floor Prices
Plantation Pulpwood



Another way of tackling this question is to examine the FT forecasts of average realised prices over the life of the contract⁴. These are that:

- native forest stumpage rises from about \$14/GMT in 2006/07 to a forecast average of just over \$17 over the 20 year contract;
- plantation forest stumpage rise from \$19 in 2006/07 to a forecast average of about \$35.

Figure 5 plots two time series for each of Native Forest and Plantation prices. In each case the horizontal line is the FT forecast of average nominal prices achieved over the contract period. The upward sloping lines represent the indexed price – that is, the nominal price required to achieve the same real amount per GMT as was achieved in 2007 for each of NF and P pulpwood.

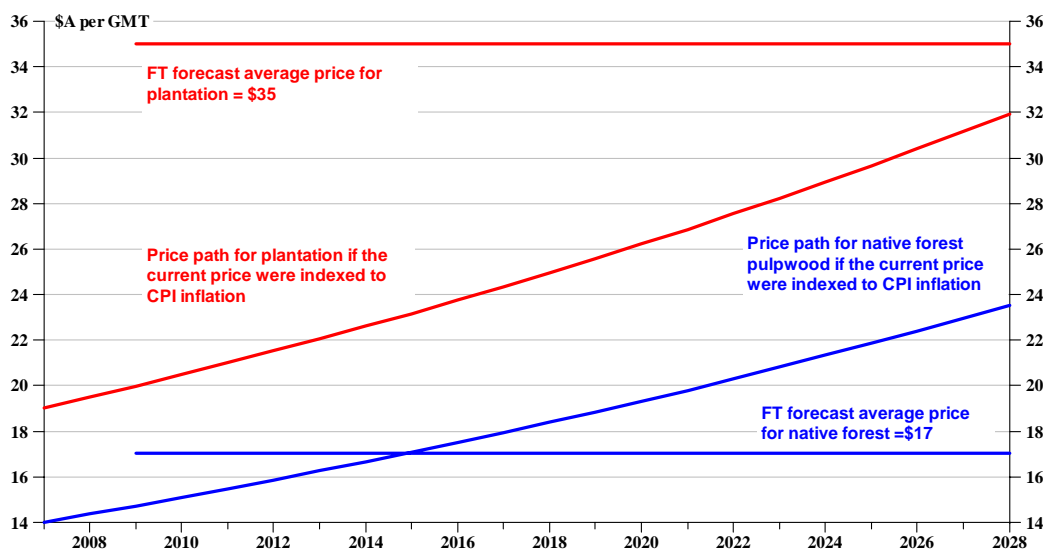
For plantation (P) timber, the forecast average price is always greater than the indexed price, so it can be concluded that the achieved real P price is forecast to rise. It is a different story for native forest (NF) timber – in that case the forecast average NF price lies *below* the indexed price for most of the contract period, so it can be inferred that the real average price is forecast to fall.

Clearly, it is the trend in real NF prices that are of overwhelming importance for real FT returns. This is because in 2006/07, production of plantation pulpwood comprised only 6% of total pulpwood production and plantations comprised only 8% of the total FT forest estate⁵. It is highly likely, therefore, that the FT forecasts imply *declining real returns to overall pulpwood supply* over the life of the contract. More detailed forecasts would be required to quantify the extent of this fall.

⁴ See Forestry Tasmania, *Fact Sheet: Pulp Mill Wood Supply Agreement*, October 2007.

⁵ See Forestry Tasmania *2007 Annual Report*, p.3. Because Forestry Tasmania has announced it will stop converting native forest to plantation, the importance of plantation supply is unlikely to rise significantly beyond 2006/07 levels.

Figure 5 FT Forecast Average and Current Prices
Nominal \$A



4. Conditions of 5-yearly reviews

The LTPSA provides for 5-yearly reviews of the agreement. Items explicitly listed for review include the tonnage of wood, the locations from which it is to be supplied, floor prices and the stumpage schedule.

With respect to the floor price, FT may be able to demonstrate that the 5-yearly change in floor stumpage is significantly different to 'the change in the reasonable cost of managing native forests', in which case a revision to the contract may be negotiated. Similarly, a review of the stumpage arrangements (which we take to mean the stumpage schedule) will take into account 'the relative profitability of managing forested lands for wood production'. Analogous contract provisions apply from Gunns' perspective; however we focus here on adequacy of returns to taxpayers.

The important issue is – what constitutes a 'reasonable cost of managing native forests' and what defines the 'relative profitability of managing forested lands for wood production'? The meaning of these phrases is not clarified in the heads of agreement.

From the point of view of Tasmanian taxpayers there at least two considerations in defining 'reasonable costs' and 'relative profitability' which require clarification:

- First, in a long-run supply contract the starting point for setting a selling price is to take into account *all* costs, not just variable costs. This implies that the forecast achievable price should yield a 'reasonable' rate of return on equity. The benchmark for State-owned enterprises is a 5% return on equity and it is difficult to see why a 'reasonable' rate of return to FT should be below this. Section 3 of the present report leads to the conclusion that real revenues to Forestry Tasmania are forecast to fall over the contract period. It can also be assumed that real variable costs, such as wages, will rise so that the real rate of return to Forestry Tasmania assets is likely to fall.

It is noted that these forecasts are just that – forecasts, and that different rate-

of-return outcomes may occur during any particular 5-year period. However, 'relative profitability' should be clarified in the LTPSA. Specifically, a requirement for Forestry Tasmania to achieve a reasonable rate of return on equity should be included in the LTPSA clauses relating to 5-year contract renegotiation.

- Second, a long-term supply contract should take account of opportunity costs as part of 'reasonable costs' – indeed, *opportunity cost* (i.e. the cost of pulpwood supply to Gunns in terms of the most valuable foregone alternative) is the standard definition of cost. In agreeing to supply 1.5m GMT per annum over a 20-year period Forestry Tasmania is giving up the right to use that pulpwood for other purposes. Over the contract period more valuable alternative uses for the FT forest estate may emerge, notably from establishment of emissions trading schemes in which FT is eligible to participate by using the FT estate as a carbon sink forest⁶. These may be Australian or international trading schemes.

Recent estimates (in 2005 prices) of the discounted cost of current CO₂ emissions over a 100 year life in the atmosphere range from \$US20 per ton to \$US50 per ton, and most estimates predict that these costs will rise over time⁷. At this stage it is not clear how these costs translate into the price the market will be prepared to pay for carbon sequestration in native forests.

However

- given the long timeframe of the LTPSA,
- the relative novelty of carbon sinks as an alternative use for commercial production forest, and
- the possibility that this alternative use will become more valuable than pulpwood supply,

this opportunity cost should be explicitly identified as a 'reasonable cost of managing native forests' so as to remove any ambiguity between the contracting parties.

The 5-year reviews outlined in the Heads of Agreement provide for dispute resolution involving an independent expert, although the terms of appointment of such an expert are yet to be specified. But it is likely that when one of the parties (Forestry Tasmania) is a State-owned enterprise the reality of the Tasmanian political process is that it will impinge on dispute resolution if it involves important contract ambiguities such as the two referred to above. So it may help to reduce sovereign risk if these matters are clarified in the LTPSA rather than left to be resolved in future 5-year reviews.

End.

⁶ In addition to the well-known intention of both the Coalition and the Labor opposition to introduce emission trading schemes in the near future, there has been international interest in purchasing carbon sink forests in Australia. Also, in the recent review of Managed Investment Schemes for forestry, it was decided to introduce new MIS arrangements applicable to carbon sink forests.

⁷ Parry, Walls and Harrington, 'Automobile Externalities and Policies', *Journal of Economic Literature*, June 2007, p.377.