# WEST RFA HORSHAM FMA

### **Timber Resource Analysis**

This report summarises the Timber Resource Availability analysis (TRA) for Horsham Forest Management Area (FMA), which has been undertaken as part of the West RFA.

Note that the results of this analysis are based on a review of Timber Resource Availability undertaken by David Holmes, as a consultant to the Department. New inventory and assessment information undertaken by Regional staff was used in this analysis.

This version of the TRA assessment is based on revised information received from Regional staff on 15/12/99.

These results are indicative only and are not to be interpreted as a change in the sustainable yield rate. The sustainable yield rate will be determined once the RFA is finalised, and may incorporate additional modelling.

### **1. Current Commitments**

The current legislated sustainable yield rate for Horsham FMA is 800  $\text{m}^3$ /year. Current licence commitments in the Horsham FMA are 880  $\text{m}^3$ /year of durable species sawlog. Note that total licence allocations are reconciled with sustainable yield over a 15 year Timber Supply Period.

### 2. Resource information

The following area statement has been derived from the 1998 inventory undertaken by Regional staff, and has been updated based on field surveys undertaken by Regional staff in December 1999. This area statement is based on a more detailed definition of productive forest, and incorporates buffers where they affect productive forest.

Forest Area	SQ 1	SQ 2	Block group	
	Area (ha)	Area (ha)		
Woohlpooer	1,448	898	Woohlpooer	
Cherrypool		715	Cherrypool	
Daahl		300		
Brooks Road		340		
Mt Bepcha		140		
Billywing		90		
Conniwerrico		150	West Wimmera	
Bogalara		100		
Kadnook		220		
Rocklands Road		60	Southern Wimmera	
Shrives		60		
Kalingur		90	Central Wimmera	
Blythewood		80	Stawell-Northern Grampians	
Ledcourt		210		
Illawarra		150		
Glynwylln		160		
Total	1,448	3,763		

Inventory plots were established in 1998 in the Woohlpooer SQ1 and SQ2 areas.

Stratum	Block	Plots	Plots Per Ha
Site Quality 1	Woohlpooer	104	1 per 13.9 ha
Site Quality 2	Woohlpooer	36	1 per 24.9 ha
	All other areas	nil	_

However, based on the revised area statement, there is now a considerably greater area of SQ2 outside Woohlpooer (2,865 ha) which is not represented by any plots. Regional staff consider that Woohlpooer SQ 2 stands are similar to those in the other areas. While it is desirable to have plot data from the latter, an analysis can still be made using the Woohlpooer SQ 2 plot data to represent the whole of this stratum. However, preliminary estimates indicate that SQ 2 areas outside Woohlpooer will produce approximately 40% of the sawlog resource. If there is a variation of  $\pm 25\%$  in the merchantable size classes between Woohlpooer SQ2 and SQ 2 in other areas, the impact on the resource estimate will be in the order of  $\pm 10\%$ . As a result, assuming that SQ 2 stands in all areas are represented by the Woohlpooer plots does involve a degree of risk.

Growth data was supplied from 5 CFI plots (four thinned and one control). The plots were established in 1977 and re-measured in 1987, 1991, 1993 and 1996.

## 3. Methodology

The consultant's report (20/12/99) gives a detailed summary of the methodology used for this analysis. The broad assumptions of the modelling process are as follows:

- Conversion of the even-aged SQ 1 stratum to an uneven aged forest structure over a long-term planning horizon (150 years)
- Management of the uneven-aged SQ 2 stratum for the production of sawlogs and continuing improvement of the condition of these forests through thinning, single tree and group selection
- Retention of non-merchantable trees and merchantable trees over 80 cm dbh for habitat purposes.
- No additional exclusions have been made to meet Code of Forest Practices requirements.

Spatial SFRI data were not available for this area, so it was not possible to model the available area net of Code of Forest Practices exclusions. However, the Region have identified available areas in the revised area statement, incorporating buffering where appropriate.

• The area available is net of the draft CAR reserve system identified for the RFA.

## 4. Results

The results of the analysis indicate that based on the data available and the analysis procedure adopted, these forest areas are capable of supplying 1,050  $\text{m}^3$ /year of sawlog class material.

A contingency allowance of 10% needs to be applied to this figure, to allow for limitations in definition of productive area and to allow for factors not readily identified by the model.

In light of the increased reliance on this volume on SQ2 areas (compared with earlier analyses), and the fact that the majority of this stratum is not represented by inventory plots, a further allowance of 5% has been included to cover the risk associated with applying Woohlpooer SQ2 plot averages to the entire SQ2 stratum.

Based on a total contingency allowance of 15%, the available volume from the Horsham FMA should be 890  $m^3/year.$ 

This suggests that based on existing data and on the assumptions of the model (particularly those relating to the availability of sawlog from the SQ2 stratum), licence commitments can continue to be met in this area.

The results from these Timber Resource Analyses can only be considered indicative, although the range of key issues has been addressed in these analyses, utilising currently available data.

A statewide review of sustainable yield is required in 2001 and will utilise SFRI based resource data wherever possible. This review will also incorporate regionally defined prescriptions and constraints, and will provide opportunity for community input.