



**SUBMISSION BY GREEN TRIANGLE REGIONAL PLANTATION COMMITTEE**

**TO**

**THE HOUSE OF REPRESENTATIVES INQUIRY  
INTO THE INTEGRATION OF REGIONAL RAIL AND ROAD FREIGHT TRANSPORT  
AND THEIR INTERFACE WITH PORTS**

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**1. INTRODUCTION**

The Green Triangle Regional Plantation Committee (RPC) was formed in July 1996 to represent the major interest groups associated with timber and farm forestry in the Green Triangle Region of South East South Australia and South West Victoria. Funded by the Federal, South Australian and Victorian Governments, the RPC employs a full time executive officer based at 19 Penola Road, Mt Gambier. The current Executive Officer is Dr John Kellas, who has had an extensive career in forestry research and development and forestry education.

In 2002, the Green Triangle Regional Plantation Committee became an incorporated body and in 2004 conducted a strategic planning workshop to better define its role and function. Thus the RPC's vision is:

*A sustainable forestry sector providing long-term economic, environmental and social benefits to the Green Triangle region.*

And a mission:

*To provide a forum for cooperation between forest industry stakeholders in order to promote and facilitate sustainable development of the forest industry in the Green Triangle region*

**1.1. What does the Green Triangle RPC do?**

The RPC brings together a range of stakeholders and interested parties (growers, processors, State and local government, natural resource managers, farm foresters, consultants, environmental groups) in the plantation sector from across the region, to work on issues addressing planning, infrastructure, education, training and promotion of forest-based industries and associated enterprises.

There are benefits from the communication and networking between local, State and National Governments, the industry sector and its associations, the farm forestry community and the general community. The RPC facilitates communication flows within the sector and with other interested organisations and individuals. The RPC also has an active program for promoting the importance and the image of the sector to the wider community. This program includes funding projects with related natural resource management organizations, educational institutions and environmental non-government organisations.

The RPC also collates data for the region for input to the National Plantation Inventory and provides data for regional planning to assist with infrastructure development.

## **2. THE GREEN TRIANGLE REGION**

The Green Triangle Region is located across the South East of South Australia and the South West of Victoria. The Region of some 4.5 million hectares is bounded to the South East by Warrnambool, Horsham and Keith to the North, Kingston and the Southern Coastline with a resident population of around 200,000 people.

The Region comprises eleven local government areas (City of Mount Gambier, Shires of Glenelg, West Wimmera, Southern Grampians and Moyne and District Councils of Grant, Wattle Range, , Naracoorte-Lucindale and Robe, Kingston, and Tatiara. The Region also comprises parts of the Federal Electorates of Barker, Mallee and Wannon.

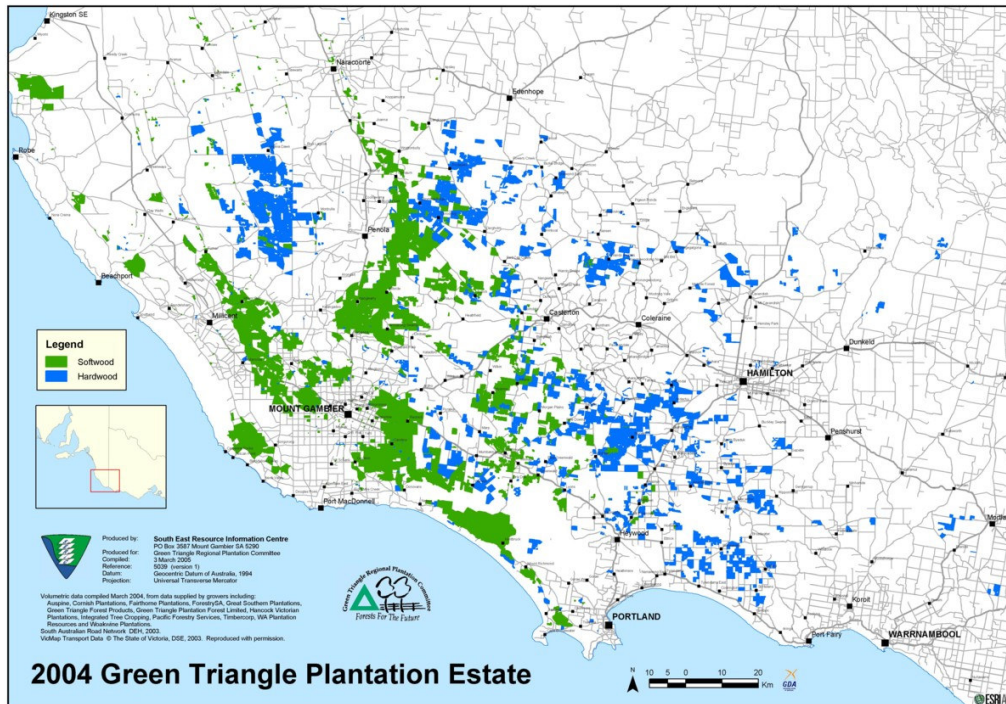
The principle industries of the Region are plantation forestry and wood processing, wine grape production and winemaking, dairying, agriculture, fishing, aquaculture, tourism, transport, engineering, and more recently mining for mineral sands, collectively generating in excess of \$3 billion in regional gross domestic production.

### **2.1. Forestry Industry**

The largest single sector is the forest industry which represents about 30% or \$1 billion annually to regional GDP and employs in excess of 5,000 jobs across the Green Triangle Region. The plantation resource consists of two components; Pine and Blue Gum, totalling approximately 291,000 ha (Figure 1). A well established and mature Pine resource of about 160,000 ha generates about 4 million tonnes of wood annually for a wide range of finished products including sawn wood, panel products, posts and poles and wood chips (LCRDB 2004). The bulk of the production is processed within the region and transported to local, state, national and international markets.

The Green Triangle Region has also seen the rapid expansion of Blue Gum plantations in the past decade in response to the Vision 2020 objectives, new investment funding and an established skills base to support such an expansion in an area already noted for its suitable environmental and climatic conditions. The updated National Plantation Inventory for the region indicates that there are approximately 131,000 ha of Blue Gum, with about 11,000 ha planted during 2004 (GTRPC Unpublished data). The anticipated output from these plantations is export wood chips for pulp and paper production.

Collectively, the plantations in the Green Triangle Regional represent 17% of Australia's plantation estate and currently produce nearly two thirds of Australia's wood production.



**Figure 1. Plantation areas in the Green Triangle Region, 2004.**

### **3. TRANSPORT NETWORKS**

#### **3.1. Green Triangle Rail Network**

Currently there is no operation rail freight infrastructure in the South East of South Australia as the broad gauge rail lines connecting Mount Gambier to Wolseley (183 km), Mount Gambier to Millicent (50 km) and Mount Gambier to Heywood (89 km) were decommissioned several years ago. The Port of Portland is serviced via the standard gauge link between Maroona (Ararat) and Portland, which then provides access to the national rail network.

Supporters of rail infrastructure envisage the standardisation of the track from Heywood to Penola and the establishment of bulk handling facilities for woodchips (and potentially other commodities) at Penola.

#### **3.2. Green Triangle Road Network**

The primary arterial road network in the Green Triangle Region includes

- The Princes Highway between Warrnambool and Portland and Heywood, Mt Gambier and Millicent
- The Henty Highway between Hamilton and Portland
- The Riddoch Highway between Keith and Mt Gambier

Traffic volumes and freight are significant on these routes, particularly close to the major freight centres of Mt Gambier and Portland where traffic volumes exceed 5000 vehicles per day. Commercial traffic is a significant proportion of traffic, exceeding 33% of total traffic on routes between Mt

Gambier and Portland. Total road freight carried on the roads in the corridor exceeds 4 million tonnes per annum.

Other significant arterial roads include the Glenelg Highway, the Wimmera Highway, and the Princes Highway west of Millicent, the Southern Ports Highway and the Mt Gambier – Portland road via Nelson. These are supported by secondary arterial roads connecting to these links and an extensive network of local roads.

As indicated above, the annual harvest of Pine in the Green Triangle Region has been relatively constant at about 4 million tonnes, being delivered primarily to Mt Gambier, Tarpeena, Nangwary, Dartmoor and Portland using the primary, secondary and tertiary road network criss-crossing the region. While the total tonnage is reasonably constant, the particular roads used for delivery may vary, and are generally of a standard suited to year round haulage. The Pine industry, together with the relevant local government authorities have successfully implemented TIRES and Roads to Recovery funding to upgrade the existing infrastructure network based on the then existing plantation estate.

The movement of the manufactured products out of the region is by road using the major road networks to Adelaide, Melbourne and Sydney.

### **3.3. Port of Portland**

The Port of Portland is a sheltered, all weather, deep-water port strategically located between the capital cities of Melbourne and Adelaide. There are four common user berths catering for most types of bulk and general cargo vessels and a fifth special purpose berth dedicated to Portland Aluminium. Portland is within 10 nautical miles of coastal shipping lanes and 25 nautical miles of international shipping lanes.

The Port specialises in the storage and handling of bulk commodities and serves the region's rich agricultural, forestry, manufacturing and mining industries as well as regionally based aluminium and fertiliser producers. In excess of 4 million tonnes of product is transferred over the Port's wharves each year, of which some 2.6 million tonnes arrives at the Port by road.

The major products exported through the Port of Portland are grain (wheat, barley, canola & pulses), woodchips and logs (until June 2005), aluminium ingots and livestock (sheep & cattle) whilst the major import commodities are alumina, liquid pitch and fertiliser products.

The Port is privately operated by the Port of Portland Pty. Ltd., which is owned by Utilities Trust of Australia (a private infrastructure fund) & Australia Infrastructure Fund (a publicly listed infrastructure fund) both of which are managed by Hastings Funds Management.

## **4. PREDICTED RAW WOOD FLOWS WITHIN THE GREEN TRIANGLE REGION**

The GTRPC together with assistance from the plantation owners commissioned the South East Resource Information Centre (SERIC) to gather and collate information on the total plantation estate and determine likely raw wood flows to provide an understanding of the implications of the total

demands on infrastructure for the forestry and transport industries as an aid for local, state and national infrastructure planners. The information developed using this geographic information system (GIS) will also permit alternative infrastructure scenarios to be tested.

SERIC manages a series of natural resource databases that can be applied to the regional geographic information system. Two components of the system are the plantation database that identifies species, location and ownership; and the transport network database. SERIC, together with individual plantation growers, supplied predicted average annual harvest volumes for the periods 2005-2008 and 2009-2014. Using the established road transport network, growers nominated likely haulage routes, based on existing infrastructure, and indicated average annual tonnages for the respective time period along those roads. To protect confidentiality, growers were able to indicate routes without necessarily nominating a tonnage, until the road network reached a grower defined 'funnel point' (usually where the output from two or more plantations joined the network). Tonnages were then accumulated along the road network to the nominated points for processing. Wood movements regularly criss-cross the region, necessitating accumulation of tonnages in absolute values on any section of road. Wood tonnages going in opposite directions along a road were summed to give a total figure.

(Note: data on individual plantations or grower's estate are covered by confidentiality agreements with SERIC through the GTRPC).

Using the GIS, SERIC generated a series of maps showing the region's plantations and the predicted tonnages classified into 6 classes: Unspecified tonnage; 0-20,000; 20,000-100,000; 100,00-250,000; 250,000-1,000,000; and > 1,000,000 tonnes/year as an average annual value for each period, 2005-2008 (Figure 2) and 2009-2014 (Figure 3).

The basis for selecting these time periods was that the first was predominantly the existing movement of Pine with the gradual build up in the harvesting of the Blue Gum plantations. The second period represented the expected longer term contribution of Blue Gum to regional wood flows. Because rotation lengths have some flexibility, the actual year of harvest may not be determined at this time and buyers are likely to require continuity of supply, growers provided predicted estimates of harvest tonnages, averaged across the time period.

While there are many minor roads used, the principle roads are the Jubilee/Princess Highway from Millicent to Portland, the Riddoch Highway from Penola through Mt Gambier onto Nelson and then into Portland and the Casterton-Heywood Road. Generally the predicted tonnages during the first prediction period, 2005-2008, were less than 1 million tonnes/yr on any one road corridor, except for the approach into Portland where several main roads merge approaching the Port area.

Data for the second period, 2009-2014, when the Blue Gum harvest should have commenced, predicts that there will be approximately an additional 3.5 to 4 Million tonnes transported annually into the Port of Portland, assuming no onshore value added processing within the region. The data predicted that about 1 million tonnes per year will pass in or around Penola, making a total of 1.5 million tonnes

coming into Mt Gambier along the Riddoch Highway, the bulk of which would preferably be directed down the Princess Highway to Portland.

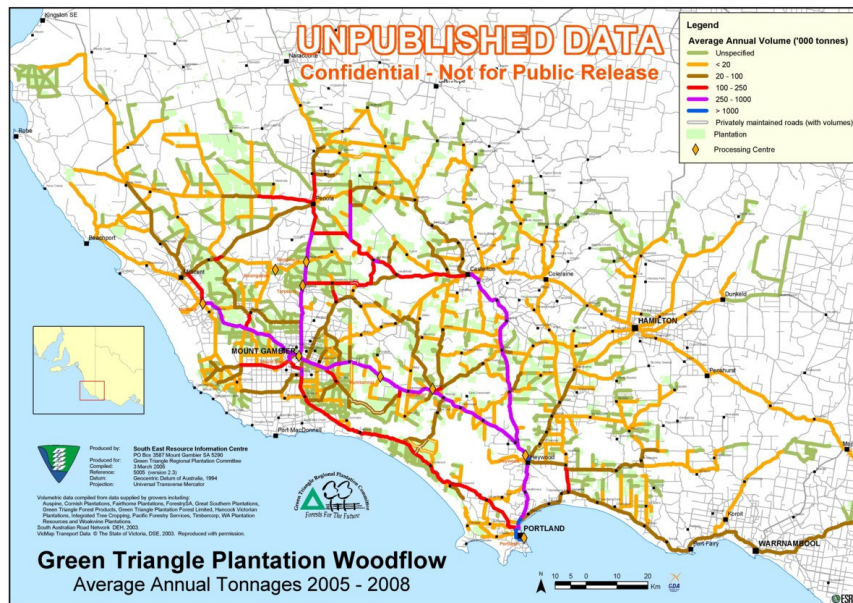


Figure 2. Average annual wood flow (tonnes/year), 2005-2008, Green Triangle Region.

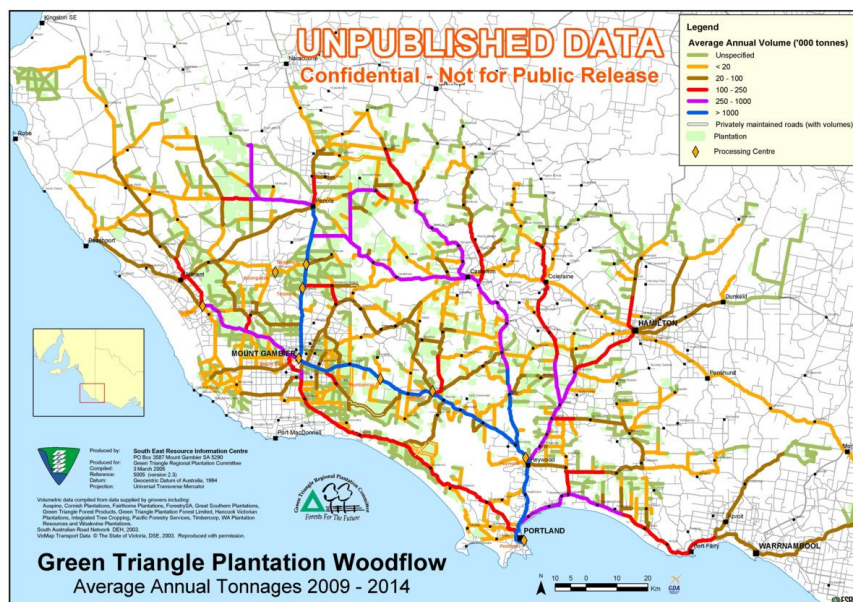


Figure 3 Average annual wood flow (tonnes/year), 2009-2014, Green Triangle Region.

The GIS system also has the capacity to integrate other transport activity, e.g. movement of processed forest products and other sectors including dairying, grain, livestock, mineral sands etc. to develop a



total transport perspective for the region and also has the capacity to determine transport tonnages on new or improved infrastructure, for example the re-establishment of the rail links to Heywood, or the construction of new roads.

## **5. IMPLICATIONS FOR THE EXISTING TRANSPORT NETWORKS**

### **5.1. Green Triangle Rail Network**

Currently there is no operational rail freight infrastructure in the South East of South Australia between Penola and Heywood, to access the standardised line servicing the Port. To determine the economic benefits and costs of re-commissioning this part of the network, the Victorian Department of Infrastructure has recently commissioned Maunsell Australia Pty. Ltd. to evaluate the costs and benefits for re-establishing the rail network to Portland. Maunsell has accessed the GTRPC/SERIC predicted wood flow data. The results of this study have yet to be released.

### **5.2. Green Triangle Road Network**

As indicated above, the annual harvest of Pine in the Green Triangle Region has been relatively constant at about 4 million tonnes, being delivered primarily to Mt Gambier, Tarpeena, Nangwary, Dartmoor and Portland using the primary, secondary and tertiary road network criss-crossing the region. While the total tonnage is reasonably constant, the particular roads used for delivery may vary, and are generally of a standard suited to year round haulage.

The movement of the manufactured products out of the region is by road using the major road networks to Adelaide, Melbourne and Sydney.

The Blue Gum plantation estate differs from the Pine estate in that it is more widely distributed across the region and is therefore likely to utilise a greater proportion of the road network with movements funnelling through towns like Mt Gambier, Casterton, Heywood and Hamilton before reaching the Port. The wood flow data indicates that upward of 3.5 to 4 million tonnes may potentially be exported annually for the period 2009-2014; potentially doubling the current exports from the Port.

The enormity of the road transport undertaking can be appreciated from the estimates that for every 1 million tonnes of wood chip passing a fixed point on the road network, there would be a 25 tonne truck entering or leaving the Port every 3.3 minutes based on a 12 hour per day and a 7 day week.

To address the anticipated increase in road transport usage associated with the future Blue Gum harvest, VicRoads, the Victorian agency responsible for roading infrastructure, is developing a regional roads strategy for the South West of Victoria. VicRoads has utilised the services of the GTRPC/SERIC wood flow data in determining traffic volumes and collectively GTRPC, SERIC and VicRoads are supplying the relevant local government authorities with wood flow maps to assist them identify priorities for the minor or farm gate network of roads, not normally funded under VicRoads programs.

### **5.2.1. The Border Road**

One transport alternative that has been promoted for some time in the Green Triangle Region is the construction of 'The Border Road' south from the Penola-Casterton Road meeting the Princess Highway at Rennick, a distance of 72 km. This route would utilise the road easement that exists along the South Australia/Victorian Border. The basis for such a road is to provide an alternative south link avoiding the population centres of Penola and Mt Gambier in SA, and Casterton in Victoria and offering a flatter more fuel efficient route to Portland.

### **5.3. Port of Portland**

At this moment in time, the output from the Blue Gum plantations is destined for export as a bulk commodity as wood chip through the Port. The wood flow data indicates that upward of 3.5 to 4 million tonnes may potentially be exported annually from 2009; almost doubling current exports, thus the Port and its approaches will require additional infrastructure investment to handle the anticipated increase in product.

The Victorian Government has commenced the planning for a \$15 million overpass to separate urban traffic from the road and rail access to the Port. Note again that for every 1 million tonnes delivered; there would be a 25 tonne truck entering or leaving the Port every 3.3 minutes based on a 12 hour day and a 7 day week.

Thus the transport infrastructure and handling facilities at the Port will be severely impacted requiring the construction of new wharf, storage and loading facilities.

### **5.4. Potential for bulk handling and onshore processing facilities**

The opportunity for onshore value adding is also possible with the recent announcement by the Infrastructure Project Group Pty. Ltd. of the commencement of an environmental effects statement for a potential thermo-chemical-mechanical pulp mill based near Heywood. The likely intake for such a mill would be about 750,000 tonnes annually, with an output of about 400,000 tonnes of pulp, which would in turn be exported, either through Portland as a packaged product, or by container through the Port of Melbourne. Heywood is well placed to potentially utilise the rail network to either Port. Clearly a rail option using the existing network would reduce some pressure on the road network entering the Port area.

An alternative proposal that has been mooted, is the option for one or more plantation growers to locate a permanent chipping and bulk storage facility adjacent to the standard rail line close to Heywood. Such a facility has the potential to significantly reduce road movements between Heywood and Portland by using rail for the bulk movement of wood chips to the Port.

## **6. THE TRANSPORT IMPERATIVE**

Recently the South East Local Government Association and the Limestone Coast Regional Development Board, on behalf of agencies on both sides of the border and with support from various industries have forwarded an application to the Federal Minister of Transport raising the impending

pressure on transport infrastructure and seeking funds to conduct a comprehensive feasibility study to assess the most cost effective and effective means for the efficiently and safe movement of commodities through the Green Triangle Region. The GTRPC strongly supports this initiative and has provided the wood flow data to support the basis of the application.

An independent study should succinctly bring together the results previous and separate studies on components or alternatives of the existing and/or proposed network to develop comparative cost and benefit assessments for the implementation of a safe, efficient and effective transport solution for the region. Inputs such as the GTRPC wood flow study will provide best estimates of tonnages at numerous points within the network and allow for direct comparisons between alternate transport modes and the relevant infrastructure needed for handling bulk commodities.

Such a study will need to address the following questions:

- What is the most efficient and safe combinations of transport infrastructure for the region?
- Will there be sufficient wood chip tonnages available to justify the capital cost of re-establishing the rail network to say Penola?
- What would be the cost to establish bulk handling and loading facilities for rail transport?
- Would it be cost effective to combine short haul road transport of wood chips to Penola and associated double handling onto the rail?
- Would the cost of constructing 'The Border Road' be an effective use of capital funds vis:
  - upgrading of the Riddoch Highway and necessary construction of bypasses of Mt Gambier and Penola?
  - re-establishment of the rail network?
  - Potential for the relief of traffic congestion through the town of Casterton?
- How will effective and safe traffic management be implemented in and around the Port?
- What additional road, rail, storage, berthing and loading facilities will be needed at the Port?
- Besides the economic costs/benefits, what are the social and environmental costs/benefits associated with the alternatives?
- Will there be adequate skills, training and labour available in the Region?

## **7. CONCLUSION**

The plantation and forestry industry in the Green Triangle Region provides significant economic, social and environmental benefits to the Region. The Pine or softwood sector has developed into a mature estate of about 160,000 ha producing upward of 4 million tones of raw material that is predominantly processed within the Region. The Blue Gum or hardwood sector has seen rapid growth from about 5,000 ha to in excess of 130,000 ha in the past decade.

The production from the Blue Gum plantations is currently planned for wood chip export, although there is at least one proposal for onshore processing into paper pulp, which in turn would likely be also exported. The predicted increase in production from these new plantations will be in the order of three to four million tonnes, almost doubling the current harvest from pine alone. This extra tonnage,

together with the expansion in the various agricultural commodities and the commencement of the mining for mineral sands, represents major increases in transport movements and increased pressure on existing transport infrastructure across the Region.

The Green Triangle Region has a history of collaborative cross border planning and cooperation, especially in the areas of economic and community development and tourism marketing and Local Government relations. There are a number of established fora where, among other topics, transport and infrastructure are addressed. These fora variously include representation from Local Government, various industry sectors, including the transport industry, State transport agencies and the community.

Such discussions have lead to the SELGA/LCRBD submission for the joint funding of a transport feasibility study to assess transport infrastructure alternatives.

The Green Triangle Regional Plantation Committee supports the submission as being timely as the commencement of the harvesting of the Blue Gum plantations will rapidly increase to a peak around the end of this decade. The added truck movements will increase pressure on existing infrastructure and will lead to increased interaction with other road users plus will impact on the towns and communities through which the traffic must currently pass. For economic, environmental, social and safety reasons, the existing infrastructure must be maintained, upgraded or replaced for the efficient and effective movement of goods and services and for the minimal disruption to the community as a whole.

Thus, the Green Triangle Regional Plantation Committee recognises that the plantation and forestry industry makes a major contribution to the region and acknowledges that that contribution will be further enhanced with the commencement of Blue Gum harvesting, but that there needs to be adequate and safe infrastructure in place to minimize any social and environmental impacts associated with increased demands on transport infrastructure