SOUTH AUSTRALIA

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Co-chairs of Forest Industry Advisory Council
Senator the Hon. Richard Colebeck
Mr Rob de Fégely
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Dear Senator Colebeck and Mr de Fégely

Thank you for the opportunity to provide comment on the Forest Industry Advisory Council's Strategic Directions Issues Paper titled "*Meeting future market demand: Australia's forest products and forest industry*". I appreciate the extension granted by the Department of Agriculture to allow time for endorsement of the attached submission by the South Australian Government.

The South Australian Government trusts the attached submission is a valuable reflection on the questions posed in the Issues Paper and looks forward to release of the Discussion Paper as a further step towards a National Wood and Fibre Plan.

Yours sincerely

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Leon Bignell MP
Minister for Forests

August 12 2015

Encl. FIAC Strategic Directions Issues Paper Submission from the South Australian Government

Forest Industries Advisory Council Strategic Directions Issues Paper

Submission from the South Australian Government

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Introduction

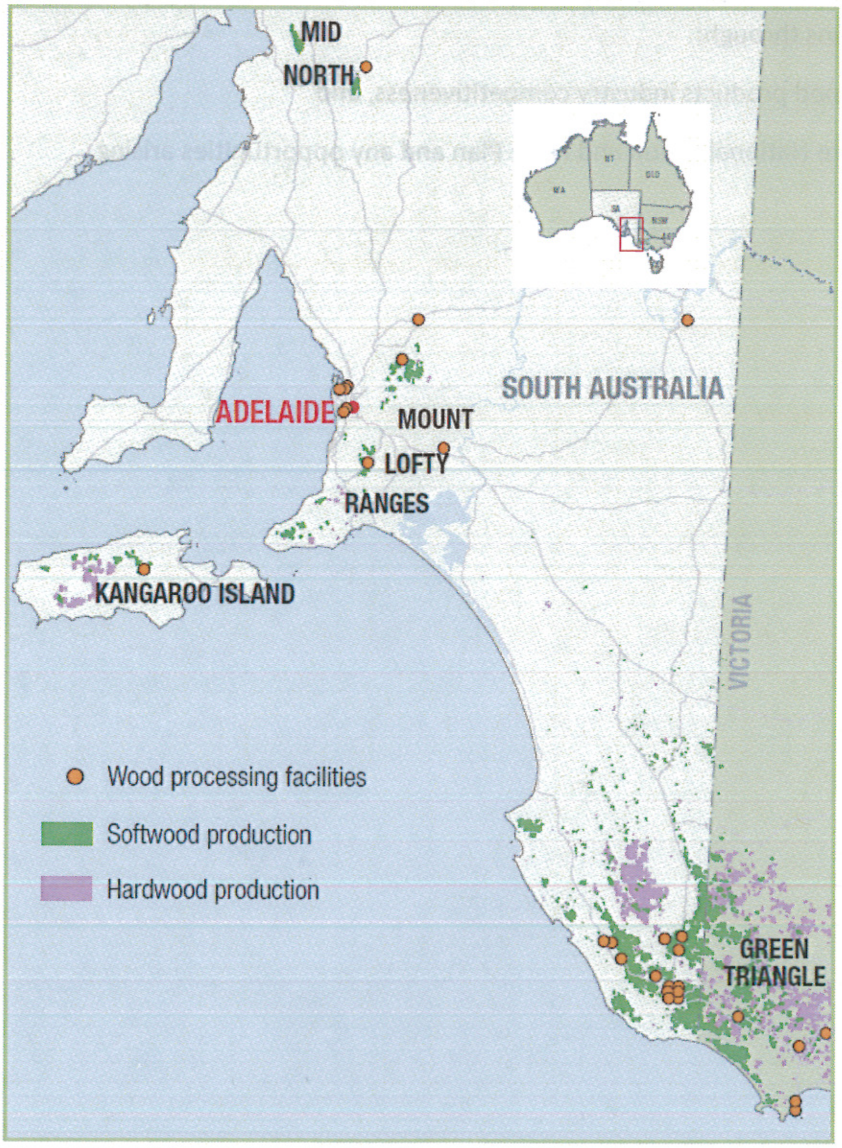
The South Australian Government welcomes the opportunity to respond to the Forest Industry Advisory Council's Strategic Directions Issues Paper 'Meeting Future Market Demand' (Issues Paper).

In its seven strategic priorities and ten economic priorities, South Australia has a strategic priority to *grow advanced manufacturing* and an economic priority to *unlock the full potential of South Australia's resources, energy and renewable assets*. Consistent with this, the South Australian Government adopted the 'Blueprint for the Future South Australian Forest and Wood Products Industry (2014-2050)' (Blueprint) and the 'South Australian Forest & Wood Products Industry Policy Statement' in September 2014.

This submission addresses many but not all of the issues presented in the Issues Paper providing advice on experience in South Australia or a pathway forward on others.

South Australia has an extensive history and expertise in plantation forestry, resulting in the world class softwood asset present today based entirely on plantations. As such South Australia is a model for sustainable development of plantations, appropriate regulation of water impacts, local council processes, state guidelines for development, and certification of growers. With sequestration and long term storage of carbon in wood products, plus some of Australia's longest afforestation climate change trials, the plantations are an asset for the nation playing a vital role in a carbon constrained economy.

In 2013 South Australia's plantation estate covered over 188,500 hectares, representing over 13% of Australia's softwood (*Pinus radiata*) plantations and 6% of the nation's hardwood (*Eucalyptus globulus*) plantations (ABARES 2014). Most of the plantations are located in the State's South East (Limestone Coast) which, when combined with South West Victoria, forms a region known as the Green Triangle (Map 1).



Map 1 – South Australian plantation and processing regions.
Source: South Australian Forest Industry Advisory Board (2014)

In addition, the industry is of great importance to South Australia's regional economy, with the Green Triangle region and areas surrounding Mount Gambier relying more heavily on forestry sector employment than other regions and large cities in Australia (ABARES, 2013). This employment includes workers in the value chain from growing and processing into sawn timber and paper products. A greater regional awareness and acceptance of forestry as a key industry in South Australia has developed in recent years, as evidenced through government's current consultations with the regional forest related communities. In Adelaide the sector includes wholesaling, retailing, furniture and overseas trading.

A recent period of rapid change for the industry in South Australia drove the need to revisit the industry's prospects and look to the future. Opportunities for growth are highlighted in a number of recent reports, including the Forest Industry Development Board (2011) 'South Australian Forest Industry Strategy 2011-2016', the South Australian Government's VTT Cellulosic Fibre Value Chain Study (2013) (VTT study), the Blueprint and the 'Green Triangle Forest Industry Prospects (2012)'. These opportunities, however, will not be realised without deliberate, concerted action by owners and managers of Australian forests, their industry partners through the value chain, and all levels of Australian government. The South Australian Government therefore seeks to be an active partner with all industry participants to drive a sustainable improvement in the standard of living of all Australians through:

- enhancing the forest and wood products industry competitiveness, and
- further developing the future National Wood and Fibre Plan and any opportunities arising.

Questions for consideration

Vision and objectives

1. *What should the vision be for the forest products sector in the coming decades?*

   In developing the Blueprint for the South Australian forest industry sector, the following vision was developed which could be broadened and adapted for a national context:

   > *An innovative, internationally competitive plantation and wood products industry that contributes significantly to economic growth, social wellbeing and environmental sustainability.*

   It is important that when vision and objective statements are set for an industry such as the forest products sector at a national level, there is sufficient scope and flexibility for regional communities and their forest industries to identify how they fit, and be given the licence to tailor the national vision and objectives to meet their needs.

2. *What specific objectives should underpin this vision?*

   The Blueprint contains the following strategic targets which could be broadened and adapted for a national set of objectives for the forest and wood products industry:

   - *Increase the economic value of the forest and wood products industry*
   - *Strengthen the industry's contribution to the community*
   - *Enhance the industry's contribution to multiple environmental benefits*

   These objectives were the result of extensive industry and community consultation across the state.

   Objectives for a national vision need to have a strong emphasis on all communities, industry participants and all tiers of government working together, with each partner valuing and respecting the role of others to facilitate a more collaborative approach. Specific and measurable objectives will allow for evaluation of progress toward the vision.

Issue 2: Emerging uses and markets

1. *Which emerging forest products have the greatest potential for Australia?*

   The South Australian Government's VTT Study *'Future options for the cellulosic fibre value chain in the Green Triangle, South Australia: strategic technology roadmaps, business cases and policy recommendations'* (http://www.dmitre.sa.gov.au/page/view_by_id/319) advised of the following emerging key technological opportunities and emerging uses in the Green Triangle (Table 1).
   Given the long history of plantation development in South Australia, an opportunity also exists to utilise expertise, skills and services in the forest and wood products sector to support international development.

Table 1 – Summary of Technological Opportunities in the Cellulosic Fibre Value Chain. Source: VTT, 2014.

Opportunities	Examples
Sawmill space	*Softwood timber and process improvements*
	X-ray and 3-D scanning technologies
	New planning systems for sawmills
	Information systems for sawmills
	CNC-based tools
	Robotics
	Engineered wood products
	Wood-plastic composites
	Nanocomposites
Biomaterials	*Biomass-based precursors*
	Biopolymers
	Nanofibres
	Converting technologies
	Packaging, building and vehicles/appliances
Biofuels	*Bioethanol etc.*
Biochemicals	*New chemicals from wood*
	Platform chemicals
Construction industry	*Engineered wood products*
	Construction materials
	Wood plastic composites
Textiles	*New textile fibres*
	Mixed textiles, e.g. with rayon

2. *What are some of the barriers to the development and/or uptake of these emerging forest products in Australia?*

   In identifying barriers or impediments to developing new products, it is important to consider solutions. There are currently no policy incentives from the Federal or state governments favouring wood as a raw material in different industrial settings. For regional hubs such as the Green Triangle, collaborative policy development may serve the industry better.

   Australian Standards, building codes and regulations need creating and modifying to enable the acceptance of emerging products such as Cross Laminated Timber (CLT). Changes in the regulatory environment can facilitate industry development if new and emerging products.

   Engaging with and educating architects, engineers and builders in the potential and value of timber products for construction is an ongoing consideration. To assist, the Sustainable Industries Education Centre at Tonsley, South Australia will make a contribution. This is in addition to the value obtained by having an architect as a member of the former South Australian Forest Industry Advisory Board.

   Applied research, development and extension are also critical to the refinement and development of new and improved products such as the VTT research and the South East Forestry Partnerships Program.

   There needs to be clear identification of lead customers, investors and business case development to assist in engaging interest.

As the domestic market is sometimes not large enough for some investments, a greater emphasis is required on attracting foreign investment or joint ventures. Indeed, the capital required for processing products such as pulp and paper means international investor funding is the only likely source.

Many of the opportunities outlined in the Blueprint are pathways to removing identified impediments and barriers, to improve sustainable economic development of the forestry industry.

Some of the underlying barriers include;

- Insufficient feasibility studies and concept developments encouraging investment to drive modernisation, higher value adding, innovation and renewable energy;
- a need for more collaborative investment in research and development, and industry clusters fostering collaboration across the value chain;
- some regional and planning environments not supporting optimisation of the plantation estate and local processing prospects;
- insufficient skills and training leading to higher productivity, efficiency and innovation; and
- enough awareness amongst communities and building professionals of the benefits of wood and the opportunities of a sustainable industry.

3. *What opportunities exist to better utilise wood resources?*

Several opportunities for better utilisation of wood resources were identified in the VTT study. It set out several options offering particular promise for the Green Triangle but may be applicable elsewhere:

Cross-laminated timber (CLT). A plant with a capacity of 60,000 cubic metres per annum would cost approximately A$40 million and have a payback period of 3-5 years. This would reduce the export of chips/logs of low value, help create regional employment and also provide construction materials to increase urbanisation.

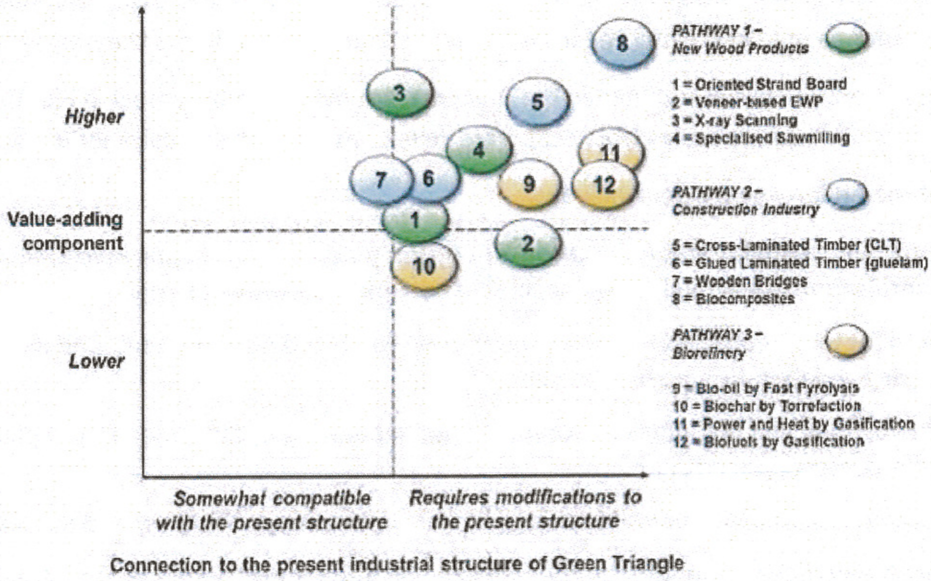
Glued-laminated timber (Gluelam). A typical plant with a capacity of 40,000 cubic metres per annum would cost approximately A$20-30 million and have a payback period of 3-5 years. This would also reduce export of chips/logs of low value and put the Green Triangle on the map as an eco-friendly construction material manufacturing site.

Biocomposites, in particular wood plastic composites (WPC). Biocomposites may contain up to 80 per cent of wood and could also utilise some of the lower quality uncommitted waste biomass. The WPC biocomposite industry and markets are expected to grow significantly in the next five years. The Green Triangle region currently does not have a polymeric resin supplier, but could be the manufacturing site of WPC pellets for further processing at existing or new biocomposite sites and increase ties to composite users such as the car industry.

Energy biorefinery - bio-oil by fast pyrolysis. This technology is readily available and cost competitive and an investment of A$50-60 million plant would make bio-oil production by fast pyrolysis a serious option. Such pyrolysis plants could be realised in Green Triangle in the next 3–5 years, supplying energy first to the sawmill boilers and kilns and later to external customers. Significant parts of the unused forest residues available in Green Triangle would be converted to a more usable energy form with profitable outcome for the region.

Bio-char by torrefaction. The energy sector and mining and metal industry in South Australia uses millions of tonnes thermal coal annually and they could use co-fire biocoal in their power plants. Available biomass in Green Triangle for torrefaction includes excess pulpwood, forest biomass and chips produced at sawmills, and the production of bio-char could be considered. Torrefied biomass and bio-char would have a significant market for soil enrichment.

The graph below outlines options for utilising wood resources from the Green Triangle region (VTT study).



Issue 3: Forest resources

10. What is required to ensure the plantation estate is able to meet future demand for forest products?

Predictions such as those developed by ABARES 2015 indicate increasing future demand for construction timber for the domestic market. Historically, a forest industry based around growing and manufacturing products for the domestic construction sector has a long term competitive advantage over imported products. This advantage falls when the Australian dollar is strong and international construction markets are depressed. It is therefore important to build the industry's resilience to exchange rate fluctuations. Domestic sawlog supply, however, is constraining most of the time so increasing supply can be achieved by:

- <u>increasing the area planted to trees suitable for structural timber</u>: On clearfelling hardwood plantations currently being exported as logs or woodchips, there needs to be a consideration of how to convert these areas into alternative species that are already being processed in the local region to maximise the economic and social benefits. For a number of reasons it is more efficient to convert from one tree crop to another than to acquire agricultural land for conversion to plantations.
- <u>increasing the per unit area productivity of such plantations</u>: In the key plantation forestry regions, access to land for plantation expansion is limited and business models for current plantation owners are unlikely to extend to plantation expansion on new forestry land. The opportunity should therefore be taken to increase productivity per unit area to increase log availability and per unit return from existing plantation land. Governments have a role in facilitating Research, Development and Extension (RD&E) leading to increasing productivity as this is a strategic objective with community economic and social benefits that will not necessarily align with business objectives.
- <u>maintaining biosecurity</u>: Secure production for plantation forests is also dependent on Government and industry collaboration for ongoing biosecurity measures, including general awareness, surveillance, diagnostics and response, consistent with that proposed in the South Australian Government's Submission to the Agricultural Competitiveness Green Paper (2014).
- <u>use of natural resources</u>: Access to natural resources such as water is also vital to achieve sustained production that meets future demands. South Australia's Statewide Policy Framework, plus legislation of a system of permits and tradeable licences in the Limestone Coast to manage water resource impacts of plantations, are key to managing water affecting activities within sustainable limits.
- <u>increasing the recovery of structural grade timber during processing</u>: The VTT Study suggested a number of process improvements (see Table 1).

12 *What opportunities are there to increase wood supply from farm forestry, private native forestry and Indigenous owned and managed lands?*

In the past South Australia along with other states, has benefited from Australian Government support for funding farm forestry extension. Farm forestry uptake was increased from the awareness raised and the capacity building made possible through dedicated officers for landholder support. Building on earlier learning, greater outcomes were achieved through time, with more recent projects ranking higher than earlier projects in a statewide evaluation in 2003 of the National Heritage Trust funded Farm Forestry Program.

Issue 4: Innovation, research and development

15 *How can the framework for coordinating Australian forestry research and development be strengthened?*

In consultation on the Blueprint, the South Australian industry considered and rated Research and Development very important to the future of the industry. The framework for co-ordinating Australian forestry research and development can be strengthened by regionalising the research and development to the relevant growing and processing hubs and forging closer connections between research, regulation and industry.

The Green Triangle is central in Australia's largest contiguous plantation area and between South Australia and Victoria. Mount Gambier is the heart of the Green Triangle hub, which is Australia's largest collective of plantation and wood processing industries and has excellent transport, energy, communications and community services. This includes access to the Port of Portland in Victoria. The 'Green Triangle Forest Industry Prospects, 2012' document provides an overview of the region's forestry hub.

Mount Gambier is also the headquarters for the Southern Tree Breeding Association (STBA), an industry funded cooperative with membership including most of the Australian plantation growers of temperate species including *P. radiata, E. globulus* and *E. nitens*. The STBA provide genetic consulting services via the internet and training services to international customers including in Sweden and France with the major commercial forest tree species.

As a plantation hub with a long documented history of research and development, the region is home to the highest proportion of forest industry related workers in Australia employed in growing, managing and harvesting the plantation resource, research and development and an increasingly sophisticated processing sector. South Australia's South East region has seen substantial investment into plantations and processing assets assisted by the State Government's own initiatives including through the South East Forestry Partnerships Program and the VTT Study. A regionally located Research Development and Extension centre would build on these initiatives for the nation and provide a focus for future uses of wood fibre, especially value adding to by-products arising from producing structural grade timber.

We would welcome any initiatives from the Australian Government that recognise SA's prominence in plantations, and the suitability of the Green Triangle region for further investment in the industry and as a base for future research and development activities. .

Issue 5: Consumer and community engagement

16 *How can domestic and international consumers be better engaged on the environmental, economic and social credentials of Australian forest products*?

The general public appreciate the recreational benefits provided by plantations especially those located close to capital cities or major regional centres. Studies undertaken in South Australia's plantations using choice modelling and contingent valuation methods show that communities place a high value on efforts to protect and enhance natural, heritage and recreational assets.

Plantations contribute to conservation outcomes, forming habitat for native species and providing a level of connectivity through the landscape, particularly for woodland birds.

Koala welfare in *Eucalyptus globulus* plantations is a national issue and a significant "social licence" challenge for industry. The response of the Green Triangle industry is a case study for the industry nationally, where public concern about the impact of plantation harvesting on koalas led to a review of industry-wide guidelines. With a view to finding a zero harm outcome for koalas while maintaining the economic, environmental and social benefits of plantation forestry, an industry working group in consultation with Government and local wildlife carers reviewed the guidelines which were subsequently adopted by bluegum companies in the region. This is an example of the South Australian and Victorian Governments, the timber industry and wildlife care groups worked together to address the areas of public concern.

Issue 6: Strengthened regional approaches

19 *How could forestry hubs better utilise resources and promote greater efficiencies and innovation?*

In 2012, South Australia convened a forum of industry and business leaders to articulate the priorities for economic diversification in the Limestone Coast. This was in the midst of the national downturn in the forest products sector and a significant impact on the region's economy. The need was identified to explore opportunities for industry hubs to take advantage of economies of scale and realise potential cross sector collaboration as well as establish or reinvigorate regional clusters in the forestry sector.

Further development of the Limestone Coast forestry hub will improve economic development and the following diversification priorities (Regional Development Australia Limestone Coast Roadmap 2013 – 2016):

- Increasing advanced manufacturing particularly in the forest and forest products industry
- Developing industry clusters to maximise economic development within the region
- Increasing research and development relevant to the regions industries, and
- Supporting small business development and sustainability.

Issue 7: Infrastructure

22 *What infrastructure will be required to respond to future demand for Australian forest products?*

On 6 July 2015, the South Australian Government finalised an Integrated Transport and Land Use Plan to guide private and government investment in the transport system over the next 30 years and help ensure that land-use planning, strategic infrastructure are fully integrated.

A contribution to this is the 'Green Triangle Region Freight Action Plan', a joint initiative of the Victorian and South Australian Governments which involved councils, timber, freight industries and the Port of Portland. It identified strategic infrastructure investments needed to address emerging capacity constraints for the transport tasks associated with various industry sectors, such as timber, mineral sands, dairy and meat processing, and electricity and gas production. It is also an example of how forest industry planning can be collaborative and for the benefit of all.

23 *What can be done to ensure better recognition and understanding of the sector's infrastructure needs?*

Communication and a commitment to collaboration at a regional level with all tiers of government, Regional Development Australia , the forest industry, other primary industry sectors, and the local community is required to ensure better understanding of the sector's infrastructure needs.

An example of communication and collaboration to improve transport infrastructure is a new partnership approach in South Australia to develop a modern transport system for agriculture.

With increases in both fuel and labour costs transport costs in Australia are rising, yet there is potential to unlock significant benefits within the primary production sectors by using new technology more efficiently and operating within a streamlined national regulatory environment. From this thinking, a project by the South Australian Government with industry (Primary Producers of South Australia) used a partnership approach to plan a road transport system that meets the existing and the future needs of primary production. Central to this project was a survey which asked the primary industries sector, as important users of regional and rural road freight services, their views on how South Australia's road transport could be made more effective and efficient. The survey sought opportunities to improve efficiency of road freight transport address restricted heavy vehicle access constraints.

Uniquely, this project has taken a whole of State, strategic approach to understanding the transport needs of the primary industries sector given the current and future freight tasks. Specifically, the opportunities for more efficient use of restricted access vehicles (B-Double, Road Train and Performance Based Standards combinations) were identified and documented. In many cases, industry identified efficiencies through more effective use of larger vehicle combinations and is willing to work with Government achieve the outcomes.

Opening up the road access network by addressing the issues has the potential to allow more produce to be moved more safety and with less road wear and at a lower cost to the operator and other businesses.

Issue 8: Industry skills and training

24 *What are the skills and training needs of the sector over the coming decades, and where are the current gaps?*

ForestWorks annual skills scans are a useful resource for national skill shortage information. In South Australia with the maturing of the *Eucalyptus globulus* plantations in the Limestone Coast, there are significant skills shortages and employment challenges are in harvesting and hauling. Industry and Government are jointly planning to address the training requirements for operators of the expensive, complex, and computerised harvesting machines as well as licensing heavy combination, multi-combination and additional B-double drivers.

Aging of the existing employees is also likely to become an issue.

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