Submission No 222

INQUIRY INTO LONG TERM SUSTAINABILITY AND FUTURE OF THE TIMBER AND FOREST PRODUCTS INDUSTRY

Organisation: Timber NSW

Date Received: 11 June 2021

TIMBER NSW

Portfolio Committee No. 4

NSW Legislative Council

11 June 2021

Dear Members of Legislative Council Policy Committee Number 4,

Timber NSW submission to the NSW Legislative Council Inquiry into the long term sustainability and future of the timber and forest products industry

Thank you for the opportunity for making a submission to this inquiry.

Timber NSW was established in 1906 and comprises over 50 members. Together, they utilise over two thirds of native hardwood and cypress timber (all grades) produced on State forest and private property within NSW. The production and manufacturing activities of our members generate economic activity valued in the hundreds of millions of dollars and support a diverse range of jobs in rural, regional and metropolitan centres.

Our mission is to work with our members, stakeholders and the broader industry to build an economically, environmentally and socially sustainable timber industry in NSW.

As this submission amply demonstrates, the timber industry has a vital role to play in the NSW economy. In order to play that role, government, industry and citizens must develop a shared vision for the management of the forests of NSW.

Recent bushfires across NSW have heightened concerns that the management of NSW public forests has largely failed to ensure the health of forest ecosystems, build resilience and secure a promised balance between economic, social and environmental values.

Following an introduction and a history of NSW timber supply arrangements between the NSW government and the timber industry since 1992, this submission provides responses to each Term of Reference.

As a matter of priority, we urge the NSW government to act on the numerous recommendations contained in this submission. We consent to this submission being made public.

Yours faithfully

Maree McCaskill
Chief Executive Officer

130 Mallett St Camperdown NSW 2050 T: E:

INTRODUCTION: A SHARED VISION FOR THE MANAGEMENT OF NSW's FORESTS

This Inquiry into the long-term sustainability and future of the timber and forest products industry in NSW comes at a time of reckoning.

In recent years NSW has been tested by catastrophic bushfires and a global pandemic that has weakened supply chain resilience and created a global timber shortage. NSW requires 21st century policy settings which take a holistic perspective of land management in NSW to deliver economic, social and environmental opportunities.

The timber industry has important new roles to play in the 21st century. But it remains at the heart of our communities. In New South Wales there are 63 hardwood mills and 13 softwood mills processing more than 5.6 million cubic metres of sawlogs every year.

For more than 100 years, Timber NSW has represented the timber and forest products industry in this state. Our members work shoulder to shoulder with the state-owned Forestry Corporation of NSW and private forest owners to meet the growing demand for our hardwoods and softwoods.

Each year every man, woman and child in Australia consumes the equivalent of one cubic metre of timber. When we build our homes, renovate our kitchens and fit-out our offices, we rely on timber. For key infrastructure like wharves, bridges, railway sleepers and telegraph poles, we rely on timber.

New South Wales' timber and forest products industry contributes millions each year to the state's economy. It is also a major employer in rural and regional New South Wales, supporting many communities.

- Timber Producer Industry Value Added $2.4 billion
- Exporter Annual Contribution to Exports $219.5 million
- Regional Employer Total Employment 22,000 people

Nation Building Timber

The timber and forest products industry in New South Wales is also an important component of other industry sectors in Australia. In particular, the timber industry underpins vitally important supply and demand relationships with the Australian design, manufacturing, construction and property sectors.

- 75% of sawn timber produced is used in residential construction.
- 20% of timber consumed in Australia is used by the furniture industry
- 5% of timber usage is by the kitchen sector alone.

> *"The value of building work in the pipeline has never grown faster, has rarely grown for as long and has never been so focussed on one sector: houses."*

As per the NSW government's Intergenerational Report 2021-22, stable, affordable housing is critical to economic security, physical and mental wellbeing, and facilitates access to jobs and services. Consequently, housing is essential to support rising living

standards. Around 1.7 million new homes will be needed by 2060-61 to support population growth and demographic trends. This is equivalent to around 42,000 new homes every year over the next 40 years.

This will be a significant challenge. The NSW government has a once in a generation opportunity to meet the demand for building supplies through timber industry reform.

Regional & Indigenous Employment Opportunities
The COVID-19 pandemic has highlighted the need to improve the resilience of regional communities to major shocks and stresses related to market dynamics, supply-chain disruptions and natural disasters.

One third of the NSW population lives in regional areas, where population growth will slow and age faster than in metropolitan locations. The population in regional New South Wales is projected to grow at 0.4 per cent a year on average over the next 20 years, compared to 1.5 per cent for metropolitan locations (Sydney, Newcastle and Wollongong). We need continued productivity growth to drive our economy.

The right timber policy settings will contribute significantly to future prosperity. This submission details many important opportunities to lift productivity and create exciting new employment opportunities for regional and indigenous communities. Empowering and increasing the key role of Indigenous Australians in forest management must be significantly improved.

In the wake of COVID-19, the demand for timber has never been higher and the constraints of the supply of NSW timber have never been greater. COVID-19 has ushered in a new era of employment opportunities relating to forests, both direct and indirect. The diverse range of employment opportunities for regional and rural communities listed below can be realized through appropriate policy settings.

POLICY SETTINGS	**JOB OPPORTUNITIES**
Timber Self-Sufficiency	
Certainty of timber supply through increased resource security	Protects & creates direct timber industry jobs and regional job ecosystems
Supply chain resilience through timely, reliable domestic timber supply	Protects indirect construction industry jobs
Protecting Forest Values	
Active and adaptive cross-tenure land management	Jobs in: • wildfire prevention • management of pests and weeds • indigenous land management • forest monitoring
Facilitate & enhance forest productivity	Jobs in establishing and maintaining: • new plantations • private native forestry
Facilitate & promote multiple use of public forests	Jobs in forest recreation and tourism

Seizing 21st Century Opportunities	
Upskilling to enable domestic production of a greater range of value-added timber products	New jobs in value-added timber manufacturing
Timber manufacturing innovation	New jobs in advanced timber manufacturing eg. CLT
Circular economy initiatives improving utilization of lower quality logs and wood residues	New jobs in: • circular economy timber • forest management • harvest & haulage • bioenergy development • production of woodchips, pulp and paper products
Timber Industry Roadmap	**150,000 new timber industry jobs**

Timber's Role in the Carbon Economy

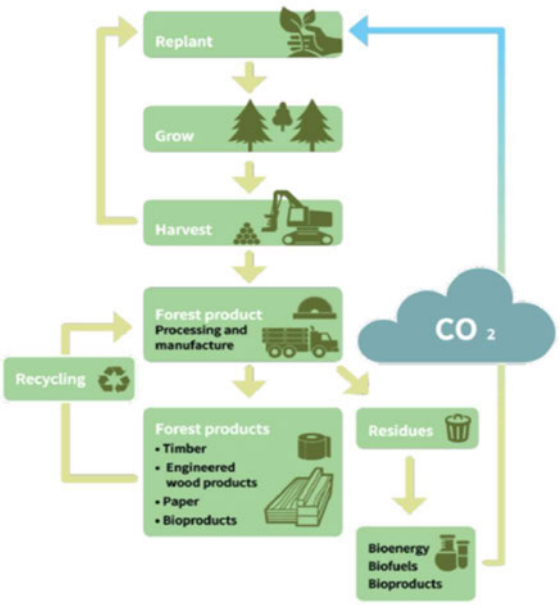
Australia's Federal Budget 2021-22 addressed the opportunity of a circular economy, recognizing both the international pressure mounting on Australia to commit to more substantial action on climate change and the once-in-a-generation social license granted by the COVID pandemic to spend strategically to 'build back better'.

In the carbon-constrained economy of the 21st century, timber is much more than a renewable, recyclable, sustainably-produced resource. New South Wales' forests and parks must now be actively managed for a variety of values and outcomes.

Efforts to date aimed at adapting forest management to address climate change have been limited. We must recognise that forests and wood products are long term carbon stores, and forest residues are renewable energy substitutes for fossil fuels. We must take a wider perspective.

Five Ways Timber Reduces Carbon Emissions

1. Carbon sequestration in growing forests
2. A renewable substitute for emissions-intensive building materials like steel, aluminium and concrete
3. Bioenergy from wood waste replaces carbon-intensive fossil fuels such as coal, oil and gas
4. Long term carbon storage in wood products
5. Recyclable timber products extend carbon storage benefits.



The timber industry can play an important role in the carbon economy. To do so, our industry needs an environmentally and economically sustainable supply of timber and a supportive, stable policy environment. These will provide an important platform for attracting investment and creating jobs over the long term.

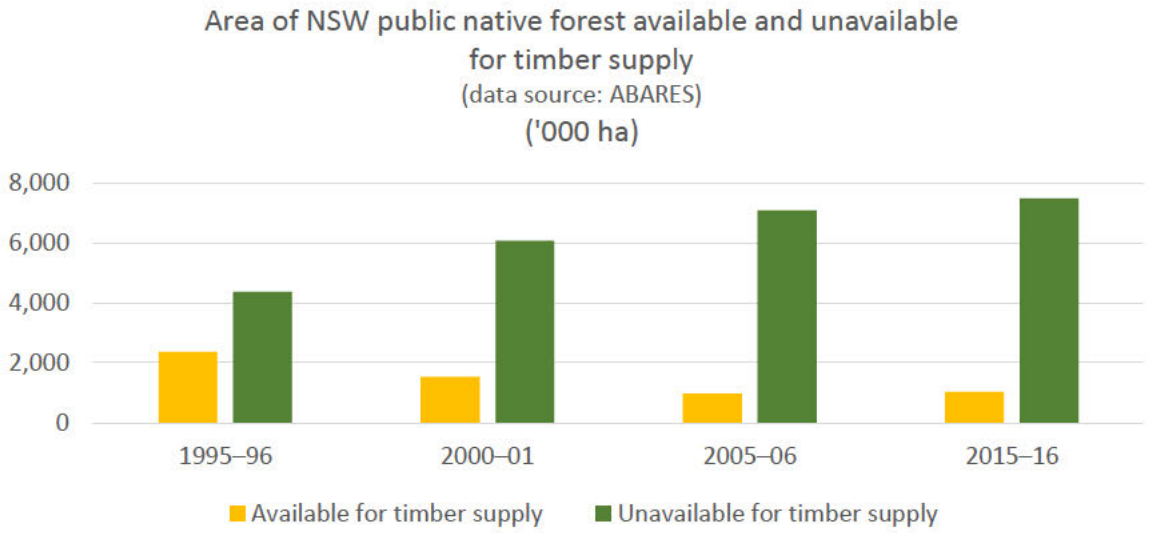
Realising the Potential of the NSW Timber Industry
While the opportunities are many, this submission details a number of obstacles faced by the NSW timber industry in realizing its potential.

Government, industry and citizens must now develop a shared vision for the management of the forests of NSW. Active and adaptive forest management is required as part of global efforts to “manage the unavoidable and avoid the unmanageable”; and will support Australia’s transition to a more circular economy based on the use of renewable resources and reduced dependency on imported products.

The NSW government has a chance to realign land management practices in accordance with the criteria and indicators for forest conservation and sustainable management agreed upon by Australia and the other members of the Working Group of the Montreal Process.

This lack of alignment has created the two biggest risks for the forest estate and the industry in NSW:

- sovereign risk which radically reduces access to public forests for timber supply
- the risk of catastrophic bushfires and the loss of biodiversity, lives and livelihoods.



These risks must be managed as a matter of priority before opportunities can be seized.

Then, through actively planning and managing our timber resources, NSW can:

- *Sustainable Supply*: engineer sustainable domestic timber supply to meet growing demand over the long term and move towards timber self-sufficiency and supply chain resilience.
- *Enhanced Forest Productivity*: enhance forest productivity through the use of technology and regulation which actively facilitates sustainable supply through the range of tenures: public & private native forests, plantations and forests integrated with agricultural land use.
- *Better Timber Utilisation*: develop domestic timber manufacturing skills and create greater value right along the supply chain through enhanced utilization of wood products through innovative new timber technology
- *Manage Fire Risk/Utilise Forest Waste*: manage fire risk and embrace the circular economy through utilisation of secondary wood products - forest floor fuel loads and timber residues/waste - in new markets, such as bioenergy markets
- *Support Regional Jobs & Communities/Partner with Indigenous Communities*: a holistic approach to NSW land management will create and fund critical regional jobs in land management, timber manufacturing, secondary wood markets and fire prevention. It will harness ancient Aboriginal land management skills and practices to prevent loss of forest life and livelihoods through catastrophic fires.

Timber NSW endorses the proposals outlined in a recent journal article in *Australian Forestry*. *Reshaping forest management in Australia to provide nature-based solutions to global challenges*[1] calls on Australia to:

[1] W. Jackson, M. Freeman, B. Freeman & H. Parry-Husbands (2021):
Reshaping forest management in Australia to provide nature-based solutions to global challenges,
Australian Forestry, DOI: 10.1080/00049158.2021.1894383
LINK: https://doi.org/10.1080/00049158.2021.1894383

:

- establish new shared governance models that bring together government agencies with Indigenous Australians and stakeholders from the private sector and civil society.
- extend active and adaptive management across forest landscapes to build resilience in our forests, local communities and society.
- integrate traditional knowledge with scientific evidence and innovative technologies to inform forest policy and enhance forest management outcomes.

These strategies point to the mechanisms by which Australia – and NSW - can conserve forests for a broader range of values, proactively manage current pressures and increasing threats from climate change and the interrelated impacts of bushfires and invasive species and ensure a sustainable supply of domestic timber.

Working with the timber industry, the NSW government must move beyond the era of conflict and develop more holistic approaches which encompass all forest values, such as water, biodiversity, tourism and forest products, across the landscape. More collaborative approaches are required to galvanise the resources, skills and knowledge that enables this shift in shared governance.

Timber NSW Policy Priorities

With its state and federal counterparts, Timber NSW seeks:

- **Plan for a renewable future**: recognition of the environmental and socio-economic value of a vibrant timber and forest products industry.
- **Carbon economy**: a better regulatory environment and program of direct action to recognise carbon sequestration in multiple use production forests and wood products through payments for carbon storage.
- **Renewable energy**: policy settings which support a market for the use of biomass as a source of renewable energy, alongside wind and solar energy.
- **Tenure-neutral**: legislative reform to create a single public land management agency in New South Wales, focused on overarching management of our public native forests.
- **Building resource security**: capital investment in forestry infrastructure, new softwood plantations and fewer restrictions on access to regrowth forests to ensure sustainable timber supply.
- **Investment environment**: facilitation of investment comparable to other countries via reducing sovereign risk, transparent planning and investment incentives.
- **Infrastructure & R&D**: better infrastructure, skills promotion and increased funding of R&D in sustainable forest industries.

Chronology of events and agreements to supply hardwood by NSW State Governments to hardwood sawmillers (1992-2004) and the 2014 Variation

Introduction

This written commentary is based on documents with explanations where deemed necessary. Most of the material is of a background nature. The purpose of providing this is to show the history of the period and how this history feeds into the alteration of contracts over the period. Particularly, how the industry convention of 'run of the bush' was introduced into the timber supply contracts and then removed and how the convention of equitable distribution subject to quota size through the contractual terms was removed by Boral subsidiaries obtaining very different contract timber specifications to that of the rest of the industry. There is evidence of duplicity (in its meaning of deceitfulness) within the documents on behalf of the Officers of State Forests and then FCNSW in their dealings with the hardwood sawmillers other than Boral subsidiaries.

This Schedule also considers in detail three alternatives to address the first Complaint.

Legislation and Policy Announcements up to 1992

In 1992 The National Forest Policy Statement based on the Montreal Criteria (Sustainability Indicators) was announced. NSW in 1991 had already legislated the Protection of the Environment Administration Act that had as one of its object "to protect, restore and enhance the quality of the environment in NSW having regard to the need to maintain ecologically sustainable development."

In June1995 the NSW Government announced the NSW Government Forest Reform package (driven by commitment to the National Forest Policy Statement). This was a strategy to consider environmental values on a regional basis, and to establish "ecologically sustainable environmental values" on a regional basis, and to establish a hardwood timber industry.

A sum of $60M over 5 years was provided for industry restructuring and retraining. From July 1996 sawlogs quota were reduced by 30% and $47M was set aside to double hardwood plantation land areas by 1998.

In October 1995, the NSW Government legislated the Forestry Restructuring and Nature Conservation Act 1995 that provided for "expenditure for the purpose of implementing forestry restructure and assistance schemes and programs in the Brigalow and Nandewar and adjacent areas, including business exit assistance, timber worker assistance and industry development assistance, shown in the Budget Papers".

1996 saw the commencement of the implementation of the Forest Industry Reform Agenda. June 1996 saw the introduction of a timber quota for the first time.

Throughout this period the NSW Parliament was legislating to cease logging operations in areas around the State. Legislation was enacted to this effect in 1992 and 1994. (Further legislation to set aside lands for flora reserves or to create national parks were enacted in the following years:1995,1996 and 1998).

By the commencement of 1997 there was much change afoot for the hardwood timber industry.

Prior to 1997 the quantity of sawlogs harvested from New South Wales State forests was determined by the cumulative available supply from individual forest Management Areas under the control of the State. In the 1990s on the New South Wales North Coast there were 36 forest Management Areas. At that time the total area of land dedicated as State forests and available for timber harvest was more than double that of the available land today. Every forest Management Area had its own Management Plan, which specified the amount of high quality large sawlog that could be sustainably produced on an annual basis.

For each forest Management Area there was typically at least one sawmill with a Crown sawlog licence. Crown licences were by and large fixed and despite being subject to annual renewal, they were regarded by most sawmillers as a valuable commodity. Sawmill businesses that had a Crown sawlog quota were considered superior to those that did not. Sawmillers without a Crown allocation had to rely on private hardwood resources.

The licences did not specify tree species. This reflected the convention of what was called *"run of the bush".* The licence in the allocation of timber simply referred to the volume by log type and the management area from where it was to be harvested.

1997

In January 1997 State Forests introduced *Timber Term Agreements* to regulate the supply of timber from Crown land. Sawmillers still held a *quota* for quality sawlogs for the period of 1 July 1996 to 30 June 1997, which was notified by letter in June 1996. The allocation of timber under the Timber Term Agreement was allocated in the same quantity as that granted under the previous annual quota which attached to the sawmiller's licence held by the respective company at the time of the Timber Term Agreement issued.

The 1997 Timber Term Agreement did not contain any reference to Species Types. The Specifications only addressed minimum log length and minimum log diameter. The Timber Term Agreement had a term of 5 years. It introduced concepts such as Integrated Operations, which had been part of the National Timber Reform Package.

1998

In May 1998 assent was given to the Forestry and National Park Act 1998 No. 163. The Act made provision with respect to forestry operations and the National Park estate following regional resource and conservation assessments; to transfer certain State Forest and other Crown lands to the National Park estate or Aboriginal ownership. It also legislated the Forest Agreements and 'integrated forestry operations approvals'.

In November 1998, the NSW State Government made an announcement that it had reserved about 1 million hectares of forests and also guaranteed to industry a minimum allocation of 129,000m3 in the Upper North East and 140,000m3 in the Lower North East for the next 20 years.

The Upper North East NSW Forest Agreement covered an area from Coffs Harbour up to the Queensland border and out past Glen Innes. The Lower North East NSW Forest

Agreement went from Dorrigo to the coast down to beyond Newcastle and out past Singleton.

In addition there was established a new Timber Industry Employment Taskforce to focus on regional development in the forest sector, $18 million over the next five years (1998 – 2003) for private land acquisition, $5 million over the next five years to log haulage assistance, and $30 million over the next five years for the development of hardwood plantations.

This announcement followed a decision of the Cabinet Standing Committee on Major Issues and Strategies held on 12 November 1998.

The Cabinet Standing Committee Minutes set out the following:

- approved the recommended outcome (as outlined in section 5.4 of the Cabinet Minute) for the Upper and Lower North East Comprehensive Regional Assessment regions;
- approved the revocation of approximately 402,282 ha of State Forest in the Upper and Lower North East Regions (in section 6.2 of the Cabinet Minute);
- approved the declaration of 85 new National Parks and Nature Reserves in the Upper and Lower North East Regions, and 37 additions to existing National Parks and Nature Reserves (as detailed in section 6.3 and 6.4 of the Cabinet Minute);
- approved the harvest of 109,000m3 per annum and 160,000m3 per annum of High Quality Large (HQL) sawlogs from the Upper and Lower North east regions respectively, to supply existing Term Agreement of Wood Supply Agreement holders (as detailed in section 5.4 of the Cabinet Minute);
- in addition to the volumes specified in section 3.4 of the Cabinet Minute, also approved the harvest of 2000m3 of High Quality Small (HQS) per annum and 8,500m3 per annum of HQS for the Upper and Lower North East regions, respectively;
- noted 20,000m3 of HQL sawlogs allocated in the UNE region will be sourced from the LNE region to allow the increased National Parks in the North East Region (see section 5.4 of the Cabinet Minute)
- noted in addition to the volumes specified in recommendation 3.4 of the Cabinet Minute. State Forests has existing customers to whom it supplies other products (i.e. piles, poles, girders, veneer, small and other sawlogs) produced in association with quota sawlogs.
- noted that this position allows for 20 years Long Term Wood Supply Agreements, which have 8 years to run, and their renewal for a subsequent 12 years, in line with the 20 year term of the relevant Forest Agreement and Integrated Approval and subject to resource availability. The Wood Supply Agreement with Boral will similarly be extended to 20 years with a mid-term review. Upon passage of the Forestry and National Parks Estate Bill the Minster for Forestry will enter into contracts with Term Agreement holders and Boral which will commit the government to extending their Agreements to twenty years at the time they expire. The volumes contained in the extended contracts will be subject to a review of resource level at the eight year review. This review will be based on the Forest Agreement land base, the EPA

> conditions and the conservation protocol applying to the Approval and updated timber inventory information,

It is observed that the Minute reproduced above states: “Term Agreement Holders and Boral’. This appears to be the first time that the distinction is made of two groupings within the industry of timber sawmillers being formally recognised by the State Government and State Forest and it is in a Cabinet Minute not presumably a document at large. So it is not surprising that this distinction was generally not recognised or identified within the timber sawmilling fraternity. The view was that there were commercial operational differences between all sawmillers, with some companies larger than others, but the availability to the Crown’s native forest green logs was equitable and on the same terms. Again reflecting the ‘run of the bush’ convention and the form of agreements that only referred to log length and log diameter for the purposes of what was timber specifications.

At the time of this Minute, Boral was a member of the NSW FPA along with the Term Agreement Holders. It was a further industry convention that the Sawmillers Association conducted the negotiations for its members with the State Forests. However, by 1999 it is evident from the available documentation that Boral was not utilising the Sawmillers Association for this purpose and was conducting its own contractual negotiations. Boral purchased Allen Taylor & Sons in the 1980s, Duncan’s in 1992 and Fennings in 2004. Boral negotiating for its subsidiaries seems to have commenced before 1997.

For the Term Agreement Holders the Sawmillers Association continued to negotiate agreements to 2004, which was the last time any major negotiation has occurred. This practice continued into 2004 and the view did persist amongst sawmillers, other than Boral, that all contracts were identical save for timber specifications and compartments and price zones. This meant in contractual terms they were very substantially the same. State Forests never let on that Boral subsidiaries were being treated differently in a contractual sense and ever increasing so throughout the period 1997 to 2004.

On 23 December 1998 State Forests of NSW issued to NSW Forests Products Association a draft ‘standard’ variation agreement to be made to the ‘standard’ Hardwood Term Timber Wood Supply Agreement. This was giving effect to the part of the Cabinet decision in November. The issued document was then subject to negotiation.

1999

On 2 February 1999 State Forests wrote to the Executive Director NSW Forests Products Association, Col Dorber. The letter in part stated:

> Please find attached a copy of the draft ‘variation agreement’ designed to effect the extension of current term agreements as provided under the Cabinet decision of November 1998 regarding the Upper and Lower North East Forest Agreements.
>
> This “variation Agreement’ has been revised after consideration and comment by yourself and other industry members and has today been submitted to the Crown Solicitor for consideration on behalf of the Minister.

> Please note on the third page under 5A.2 that Schedule 8 is intended to refer to Boral whilst Schedule 9 refers to the current term agreement holders.
>
> …
>
> Once consideration is complete, copies of the final Variation Agreement will be forwarded to Term Agreement holders for signature.

The draft Variation Agreement introduced a new Clause 5A Review of Base Allocation that provided for a review mechanism of the Base Timber Allocation in 2006. At the conclusion of that review, the Minister "may determine and advise State Forests of the annual volume of Timber which may be taken from the Review Area and the annual volume of Timber which should be made available to the Company each Year". Clause 5A of the 1999 Deed of Variation to the 1997 Timber Term Agreement is extracted and set out in Schedule 6**.** Clause 5A also introduced the term "Common Agreement" and "Principles of equitable resource distribution" as part of the Base Allocation Review. The Review was capped at the Base Allocation already stated within the 1997 Timber Term Agreements.

The term "Principles of equitable distribution" is deserving of further comment as it was first time the convention of "Run of the Bush" was introduced into a contract in written form. The context of its usage was if the Minister declined to determine the Timber which should be made available to the Company each Year, "State Forests must determine that matter in accordance with the principles of equitable resource distribution applied to the Minister's determination of the annual volume of Timber which may be taken from the Review Area".

The draft Variation Agreement defined "principles of equitable resource distribution" and "common agreements" as:

> "Principles of equitable resource distribution" means allocation of the annual quantity of Timber determined by the Minister under Clause 5A.6, after deducting annual quantities due to persons specified in Schedule 8 (whether or not the legal entitlement arose after the date of this Agreement), amongst those persons specified in Schedule 9, who have an entitlement to Timber under Common Agreements, in proportion to their respective entitlements.
>
> "Common Agreement" means a written agreement between State Forests, the State of NSW and a person entered into in 1997 on terms and conditions substantially identical to the provisions of this Agreement except in relation the quantity of the Base Allocation and the precise Specifications for Timber and under which the person entitled to timber under the Agreement has sought an extension of the agreement under provisions identical to Clause 4.3.

On 11 February 1999, Martin Grealy, an officer of State Forests, sent an email to Col Dorber, Executive Director NSW FPA:

> Col,
>
> Please find attached a copy of the generic variation agreement and the letter of instruction issues by TNT courier to term agreement holders today. …

On 11 February 1999, the CEO of NSW Forests Products Association Ltd wrote to all Term Agreement Holders (who were members) advising:

> … the Minister for Forestry, The Hon Kim Yeadon, has approved the issue to you today of a proposed variation to your Term Agreement.
>
> The covering letter from State Forests refers to consultation with Industry, which of course is a euphemism for describing an extensive consultation process conducted with the NSW Forest Products Association.
>
> I strongly urge you that before you sign this variation agreement you refresh your memory as to the contents of the original agreement and you read and understand the submissions made by FPA NSW on 24 December 1998 to Dr Bob Smith, CEO SFNSW and on 8 February to Gary Keating, General Manager, Marketing SFNSW. …

The 1997 Timber Term Supply Agreement by Variation now had a term of five plus seventeen years. The 1999 Deed of Variation did not alter the Specifications provisions within the Timber Term Supply Agreement 1997. As already stated, a review of the base allocation for each Timber Term Agreement Holder was introduced. Schedule 6 sets out extracts of the Specification Clause and the Base Allocation and Review of Base Allocation Clauses found within the 1997 Hardwood Timber Term Agreement as varied in 1999.

As Col Dorber noted to his members, the 1999 Variation to the 1997 Timber Term Supply Agreement was negotiated between State Forests and NSW FPA and then issued to the Common Agreement Holders or Hardwood Term Agreement holders.

In February 1999, State Forests NSW issued to Boral a new Hardwood Timber Wood Supply Agreement, which was signed in March 1999. Recitals 1.5.4 to 1.5.7 are reproduced here:

> *1.5.4 In accordance with the Government's Forestry Reform Agenda and the Minister's directions ('the Government's decision') in 1996 State Forests was required to reduce the amount of timber it was able to make available to the Companies under the Earlier Agreements to a total of 185,000m3 per annum quota quality timber.*
>
> *1.5.5 By reason of the Companies being part of the Boral Timber Division, the Government's decision did not specify the maximum volume State Forests was to supply under each of the Earlier Agreements or differentiate the areas of supply in the Earlier Agreements, or otherwise distinguish between each of the Companies.*
>
> *1.5.6 The State of NSW has recommended that the earlier Agreements be consolidated into a single long term Wood Supply Agreement for a term of twenty years ending 31 December 2018 with an annual supply of 185,000 cubic metres of hardwood timber.*
>
> *1.5.7 By separate arrangement the parties have agreed that 15,600 cubic metres of the Companies' annual entitlements to hardwood timber under the Earlier Agreements will be allocated to Ford Timbers Pty Limited.*

The Specification Clause and Specification Schedule for the Boral 1999 WSA are extracted and set out in Schedule 5.

The Boral Hardwood Timber Wood Supply Agreement was not a Common Agreement as defined in this Agreement.

The Boral Hardwood Timber Wood Supply Agreement is a different contract to that of the 1999 Varied 1997 Timber Term Agreement held by the Common Agreement Holders. One only has to look at the difference in the Base Allocation clause to see this. But there were similarities.

The table following seeks to show these similarities.

Differences in 1997 TTA, 1999 Variation to 1997 TTA and Boral 1999 HTWSA

Subject	1997 TTA	1999 Variation to 1997 TTA	Boral 1999 HTWSA
Duration	5 plus 5 (Cl 4.1, 4.2)	5 plus 17	I Jan 1999 to 31 December 2018
Specifications Tree Species			√ Schedule 1
Specifications minimum log length	√ (Schedule 1)	Same as 1997	√ (Schedule)
Specifications minimum log diameter	√ (Schedule 1)	Same as 1997	√ (Schedule)
Specifications maximum defect by log diameter	√ (Schedule 1)	Same as 1997	√ (Schedule)
Indicative availability of timber available from Management Areas.	√ (cl 5.2)	Same as 1997	

Reference to Price Schedule	√ (cl 14)	Same as 1997	√ (cl 21)
Reference to Price System	√ (cl 14)	Same as 1997	√ (cl 21)
Review of Base Allocation		√ (cl 5A)	√ (cl 7)
Reference to 'Common Agreement'		√ (cl 5A)	√ (cl 7)
Reference to "Principles of equitable resource distribution'		√ (cl 5A)	√ (cl 7)
Compensation if Base Allocation altered in Review		(√ (cl 5B)	√ (cl 30)

An important difference between the Specification provisions of the two documents is the timber specification The main issue is the difference in the contract drafting with the introduction of this concept.

In the Boral 1999 WSA the tree species listed were: "All species of the genera[2] Eucalyptus, Lophostemon, Syncarpia suitable for sawmilling and meeting the specifications for size and defect set out hereunder." No such description existed in the 1997 TTA or the 1999 Variation Agreement. The description along with a related specification Review Clause was introduced to the Common Agreement Holders in their 2004 WSAs.

The review clause in both the 2004 WSAs and the Boral 2003 WSA sets out an industry wide mechanism for review of the Base Allocation of Timber for Boral and all Common Agreement Holders.

It had as a principle of operation the maintenance of Base Allocations for all companies and any review not exceeding maximum levels. A list of the 'Common Agreement Holders applicable to Area of Supply' is set out in Schedule 6 of the Boral 1999 WSA. The 1997 Hardwood Timber Term Agreement is reproduced in Schedule 7 of the 1999

[2] The word 'General' is used in the WSA. This however is believed to be a typographical error.

Boral WSA and in Schedule 8 the 1999 Deed of Variation to the 1997 Hardwood Timber Term Agreement is also reproduced.

It is worth noting that the Boral 1999 WSA has in its schedules details of the Common Agreement Holder's contracts when Boral's subsidiaries were not a Common Agreement Holder party. Just as the Common Agreement Holder's 1999 Variation effectively duplicated these provisions. A reading of Schedule 6 will assist on this point. It is noteworthy as it raises the question as to why the documents were drafted in this manner. The provisions seem to try and tie the industry back into one operational group for the purposes of resource review and any new allocation in line with the long term convention.

The terms of the Base Allocation Review indeed reflected the underlying principle that had operated since sawmillers' licences to extract timber from Crown Land had existed (1861). That was that all takers of the Crown Resource would have identical contracts except for the volume of the Base Allocation and Indicative Area of Supply of Timber, which were company specific.

The Common Agreement Holders were not generally aware of any of the terms of the 1999 Boral WSA. Although their own Varied Agreements with the inclusion of the Review of Base Allocation and related Schedules did inform them that they all formed a group known as The Common Agreement Holders and the Boral group of companies were identified as the Agreement Holders.

2000

Legislation was enacted to create National Parks in the years 2000, 2002, 2003, 2005, 2006 and 2010. This had the impact of reserving much hardwood timber that was previously available for logging.

In late 2000 Timber Term Agreement Holders were invited to apply for an extension of their Term Agreements beyond 31 December 2001 for the Supply of Quota Quality Sawlogs. This extension was in accordance with the 1999 Variation of the Timber Term Agreement. The invitation to apply was available on the basis the Common Agreement Holders provided confidential business information of log and timber input data and sale data both at mill gate prices, details of the company's business plan, details of market analysis and marketing strategy, the company's view of hardwood sector trends and who were considered to be their main competitors, and their marketing details plans for improvements in products, processes and labour skills, product development and innovation, investment in new plant and technology, market research and product information, export activity and promotion and waste residue and utilisation and use of government assistance to enhance performance.

State Forests were seeking to see the establishment of a long term industry.

2001

Col Dorber Executive Director NSW FPA left in February 2001. Russ Ainley, his Deputy and a qualified forester, took up his position.

It would appear that the extension of Varied Timber Term Agreements held by the Common Agreement Holders did occur. This put these contracts concluding in December 2018.

2003

The events that occurred in 2003 concern the Boral subsidiaries

2003 was a NSW State Government election year.

On 27 February 2003 Taylors, Duncans and the State of New South Wales signed a Memorandum of Understanding (**MOU**). The objectives of the MOU were:

2. Objectives

2.1 The NSW Government acknowledges the Companies desire to renegotiate the Agreement with a view to obtaining greater certainty as to the supply of hardwood timber under the terms of the Agreement until 2023.

2.2 The Companies acknowledge that the NSW Government wishes to declare additional conservation areas in the following areas (as shown on the attached map and the schedule of associated zones and timber volumes, subject to the notations relating to Pine Creek and Queens Lake hereunder): [a list of fifteen or more areas are named]

3. Amendment of the Agreement

3.1 The parties agree to negotiate in good faith to amend the Agreement to reflect the following:

3.1.1 the NSW Government's commitment to the supply of hardwood timber under the Agreement to 2023 at a reduced level of 165,000m3 per annum of quota quality logs to apply from 1 July 2004;

3.1.2 that the review of the annual volume of hardwood logs which may be harvested out of the 1999 Agreement Land Base that is scheduled to commence in 2006 will have no impact on the Agreement with Boral;

3.1.3 the parties agree that this Memorandum of Understanding does not affect any right that the Companies hold over the wood that is the subject of the Wood Supply Agreement dated 19 June 1998 between Fords and State Forests, acknowledging that the rights relate to wood supply up to 2007; and

3.1.4 to make any other amendments to which the parties agree.

3.2 The parties acknowledge that supply management zones, log specifications and pricing arrangements should, as far as possible, replicate those provided for under the Agreement, having regard to the Companies' proposal to upgrade the Heron's Creek sawmill and at least 65 per cent of the total supply volume under the Agreement will be supplied to the Herons Creek sawmill. The Government will use its best endeavours to minimise species mix percentage from its supply zones. …

On 2 March 2003, the NSW Government made an announcement concerning new North Coast reserves and timber supply.

On Monday 10 March 2003, the Deputy Premier sent a letter by facsimile transmission to Term Timber Supply Agreement holders confirming the NSW Government had signed a memorandum of Understanding with Boral with regard to their log supply.

Boral on behalf of its subsidiaries was the only sawmilling entity that was consulted before 18 March concerning the subject matter of the MOU. This MOU gave rise to the Wood Supply Agreement entered into between Boral, the Forestry Commission (SF NSW) and the State Government on 26 August 2003.

Later in March at Port Macquarie at a meeting convened by NSW FPA, Mr Ian Cranwell, Director Resource and Conservation Division of Planning NSW (RACD) advised that Term Timber Supply Agreements holders, other than Boral, would be receiving a letter offering to negotiate new contracts **on similar terms to the Boral MOU**.

On 19 August 2003 Boral issued a press release advising of its plan to invest $19 million to build the first stage of a large scale, state of the art engineered flooring manufacturing plant at a site close to sources of native hardwood and plantation softwood in Northern NSW. The press release stated in part:

> Boral's ability to undertake this exciting growth opportunity has been facilitated by reaching agreement on long-term wood supply with the NSW State Government and NSW State forests.

On 26 August 2003, a WSA was entered into between Taylors, Duncans, State Forests and the State of NSW. The details of this WSA were not disclosed and the existence of substantially different terms of the WSA only became known in 2010 when the Agreement was the subject of litigation in the Supreme Court of New South Wales (Case No 2010/291263). The actual terms were not known, only that terms had to be available to run an action that was not available to the Common Agreement Holders.

The actual terms of the Agreement were only seen by the Common Agreement Holders in early 2014 after the Nature Conservation Council of New South Wales received copies of the WSAs in September 2012 as a result of a GIPA (FOI). That action then caused the text of all wood supply agreements to be placed on the State Forests website.

In those proceedings Taylors and Duncans were plaintiffs with the defendants being FCNSW and the State of New South Wales.[3] As noted earlier, Taylors and Duncans were part of the Boral Group of Companies at that time.

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[3] In the summons that was filed, it was stated that the dispute concerned the WSA between Taylors and Duncans and the defendants. Further, it was contended that FCNSW failed to supply timber in the manner required by the WSA and that that failure occurred when FCNSW was supplying timber "of the quantity, size and species required by the agreement to third parties in circumstances where it had no contractual right to do so. In the summons it is stated that that FCNSW supplied specified quantities of timber to the plaintiffs in the period 2005 – 2010 and that this was less than the amount required to be supplied: see paras 12 and 16. In addition, it was alleged that there was a failure to supply the plaintiffs 15,000 m^3 of timber from the New South Wales South Coast, and that there had been an excessive supply of small diameter timber (paras 23 to 25), and a breach of the best endeavours obligation to supply a minimum species claim (paras 26 to 36). Finally, there were also claims that there had been a failure to determine delivery charges that were fair, reasonable and competitive (paras 37 to 44).

Significantly, in the WSA with Taylors and Duncans clause 15.9.1 detailed requirements regarding volume supply by major tree species of Blackbutt, Spotted Gum, Tallowwood, Brushbox and Blue Gum.

Clause 15 deals with Timber specifications and, in part, set out in the following terms:

> *15.9 State Forests recognises the importance, to the operation of the sawmills at the Delivery Sites, of consistency in species, diameter and length of delivered Timber. The Companies also recognise the difficulties associated with supplying a delivered log mix that does not vary to reflect the inherent variability of the forest from which it is harvested. Subject always to State Forests' sole discretion to determine from time to time the location of Contract Harvesting operations necessary to supply Timber under this Agreement, in accordance with State Forests' opinion of good forest management, and the limitations that flow from the exercise of that discretion, State Forests will use its best endeavours to deliver Timber:*
>
> > *15.9.1 which complies, on an annual basis, with the following requirements regarding volume by major species:*

Major Species	***Maximum or Minimum***	***Percentage of Base Allocation***
Blackbutt	*Minimum*	*60%*
Spotted Gum	*Minimum*	*5%*
Tallowwood	*Minimum*	*3%*
Brushbox	*Minimum*	*2%*
Blue Gum	*Minimum*	*3%*
New England Hardwood (including E.viminalis, E.fastigata, E.andrewsii, E.carneronii, E.obliqua, E.laevopinea, E.radiata, E deanii, E.albens, E.dunnii)	*Maximum*	*12%*

15.9.2 which complies on an annual basis with the following requirements regarding volume by diameter:

Diameter Range Centre Diameter Under Bark	***Maximum or Minimum***	***Percentage of Base Allocation***
40-49 centimetres	*Maximum*	*55%*
50-59 centimetres	*Minimum*	*15%*
60+ centimetres	*Minimum*	*10%*

which complies on an annual basis with the following requirements regarding volume by preferred lengths (124 decimetres (dm), 118 dm, 112dm 100 dm, 94dm, 62 dm, 59 dm, 56dm, 50dm and 47dm):

Major Species	***Maximum or Minimum***	***Percentage of Major Species Volume per Year in***
Blackbutt	*Minimum*	*50%*
New England Hardwood (Including E.viminalis, E.fastigata, E.andrewsii, E.cameronii, E.obliqua, E.laevopinea, E.radiata, E deanii, E.albens, E.dunnii)	*Minimum*	*40%*

The impact of these changes to the Taylor's WSA and the Duncan's WSA, was to give Taylor and Duncan (and Boral) a major market advantage over its competitors. These advantages provided Boral or their companies:

- with base quantities of preferred species timber;
- with the ability to specify preferred lengths and diameters of hardwood logs to be supplied;
- with minimum volumes of supply of timber from specified zones which were non-preferred species (New England hardwood);
- with a longer contractual term than was offered to other timber companies;[4] and

[4] This longer contractual term was offered in the following year to all other WSA holders in the Common Agreement Holder list. This will be covered later.

- with a significant portion of hardwood timber supply from the North Coast region of New South Wales.

The statement in the Boral 2003 WSA at paragraph 15.9: "*State Forests recognises the importance, to the operation of the sawmills at the Delivery Sites, of consistency in species, diameter and length of delivered Timber. The Companies also recognise the difficulties associated with supplying a delivered log mix that does not vary to reflect the inherent variability of the forest from which it is harvested."* Supports the 'run of the bush' convention. The issue here being that whilst these words may seek to qualify the percentages set out in the tables in Clause 15, it did not. Whilst it appears that no judgement was issued in the Supreme Court Proceedings, the effect of the Court case was that the tables in Clause 15 are what were enforceable as to timber specifications and timber allocation.

As noted at the start of this submission, log species mix, log length, log diameter are important factors that govern the viability of a sawmill operation. As already noted the 1979 Term Agreements issued to the Common Agreement Holders did not specify species. This was not changed in the 1999 Variation to this Agreement. The effect of this was all recipients of timber from State Forests had to accept a delivery of timber no matter what was harvested provided it meet length and diameter specification.

The rationale for such a distribution mechanism of a Crown timber resource is that no company gets preferred species. Instead the distribution is made as equitable amongst the sawmillers as the resource will permit. Length of logs and minimum diameter operate as factors of a profitable mill operation design. It also acts as a de facto environmental control. Smaller trees are left in the forest for future harvest in line with the practice of silviculture.

By offering one sawmiller preferred species and a minimum of the unprofitable non-preferred species (New England hardwood), the market was seriously distorted as a disproportionate amount of the better timber went to one sawmiller whereas previously, it was spread around. With the equitable distribution of timber through 'run of the bush' it was ensured that the non-preferred species, which are hard to dry and harder to market, was shared around. With the introduction of the Boral preferred clause, this non-preferred species had to be sent to Boral's competitors as FCNSW still had to meet its timber supply obligations to them and had to use the harvested non preferred species to meet this obligation.

2004

In November 2004, a Type A Wood Supply Agreement was entered into between FCNSW, Allen Taylor & Company Limited and the State of New South Wales. This agreement arose from the wood allocation being the Fennings Timber Quota, a company that Boral purchased. This WSA also contained a specification clause similar to the Boral WSA 2003.

The Fennings Agreement had a term of the Agreement that ended on 31 December 2023. Schedule 1, of the Agreement, which contained the Specifications for Hardwood Timber between Commencement Date and 30 June 2005 for Sawlog Grade 1 High Quality Large

Sawlogs (HQL) and Sawlog Grade 1 High Quality Small Sawlogs (HQS), had species listed as:

> *Species*
>
> *All Species of the Genera Eucalyptus, Corymbia and Syncarpia*

The Schedule then stated:

> *PROCESS TO DETERMINE A REVISED SPECIFICATION FOR IMPLEMENTATION FROM 1 JULY 2005.*
>
> *The Specifications to apply from 1 July 2005 will be a standard Specification for all north coast customers.*
> ***By 1 October 2004 Forests NSW must convene a working party of Forests NSW, Type A WSA customers (or their representatives) and other parties (or their representatives) receiving Timber under written agreement from Forests NSW, for the purpose of developing the revised Specifications ("the Working Group").***
>
> *The Company (or its representatives) may participate in the Working Group.*
> *The Company or its representatives on the Working Group must negotiate in good faith to reach agreement on changes to the Specification.*
> *Any revisions determined by the Working Group must:*
> *Standardise specifications for HQL and HQS sawlogs for all Forest NSW north coast customers.*
> *In aggregate not vary the total volume of timber currently defined as HQL and HQS.*
> *Be reflected in the price Schedule from 1 July 2005.*
> *Define minimum diameter only in terms of small end diameter underbark.*
> *Ensure that safety and operational efficiency of harvesting, haulage and timber processing operations are maximized.*
> *The Company may not unreasonably refuse its consent to a request by Forests NSW to amend this Agreement from 1 July 2005 by replacing the Specifications with a revised Specifications determined by the Working Group.*

The Working Group was never convened. This was probably because all North Coast sawmillers would not be part of the Working Group. The 2003 Boral WSA did not have the provision compelling the Boral subsidiaries to participate in the working group and adhere to the contractual provisions to do with the working group. The Working Group had as one of its objectives to "standardise specifications for HQL and HQS sawlogs for all Forest NSW North Coast customers." If the Working Group had happened, then we submit the preferred species timber specifications would either have been offered to all sawmillers on the North Coast or would have ceased altogether.

On 3 September 2003 NSW FPA advised its members that on 8 September at Grafton Racecourse a meeting with State Forests was to occur concerning new Term Agreements. State Forest officials at the meeting where Peter Duncan, MD, Michael Bullen, Gary

Keating, GM Marketing and Ron Wilson. There are no available notes of what occurred at this meeting.

On 16 September 2003 the NSW Minister for Infrastructure and Planning and Minister for Natural Resources, Craig Knowles, wrote to Hurford Sawmilling. A member of NSW FPA and a Common Agreement Holder, and advised:

> As you know, agreement has been reached between the Government and the Forest Products Association on a framework memorandum of understanding which is now being used as a basis for discussion between State Forests and individual companies. …

On 7 April 2004 State Forests, over the signature of Gary Keating, General Manager, Marketing Division forwarded a copy of a new Type A Wood Supply Agreement for High Quality Hardwood Sawlogs to Timber Term Agreement Holders. The letter stated in part:

> I am pleased to enclose two copies of the new Type A WSA for your company. This represents the culmination of a process which commenced in August 2003 to provide holders of existing Hardwood Timber Term Agreements with the opportunity to enter a new WSA, similar to the Boral WSA, extending from 1 July 2004 to 31 December 2023 without resource review. A deed of Release is also enclosed. …
>
> This new type A WSA is part of a package approved by Government to provide improved resource security to the existing north coast hardwood timber industry and to resolve issues which were not completed through the Regional Forest Agreement and subsequent NSW Forest Agreement processes in 1998 and 1999. The package includes Type B WSAs for poles, piles, girders and some HQS sawlogs and Type C WSAs for low quality (salvage) sawlogs.
>
> The new Type A WSA has been negotiated with the NSW Forest Products Association as a generic agreement but schedules are company specific. …

On 30 April 2004 State Forests, over the signature of Gary Keating, wrote to Term Agreement holders stating:

> **Indicative Quantities of Timber (Schedule 2, part 2)**
>
> State Forests has reviewed “indicative quantities of timber” to provide a more equitable geographic distribution, at the same time as minimising delivery costs and meeting customers’ species mix requirements to the greatest extent possible. Resulting from this review State Forests has revised Schedule 2, Part 2 for replacement in the final Type a WSA.
>
> The changes to “indicative quantities of timber” are particularly targeted to restore as equitable geographic distribution of High Quality Small Logs (HQS). Please note that this Schedule is indicative only and that, as before, actual geographic distribution of timber may vary from that indicated in Schedule 2, Part 2.
>
> **Log Specifications (Schedule 1)**
>
> Schedule 1 has been revised to provide for the formation of a working group comprising State Forests, customers and the FPA to revise current log specifications within certain specific parameters for implementation from 1 July 2005.

> The process is aimed at standardising log specifications on the North Coast and ensuring that all relevant considerations are made before any changes to log specifications are implemented. …

The indicative quantities of timber referred to in Schedule 2, Part 2 of the 2004 WSA were important to the Term Agreement Holders being asked to release the Varied 1997 Term Agreement as it was believed it ensured a supply of species mix

The schedules to the 2004 WSA also contained generic terms to all of these Agreements supplied to the Common Agreement Holders. The species listed were identical and each Agreement contained the words set out above in relation to the Fennings WSA 2004.

Clause 14 Specifications in the WSA 2004 issued to the holders of the Varied Hardwood Timber Terms Agreement 1997 is revealing.

It is to be noted that the provisions concerning the Working Party concerning Specifications for north coast customers are set out in this extract. It is the same provision in the Fennings WSA and in what was referred to in a letter from Gary Keating dated 30 April 2004 and referred to above.

A comparison of the Boral WSA 2003 and a Common Agreement Holder's WSA highlights clear differences which are substantial when commercial matter of the form and type of resource supply are considered.

Under the 2003 Boral Agreement the Area of Supply was a smaller area being limited to 14 Management Areas and three Supply Zones (2, 3 and 4).

From1 July 2014 the Area of Supply became common to all WSAs (i.e. the whole North Coast = Supply Zone 1-6 inclusive). Under Clause 6.10.2 of Boral's WSA, FCNSW must however 'select areas using its best endeavours to minimise timber haulage distance.' This requirement, when combined with Boral's entitlement to the species which grow predominantly along the coast effectively shield it from the risk of long haulage.

In contrast other WSA holders do not enjoy the same protection.

Price Zones

Price Zones is a term used in the 2004 WSA but not in the 2003 Boral WSA.

Both of the letters dated 7 April 2004 and 30 April 2004 and Schedule 1 of the 2004 WSA refer to Price Zones and Indicative quantities of timber that might be obtained from a particular price zone.

What is in these letters is quite clear. The letter of 30 April seeks to emphasis the word 'indicative', the Price Zones are references to 'geographic distribution of timber'. The point must be made that whilst the covering letter used the word 'indicative' only one of the issued 2004 WSA uses this word. However, the interpretation of each of the 2004 WSAs is the same when looking at the operational meaning of Price Zones. The significance of this to a sawmiller can be found in the 2004 WSA clauses 16, 17 and 18. These three clauses are set out in Schedule 13. Clause 16 states:

Clause 16 Delivered price.

16.1 The price payable under this Agreement for Timber taken by the Company under this Agreement shall be the Delivered Price.

16.2 The Delivered Price payable from time to time shall be the total of:

16.2.1 the Stumpage Price determined in accordance with clause 17; and

16.2.2 the Delivery Charges determined in accordance with clause 18;

in respect of the Timber.

It is relevant to set out here Clause 18.1:

18.1 The Delivery Charges for Timber harvested and hauled from a Price Zone to the Delivery Site shall be determined by applying the rates set out in the Delivery Charge Schedule for the type of Timber, the Price Zone and the Delivery Site involved. State Forests must prepare the Delivery Charge Schedule as agreed or determined in accordance with this clause.

18.2 A Delivery Charge for Timber harvested from a Price Zone and hauled to the Delivery Site will be the total of:

18.2.1 A cost per cubic metre for the type of Timber being an aggregate of costs for the various items of work comprising the Contract Harvesting necessary to harvest and haul the Timber from the particular Price Zone to the Delivery Site; and,

18.2.2 A cost per cubic metre for State Forests' management and administration of the Contract Harvesting involved which the parties agree at the date this Agreement takes effect is $1.12 per cubic metre.

'Price Zone' means an area nominated by State Forests from time to time as a Price Zone for the purposes of setting Delivery Charges and being a generally contiguous geographical area of forest which is in the opinion of State Forests is suitable for uniformity in pricing for Timber. The Price Zones applicable at the commencement of the Agreement are as set out in Schedule 3 of the WSA.

'Delivery Site' is the sawmiller's yard.

'Timber' is timber complying with the Specifications set out in the WSA.

The Common Agreement Holders who took up a 2004 WSA had a level of certainty of where the timber to be supplied to them was to be obtained. From this flowed a level of certainty as to the Delivery Charge they would have to pay. Whilst the correspondence does use the word "indicative' it is also quite strong in what is states about 'geographical distribution of timber'.

As background to this it has to be recalled that the compartments usually were made of a number of Price Zones and that each sawmiller historically had a compartment from where their Crown timber was sourced. This was important as haulage has always been an important cost of the raw material in sawmilling.

In effect, what State Forests were representing was that whilst they could not guarantee timber was going to be sourced from 'local' Price Zones they were 'indicating' that this was where it was expected to be obtained.

This is not what has occurred. Timber is now being sourced from outside Price Zones for most North Coast sawmillers. One of the reasons for this has been the Boral WSA preference clause.

How this occurs is that as Boral's contract has clear percentages of delivery, preferred species mix closer to Boral is delivered to them. The only means of actually proving this within the North Coast is by extrapolation from the figures from FCNSW of timber sales from 2003 to 2019.

Higher Delivery Charges are a competitive impost placed upon your competitor if they are also not incurred.

But the Price Zone issue has another dimension. Each sawmiller would know from experience what a Price Zone would be expected to yield in the way of Timber. Yes, any yield has to be subject to 'Run of the Bush' but historically a degree of certainty would be present as a sawmiller saw the sourcing of their Timber in Schedule 1 of the WSA.

There is clear evidence in the sales data supplied by FCNSW that they have been securing Timber to fill WSA Allocations, particularly Boral's WSA, from wherever they can find the Timber. What this means is that any certainty that might have been determined in the 'indicative Price Zones' schedule in the respective WSAs are now meaningless. The distortion of the Boral preferred species clause needs to be removed so that normal competition can operate. That is, every sawmiller has an even handed treatment of whatever the bush can yield and that Price Zones and compartments are to yield as nature dictates rather than the pressure of supplying percentage of preferred species.

Supply Zones and Price Zones

Supply Zone is a term used in the 2003 Boral WSA and not the 2004 WSA.

The comparison of Schedule 2 and Schedule 3 of the 2003 Boral WSA and Schedule 1, Schedule 2 and Schedule 3 of the 2004 WSAs is important as it shows what a competitive advantage State Forests provided to Boral and its subsidiaries during this period.

To illustrate this point certain terms of the 2003 Boral WSA need to be highlighted.

Boral 2003 WSA, Schedule 2 provides:

> **Schedule 2**
>
> **165,000 cubic metres of Quota Quality Logs (subject to clause 6.2)**

Supply Zone	Maximum Allocation (Quota Quality Logs)	% of Production (Quota Quality Logs)
2	55,000	72%
3	95,000	88%
4	15,000	52%

Clause 6.2 of the 2003 Boral WSA provides:

> 6. BASE ALLOCATION
>
> 6.1 Each Year State Forests must make the Base Allocation available to the Companies.
>
> 6.2 Subject to Clause 6.11, each Year State Forests may substitute up to 24,350 cubic metres of the Base Allocation of Quota Quality Logs with Small Logs as follows:
>
> ….

Supply Zones 2, 3 and 4 are defined in the 2003 WSA, Clause 2.1 the Definition Clause. It provides that **'Supply Zones'** are in Schedule 3 as "Zones 2", "Zone 3" and "Zone 4". They are marked on a map of the North Coast.

Price Zones are also defined in Schedule 3 of the WSA. The meaning of the phrase "Price Zone' is defined in clause 2.1.

> **'Price Zone'** means an area nominated by State Forests from time to time as a price Zone for the purposes of setting Delivery Charges and being a generally contiguous geographical area of forest which in the opinion of State Forests is suitable for uniformity in pricing of Timber. The Price Zones applicable to the Supply Zones 1 to 6 inclusive at the commencement of the Agreement are as set out in **Schedule 3**.

Price Zones are also marked on the map in Schedule 3 in the 2003 WSA.

Then one needs to look at the various 2004 WSAs.

The Timber Allocation for each 2004 WSA is different. But what is significant is that none of the WSAs uses the term "Supply Zone'. Instead 'Price Zone' is used. It has the same definition as that used in the 2003 WSA. But it does not have the same certainty as the use of the term 'Supply Zone'. In the Hurford WSA the term 'indicative ' is used. In the Notaras WSA the Schedules simply read that timber supplied from the Price Zones will have the following features.

When looking at Schedule 3 of the 2004 WSA, Schedule 3 only marks 'Price Zones' which are indicative only for which timber may be sourced as per the Tables in Schedule 1 or for which defects will apply for timber taken from those Price Zones. What is not stated but is implicit in the 2004 WSA is that timber can be provided from outside of the named 'Price Zones' in the respective WSA.

Significantly, the Supply Zones in the 2003 Boral WSA cover a large number of the Price Zones in the 2004 WSA.

In reality what this means is that in 2003 State Forests and, now FCNSW, guaranteed through the preferred species specification clause (Clause 15 WSA 2003) and the use of Supply Zones 2, 3 and 4 that the first pick of the better timbers in the areas went to Boral before any other company. This is because the 2003 contract was specific in type and quantity of timber being supplied by percentage from a geographical area. Whilst the 2004 contracts referred to general species mix subject to defects and quality which were to be cut from Price Zones that were not exclusive.

In reading the 2004 WSAs it is clear that whether a Price Zone was indicative or just named, all it really states is that timber from these Price Zones must comply with these specifications concerning defects, diameter and length. This then defined 'Timber' under the WSA. The literal reading is that timber taken from any other Price Zones not mentioned in Schedule 1 could be 'Timber' by virtue of it being simply delivered under the WSA to the sawmiller.

These provisions really provide Boral with a major competitive advantage and really do lessen competition.

The comparison of the 2003 WSA and the 2004 WSAs is far removed from the 'run of the bush' operation which existed when competition between sawmillers did operate as they all received what their local 'compartment' could supply without contractual manipulation.

Review of the Coastal Hardwood Wood Supply Agreements

Timber NSW in a letter sent to the Minister for Lands and Forestry, and the Minister for Racing expressed 'profound disappointment' on the lack of action following the tabling of the GHD Report.

The GHD Report was commissioned to review the issues set out previously.

Summary

The long term convention of equitable distribution of the Crown resource of hardwood green logs and the difficulty of the predictability of harvesting particular types of trees because of the 'run of the bush' principle ensured certain things.

These were:

- when licence arrangements moved from an annual licence to a term contract the contractual arrangements with licensed sawmillers had to be of similar contractual provisions save timber allocation and the compartment from where the timber was to be sourced.
- All contracts had to conclude at the same time so that equitable distribution of the timber resource would be distributed after a available resource review.
- In 2003 when the Boral subsidiaries obtained a Wood Supply Agreement that altered the standard timber specifications from just log diameter and log length to specific tree species expressed in a percentage of the total timber allocation maximising preferred species and minimising non-preferred species the Boral Group obtained a significant market advantage.

- In 2004 the Common Agreement Holders were granted a Wood Supply Agreement very similar to what Boral subsidiaries had been given save the timber specification clause in the body of the contract did not include percentages against preferred and non- preferred species.
- Both the 2004 Boral subsidiary Fennings WSA and the Common Agreement Holders Wood Supply Agreements had a provision that a working group would be formed in 2005 to ensure that all specifications on the north coast were identical. This may have removed the anomaly of the Boral Group WSAs in the context of the industry contracts as such a working party might have stumbled onto the provision in the other Boral Group WSAs. State Forests never convened this meeting.
- If 'Run of the Bush' is to be a WSA founding principle then Price Zones need to be enhanced as a sawmillers local resource catchment. If it is not to be a founding principle then the market needs to start differentiating between preferred species and non-preferred species and the price for delivered Timber needs to be one price rather the current system that has a stumpage price and haulage price that are independent.

The Boral 2014 Variation Deed and its effect on the Common Agreement Holders

Schedule 4 provides background to the Boral 2014 Variation Deed, its key provisions and their effect on wood supply to the Common Agreement Holders.

Background

In 2012 the NSW Government formed a Forestry Industry Taskforce which identified priority issues to be solved for the forest industries. Resource supply on the north coast was identified as a priority issue. The issue comprised of:

- concern about sustainability and the major drop in yield beyond 2023
- decline in the size and quality of high quality logs
- increase in the cost of harvesting and haulage.
- collapse of the pulpwood market,
- declining Blackbutt log supply.

The issues identified by the Taskforce arose as a consequence of the following concerns:

- The imprecise nature of FCNSW's timber resource modelling (FRAMES[5]) which has probable limits of error of +/ – 30%;
- The broad scale at which sustained log yield estimates are calculated. Sustained yield estimates modelled by FRAMES are based on the whole north coast (Area of Supply), not for individual Supply Zones or individual Price Zones;
- The large disconnect between strategic resource modelling and operational harvesting practice. FCNSW is unable to reconcile predicted and actual timber yields;

[5] FCNSW's Forest resource estimation model

- The incremental reduction in the State Forest area available for timber production (caused by IFOA harvesting prescriptions);
- Prioritisation by FCNSW of its species mix supply obligations to Boral at the expense of long term sustainable log supply to the industry as a whole. This has seen the intensification and concentration of FCNSW's harvesting activity in the coastal region which are rich in preferred species;
- The possibility that the NSW Government has not allowed a sufficient buffer in the modelling estimates to cover unforeseen resource loses and modelling imprecision.

We submit that while these concerns are real and reflect on FCNSW's current and past management practices, the major impact on the wood supply to the Common Agreement Holders is the Boral 2014 Variation Deed.

In 2013 a Steering Committee commissioned by the NSW Cabinet, including FCNSW, and chaired by Dr John Keniry engaged consultants URS to undertake a review of wood supply levels (called the 2023 Project). This review was "Cabinet in Confidence" and was not shared with the NSW Forest Industries Taskforce or the broader industry. The key recommendation arising from this review was to reduce supply of high quality logs by 50,000 m3 per year including 40,000m3 per year of Blackbutt.

The Boral 2014 Variation Deed

On 19 June 2014 FCNSW reached agreement with Boral (Allen Taylor and Duncan's Holdings) to a major variation of its WSA. No consultation or engagement occurred with any other WSA holders.

Under the terms of the 2014 Variation Deed Boral had their annual allocation of high-quality sawlog reduced by 30% (165,000 m3 to 116,000 m3) or 49,000m3 per year. The reduction amounts to 465,500m3 over nine and a half years (1 July 2014 to 31 December 2023).

Boral compensation provisions detailed in the 2014 Variation Deed included:

i. A payment of $8.55 million.
ii. A five-year extension to the term of their WSA from 31 December 2023 to 31 December 2028. In effect the total allocation of high-quality sawlog to be supplied over the extension period exceeds the total allocation that Boral relinquished by 115,000 m3 (i.e., 580,000 m3 less 465,500m3);
iii. A new (additional) annual allocation of 4,010m3 of higher value hardwood poles to be supplied from 1 July 2014 to 31 December 2023 being a gain of 38,095 m3 over the nine-and-a-half-year period. Note the company have since monetised this allocation selling their pole division along with their upgraded pole supply agreement to another company;
iv. Preferred species mix supply arrangements that greatly improve on the arrangements detailed in the 2003 WSA (figure 1), namely:
v.

    a. Minimum share of total north coast Blackbutt supply set at 85%[2]. Under the 2003 WSA no such guarantee existed;

b. Minimum annual supply of Blackbutt set at 58,000 m3[6]. Under the 2003 WSA FCNSW was obliged to supply 60% of the company's allocation as Blackbutt;

c. Guaranteed minimum share of total supply of Big Four species (Spotted Gum, Brush Box, Tallowwood and Sydney Blue Gum) set at 49%[2]. Under the 2003 WSA no such guarantee existed.

d. Minimum annual supply of Big Four species set at 24,000 m3[2] which equates to 20.7% of the company's base allocation. Under the 2003 WSA FCNSW was obliged to supply 13% of the company's allocation from this species group.

e. Minimum annual supply of Spotted Gum set at 8,000 m3 which equates to 7% of the company's base allocation. Under the 2003 WSA FCNSW was obliged to supply 5% of the company's allocation as Spotted Gum.

f. Minimum annual supply of Brush Box set at 2,000 m3 which equates to 1.7% of the company's base allocation. Under the 2003 WSA FCNSW was obliged to supply 2.0% of the company's allocation as Brush Box.

g. Minimum annual supply of Tallowwood set at 4,000 m3 which equates to 3.4% of the company's base allocation. Under the 2003 WSA FCNSW was obliged to supply 3.0% of the company's allocation as Tallowwood.

h. Minimum annual supply of Sydney Blue Gum set at 4,000 m3 which equates to 3.4% of the company's base allocation. Under the 2003 WSA FCNSW was obliged to supply 3.0% of the company's allocation as Sydney Blue Gum.

i. Maximum annual supply of non-preferred New England Hardwood species set at 6,000 m3 which equates to 5.2% of the company's base allocation. Under the 2003 WSA FCNSW was entitled to supply up to 12.0% of the company's allocation as New England Hardwood (figure 2).

[6] Volume or % is based on 100% supply of base allocation. If annual supply is less than or greater than 100% of the base allocation then the minimum volume is adjusted accordingly.

Figure 1 summarises the supply zone and species mix supply arrangements under Boral's 1999 WSA, 2003 WSA and the 2014 Variation Deed. The graph shows how the preferred species mix supply arrangements to Boral have been enhanced over time.

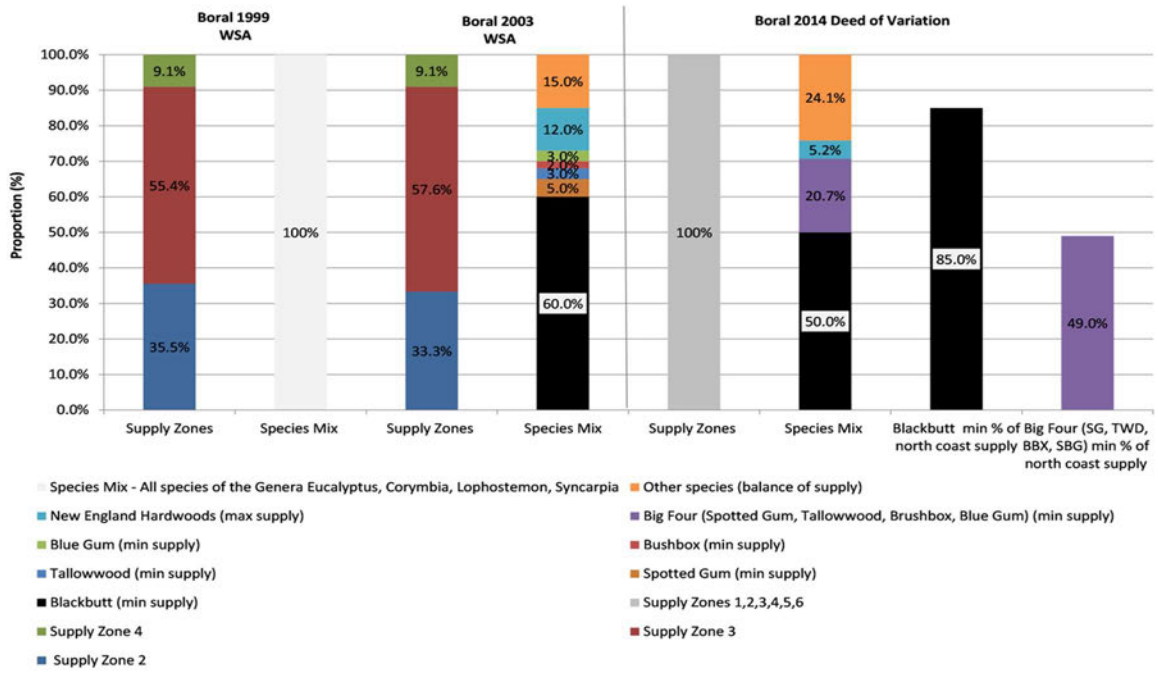
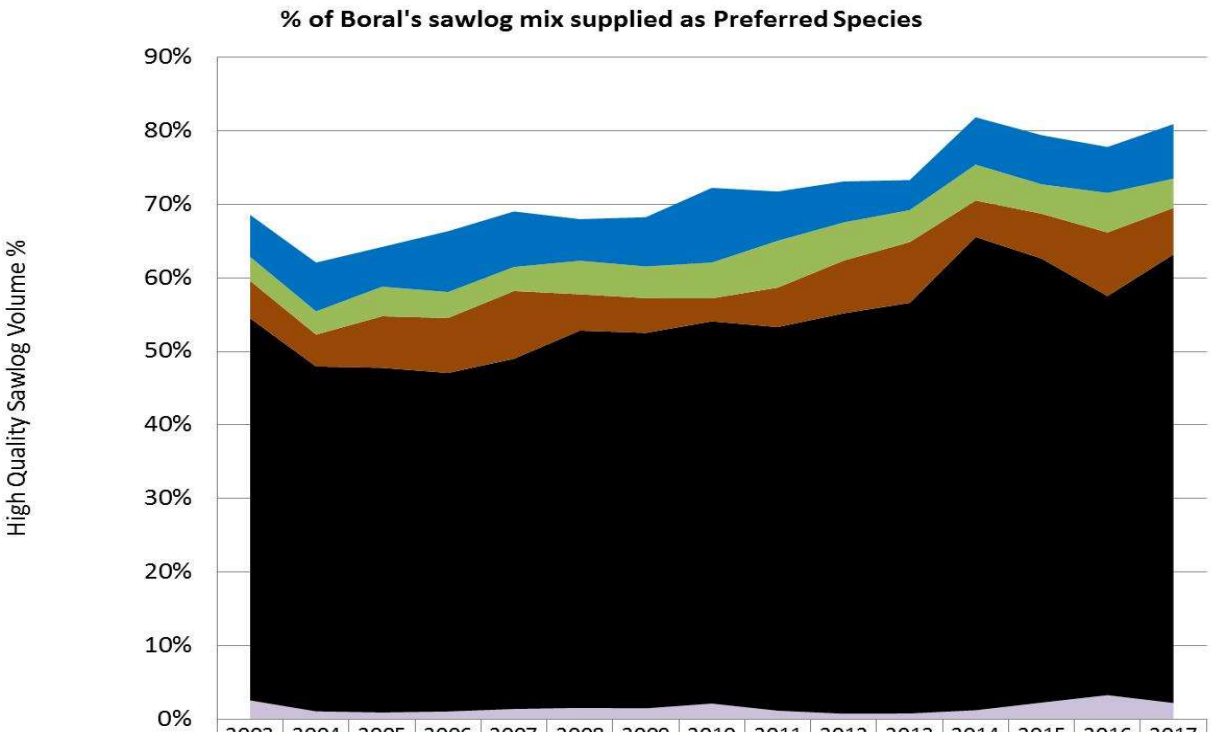


Figure 1: Boral log supply zones and species mix supply obligations under its 1999 WSA, 2003 WSA and 2014 Variation Deed.

Figure 2 below shows the effect of Boral's 2003 WSA and the 2014 Variation Deed on its preferred sawlog species mix. It shows that the proportion of preferred species has increased over time[7] with supply of preferred species in 2015 reaching an all-time high. In 2017 we estimate that Boral received over 80% of its entire allocation in preferred species.

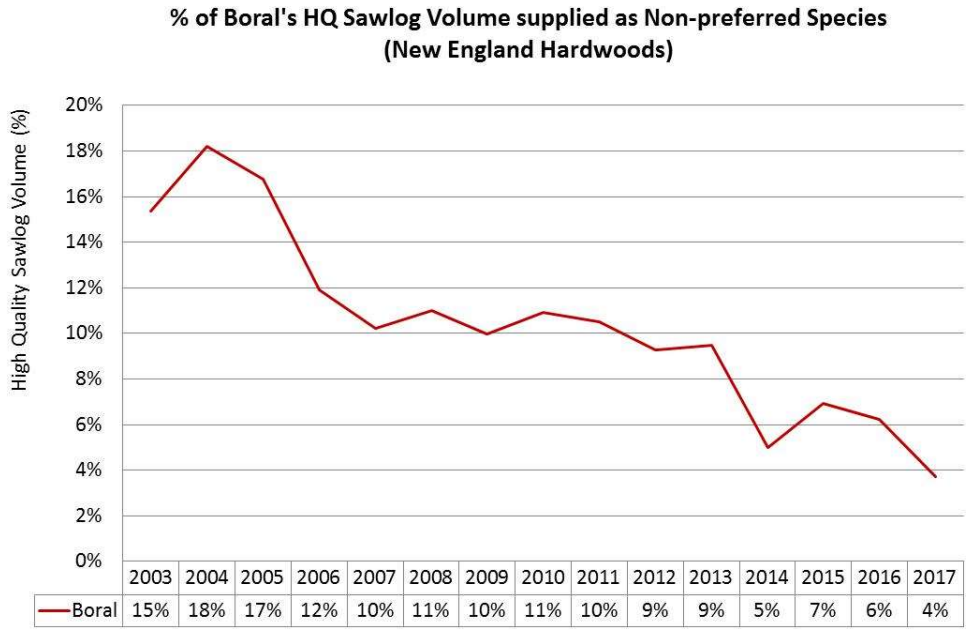
[7] High quality sawlog sales to Boral were calculated by subtracting the volume of high quality sawlog produced by FCNSW for the Common Agreement Holders from the total sales of North Coast high quality sawlog.



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Sydney Blue Gum	6%	7%	5%	8%	8%	6%	7%	10%	7%	6%	4%	6%	7%	6%	7%
Tallowwood	3%	3%	4%	4%	3%	5%	4%	5%	6%	5%	4%	5%	4%	5%	4%
Spotted Gum	5%	4%	7%	7%	9%	5%	5%	3%	5%	7%	8%	5%	6%	9%	6%
Blackbutt	52%	47%	47%	46%	48%	51%	51%	52%	52%	54%	56%	64%	60%	54%	61%
Brush Box	3%	1%	1%	1%	1%	2%	1%	2%	1%	1%	1%	1%	2%	3%	2%

Figure 2: Proportion of Boral's high quality sawlog mix supplied as preferred species between 2003 and 2017. Data source: FCNSW 2017 hardwood sales data.

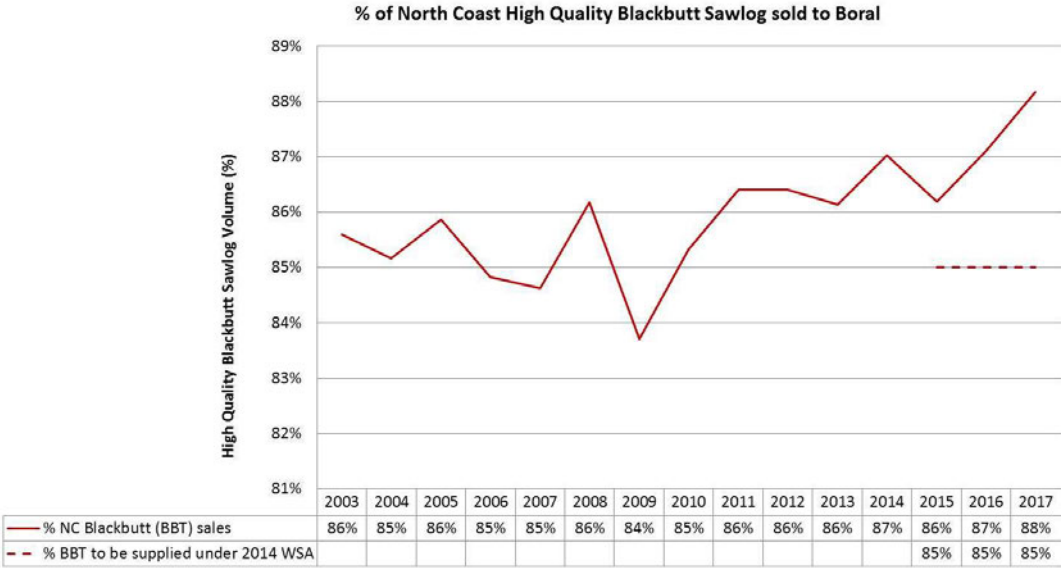
In contrast the supply of non-preferred species to Boral has fallen dramatically and is now at an all-time low (figure 3).



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Boral	15%	18%	17%	12%	10%	11%	10%	11%	10%	9%	9%	5%	7%	6%	4%

Figure 3: Percentage of non-preferred species (New England Hardwoods) in Boral's sawlog mix. Data source: FCNSW 2017 hardwood sales data[15].

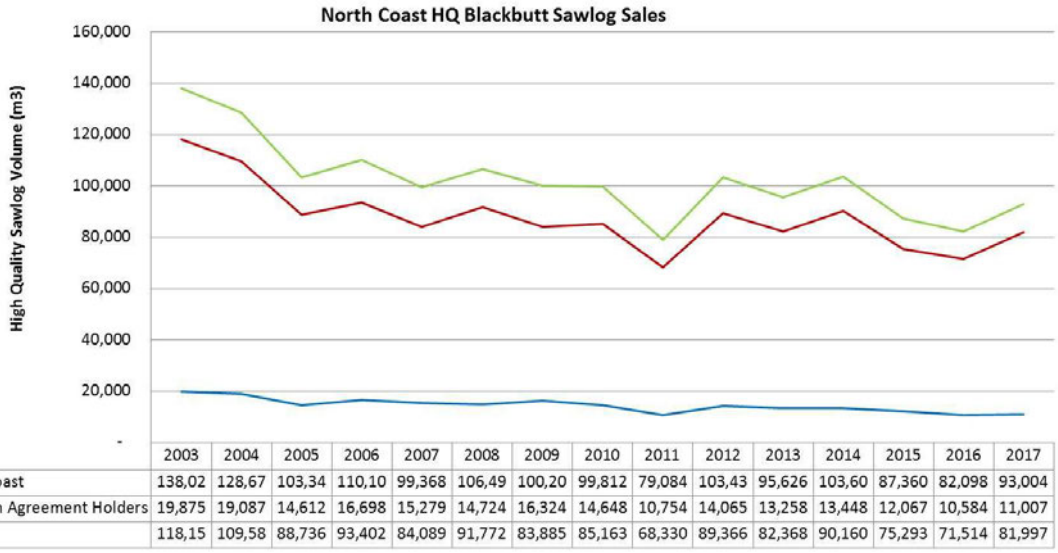
The most signifiant provision in the 2014 Variation Deed is FCNSW's commitment to supply Boral with specified proportions and volumes of high-quality Blackbutt sawlog. Boral is entitled to receive a minimum of 58,000m3/year which equates to 50% of their base allocation and a minimum of 85% of all Blackbutt produced by FCNSW on the north coast. For financial years 2015, 2016 and 2017 we estimate that Boral has received between 71,000 and 82,000 m3[15] of Blackbutt per year. These quantities equate to between 62% and 70% of Boral's base allocation. In addition, Boral has received between 86% and 88% of all high-quality Blackbutt sawlog supplied on the North Coast.



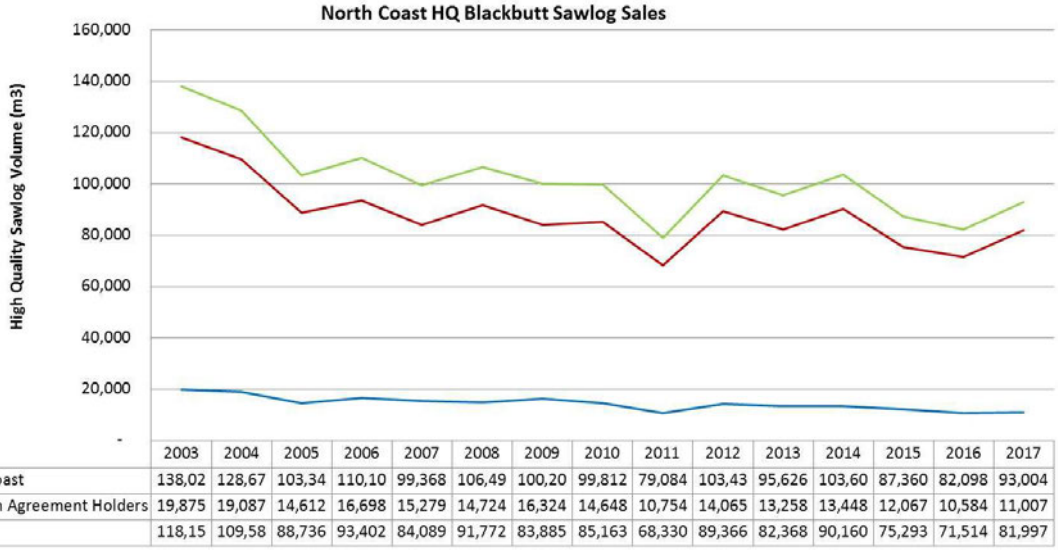
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
% NC Blackbutt (BBT) sales	86%	85%	86%	85%	85%	86%	84%	85%	86%	86%	86%	87%	86%	87%	88%
% BBT to be supplied under 2014 WSA													85%	85%	85%

Our analysis suggests that (since 2015) FCNSW have been over supplying (over cutting) Blackbutt sawlog and distributing this volume predominantly (88% in 2017) to Boral. In effect this has shielded Boral from the 40,000 m3 /year Blackbutt buyback.

Figure 5 below shows that since 2014 the actual change in the volume of Blackbutt supplied to Boral has been negligible.



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
North Coast	138,02	128,67	103,34	110,10	99,368	106,49	100,20	99,812	79,084	103,43	95,626	103,60	87,360	82,098	93,004
Common Agreement Holders	19,875	19,087	14,612	16,698	15,279	14,724	16,324	14,648	10,754	14,065	13,258	13,448	12,067	10,584	11,007
Boral	118,15	109,58	88,736	93,402	84,089	91,772	83,885	85,163	68,330	89,366	82,368	90,160	75,293	71,514	81,997



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
North Coast	138,02	128,67	103,34	110,10	99,368	106,49	100,20	99,812	79,084	103,43	95,626	103,60	87,360	82,098	93,004
Common Agreement Holders	19,875	19,087	14,612	16,698	15,279	14,724	16,324	14,648	10,754	14,065	13,258	13,448	12,067	10,584	11,007
Boral	118,15	109,58	88,736	93,402	84,089	91,772	83,885	85,163	68,330	89,366	82,368	90,160	75,293	71,514	81,997

Figure 5: Sales volume of high quality Blackbutt sawlog for the whole north coast, to Boral and to Common Agreement Holders. Data source: FCNSW (2017) hardwood sales data[15].

In summary, the 2014 enhanced preferred species timber specifications further builds Boral's dominant position within the industry which is a direct response to the decision of the NSW State Government ion 2004 and 2014.

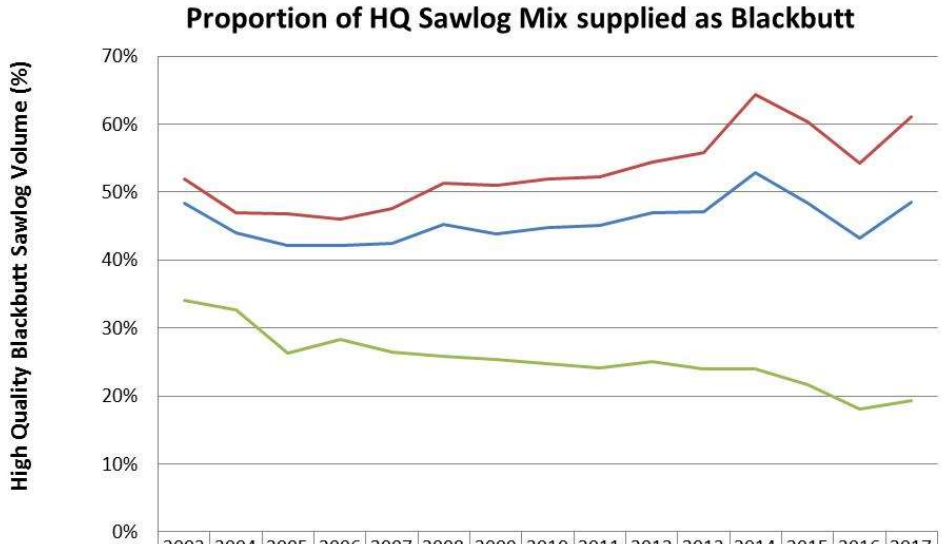
The Counter view of the Common Agreement Holders following the 2004 and 2014 FCNSW Contracts with Boral.

The effect on Common Agreement Holders

The greatest impact of the Boral 2003 WSA and 2014 Variation Deed on the Common Agreement Holders has been the low proportion of Blackbutt they have received in their 'run of the bush' log mix. Between 2003 and 2013 the proportion of Blackbutt in FCNSW's North Coast HQ sawlog mix has remained relatively stable, ranging between 44% and 48%

(Figure 6). 34% however is the highest percentage of Blackbutt that the Common Agreement Holders have received. This high point occurred in 2003, since then the proportion of Blackbutt in their HQ sawlog mix has steadily declined.

In contrast Boral's share has grown from 52% in 2003 to a high of 64% in 2014. Boral currently receives 61% of their HQ sawlog volume as Blackbutt.



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Entire North Coast Supply	48%	44%	42%	42%	42%	45%	44%	45%	45%	47%	47%	53%	48%	43%	49%
Boral	52%	47%	47%	46%	48%	51%	51%	52%	52%	54%	56%	64%	60%	54%	61%
Common Agreement Holders	34%	33%	26%	28%	26%	26%	25%	25%	24%	25%	24%	24%	22%	18%	19%

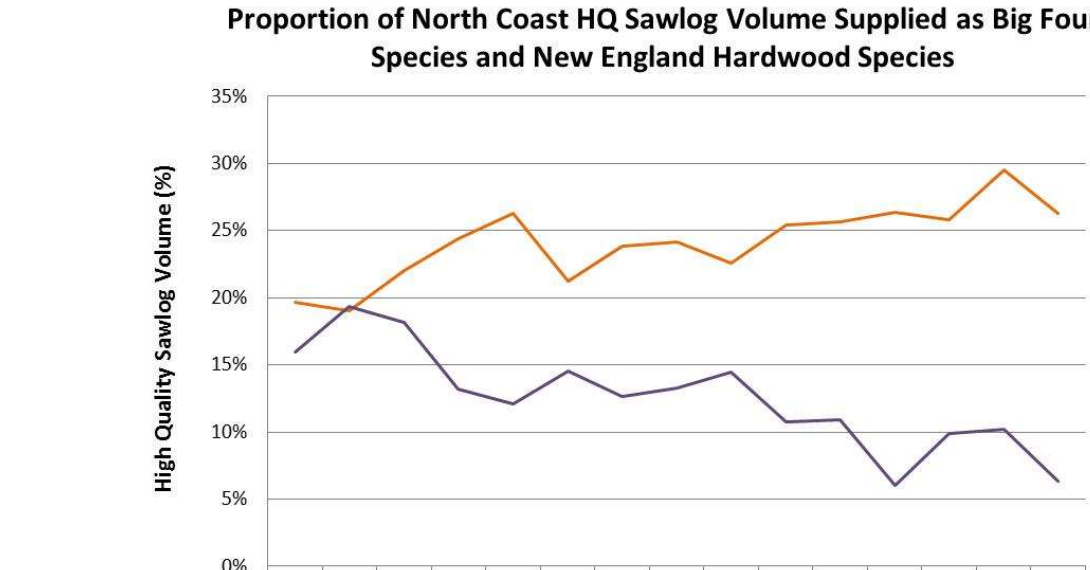
Figure 6: High Quality Blackbutt sawlog sales as a percentage of total log sales for the entire North Coast, just to Boral and just to Common Agreement Holders. Data source:FCNSW (2017) hardwood sales data[15]

Figure 6 also highlights how the supply of Blackbutt to Boral directly effects the supply of Blackbutt to the Common Agreement Holders. Between 2003 and 2017 Boral achieved a 17% increase in the amount of Blackbutt that made up its HQ sawlog mix [i.e. (61%-52%)/52%*100]. For the Common Agreement Holders this increase caused the Blackbutt in their log mix to decline by 44% [i.e. (34%-19%)/34%*100]. The disproportionate impact on the Common Agreement Holders is due to their smaller size. Every time FCNSW makes a positive concession of Blackbutt to Boral it has a much larger negative flow-on effect for the eleven Common Agreement Holders.

On the ground, the impact on the Common Agreement Holders is much greater than the figures presented in the graphs. The graph only shows annual averages whereas logs are supplied daily. The quantity of Blackbutt that is supplied to an individual Common Agreement Holders can vary greatly over time. For small Common Agreement Holders this can mean they may go without Blackbutt for months at time. The most recent example of this scenario occurred at the end of FY2017 when FCNSW directed their Blackbutt almost exclusively to Boral to meet their annual Blackbutt contractual supply obligations. Some actual examples of this effect at a company level are detailed below.

The impact of Boral's species specific supply arrangements on Common Agreement Holders has not been confined to Blackbutt. Impacts associated with the supply of other species have however been limited to date as FCNSW has been scheduling its operations

in areas that generate a high proportion of preferred species. These operations are in coastal areas which yield a high proportion of the Big Four species (Spotted Gum, Brush Box, Tallowwood and Sydney Blue Gum) while fewer operations are being scheduled on the North Tablelands (where non-preferred New England Hardwoods are produced) (Figure 7).



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
SG, BBX, TWD, SBG	20%	19%	22%	24%	26%	21%	24%	24%	23%	25%	26%	26%	26%	30%	26%
New England Hardwoods	16%	19%	18%	13%	12%	15%	13%	13%	14%	11%	11%	6%	10%	10%	6%

Figure 7: Proportion of north coast high quality sawlog volume supplied as preferred 'Big Four' species (Spotted Gum, Brush Box, Tallowwood and Sydney Blue Gum) and non-preferred New England Hardwoods. Data source:FCNSW (2017) hardwood sales data[15]

Our analysis of sales between 2003 and 2017 reveals that the 'run of the bush' supply arrangements are no longer being allowed to operate as they were intended. The demise of equitable log supply arrangements may be clearly attributed to the 2003 Boral WSA and the 2014 Variation Deed. In effect these contracts have lessened competition and afforded Boral a clear competitive advantage over the Common Agreement Holders.

Another important difference which exists between Boral's 2003 WSA and its 2014 Variation Deed are the words describing the supply of specified log species. Under Boral's 2003 WSA FCNSW had to use 'best endeavours' to supply the specified log species mix. This obligation was limited however by being…Subject always to State Forests' sole discretion to determine from time to time the location of Contract Harvesting operations necessary to supply Timber under this Agreement, in accordance with State Forests' opinion of good forest management, and the limitations that flow from the exercise of that discretion. Under Boral's 2014 Variation Deed FCNSW the 'subject always to…' provisions have been removed requiring FCNSW to deliver minimum quantities of preferred species. In contrast the Common Agreement Holders must continue to take the 'run of the bush' after the preferred species have been removed.

Explanations of Terms

Area of Supply means the State Forest lands within a geographical region from which the supply of timber is sourced by FCNSW to supply Timber to a sawmiller under a supply agreement, either a Hardwood Timber Term Agreement or a Wood Supply Agreement. The North Coast of NSW is an example of an Area of Supply that encompasses approximately 950,000 hectares of State Forest (Crown Land) stretching from Gosford in the south to the Queensland border in the north and west to Glen Innes, Walcha and Scone. An Area of Supply is divided into Supply Zones and further divided into Price Zones (a.k.a. Management Areas). Both of these zone types are also geographical areas.

On the north coast the Area of Supply has six Supply Zones and 32 Management Areas. Significantly, the location of timber within an Area of Supply (i.e. its Price Zone or Management Area) has a bearing on its type and quality. On the North Coast the preferred timber species tend to grow in the coastal Price Zones where favourable rainfall, temperature and soil conditions prevail. The timber from these species is durable, strong, stable and attractive, making it suitable for a broad range of applications.

The least preferred species grow on the Tablelands. The quality of this timber is less desirable because of its lower durability, lower stability and higher defect.

Boral is a reference to Boral Timber Division who holds several Wood Supply Agreements in the name of companies that Boral has acquired. Illustrative are the companies, Allen Taylor & Co Limited (**Taylors**) and Duncans Holdings Limited (**Duncans**) which are part of the Boral Timber Division, an administrative division of Boral. Duncans is a wholly owned subsidiary of Taylors.

Boral is not a member of Timber NSW. It has not been a member since early 1998.

Boral trades directly with FCNSW through other entities, which it has acquired over time. Some of corporate acquisitions are set out in the table below:

Date of Acquisition	Company Name	Type of Business
1980s	Allen Taylor & Co Limited	At the time of acquisition by Boral, Taylors operated a quota on the North Coast. Taylors had three wood supply agreements, each dated 2 May 1988, for the Port Macquarie Region, the Newcastle Region and the Coffs Harbour Region.
1992	Duncan Holdings Limited	Prior to the acquisitions by Boral, Duncans operated a quota on both the North Coast and in the New England Tableland Region. Boral closed the Tenterfield operations of Duncans in 1996/7. Duncans also operated a sawmill at Glen Innes, which Boral also closed prior to entering the Boral 1999 Wood Supply Agreement

2004	Fennings Timbers (Aust) Pty Ltd	Prior to the acquisitions by Boral, operated a flooring plant at Gloucester and a sawmill in Walcha, both on the NSW north coast. In 2006 Boral closed the Gloucester plant and in 2008 it closed the Walcha plant. On 13 November 2004, Fennings assigned the benefit of its WSA to Taylors.
2005	Davis & Herbert	Prior to the acquisitions by Boral, operated three green mills at Nowra, Batemans Bay and Narooma, on the NSW South Coast, and supplies green sawn timber products predominantly to the industrial market. A small softwood and pallet business was included in the purchase.

Common Agreement is a term that is defined in Clause 7 Review of the Base Allocation of the Boral 1999 Wood Supply Agreement and is referred to in Schedule 6 of the Boral 1999 Wood Supply Agreement. The particular clause and Schedule is set out in Schedule 5. The operation of the provision was to ensure an equitable distribution of native forest sourced green logs between two groups who purchased such logs; the Boral group of companies and the balance of the holders of Hardwood Timber Term Agreements (also known as Common Agreement Holders). The 1999 Agreement uses the words “on terms and conditions substantially identical” when comparing the Boral 1999 WSA to the Hardwood Timber Term Agreements of 1997. A review of the respective documents reveals that differences do exist.

Delivered Price is the price paid by a WSA holder for timber (roundwood) delivered to their wood processing yard. The delivered price of high quality sawlogs has two components, a **Stumpage Price** (refer definition) and a harvest and haulage charge. Separate pricing mechanisms are used to determine stumpage rates and rates for harvesting and haulage.

FCNSW is Forest Corporation of New South Wales. Established on 1 January 2013 it is governed by the State Owned Corporations Act 1989 and the Forestry Act 2012 http://www.forestrycorporation.com.au. Its predecessor was the Forestry Commission of NSW who traded as Forests NSW.

Forests NSW. Forest NSW was established in 2004 and operated as a public trading enterprise within the NSW Department of Primary Industries. Before 2004 the entity was known as **State Forests**. The Forestry Commission of NSW was originally formed in1916 and governed by the Forestry Act 1916.

Integrated Forestry Operations Approvals (IFOAs) detail the operating rules for timber harvesting were introduced in 1998. IFOAs came into force at the time of Forest Agreements and allow for forestry operations to be shielded from Commonwealth environmental law and avoid the need for export control approvals.

Management Areas share common boundaries with **Price Zones** (refer definition). A Management Area is a geographic region that commonly contains around 50,000 hectares of State Forest that is controlled by FCNSW.

Prior to the signing of **Regional Forest Agreements** (refer definition), Management Areas were managed as discrete areas of timber supply for local industry. Each Management Area Plan had a defined sustainable yield upon which industry sawlog quotas were based. Sawmillers traditionally sourced their timber from nearby Management Areas to ensure haulage costs were reasonable.

Management Areas were located within Forestry Districts. A Forestry District mostly comprised one or two Management Areas. The head of a Forestry District was called a District Forester. The District Forester was responsible for ensuring the sustainable supply of timber from the Management Areas within their District in accordance with the Management Area Plan(s).

When **Regional Forest Agreements** were signed sustainable timber supply from individual Management Areas/Price Zones was compromised as large areas of State Forest were converted to National Park and informal reserves. In response FCNSW shifted operational management from a Management Area level to a Regional Level. On the North Coast there were initially three regions - Hunter, Mid North Coast and North East (refer WSA map in Schedule 3). Over time as timber supply became more challenging the number of operational regions was reduced to one.

Milling operations means the operations of a timber sawmill or the processing of other types of hardwood logs (veneer, poles, piles). The profitability of a sawmill is determined by how much sawn timber can be cut from a round Timber log and the value of that sawn timber. The Timber log will have natural wastage as the core of the log is less solid and the outer diameter of the log is sapwood which is non-durable. Wastage can also arise from internal defect which takes the form of pipe, gum veins and gum pockets, rot, knots, scars and wandering heart and length defects caused by branches, spiral grain and sweep. Sawing solid timber starts after the edges of the log have been squared and the cutting of a sawn product is interrupted when either the core or defect is encountered. The preferred species are not only the Timber logs that have the high end of the retail market but are also the species that produce the least amount of defect. In general, a large high-quality sawlog is more valuable to a miller than a small high-quality sawlog as it produces a higher proportion of high value timber. This is due to the core and outer sapwood representing a lower proportion of the log's overall volume.

Non-preferred Species means the tree species that are the least profitable to mill. In the North Coast Area of Supply most non-preferred species grow at higher elevation (above 750m) on or near the Northern Tablelands. There are 20 non-preferred commercial species that are collectively known as New England Hardwoods. New England Hardwoods are classified by FCNSW's Pricing System as either Tableland Hardwoods or High Country Hardwoods (refer Schedule 4). Non-preferred species attract a lower stumpage price in accordance with the **Pricing System**. Despite having a lower stumpage, the **Delivered Price** of non-preferred species still makes them less profitable to mill.

Preferred Species is a term that refers to the tree species that produce the more profitable logs received by a sawmiller. Preferred species are described in the log pricing system as Key Hardwoods being Blackbutt (BBT), Spotted Gum (SG) and Tallowwood (TWD) and 'Select Hardwoods' being Brushbox (BBX) Ironbark (IBK), Grey Box (GBX), Steel Box (RUM) and Gympie Messmate (GMM). Select Hardwoods are priced slightly higher than Key Hardwoods. Key Hardwoods are more important, however, due to their higher availability. BBT and SG are the most important as together they typically constitute around 85% of the Preferred Species supply. Sydney Blue Gum (SBG) is another species that is regarded as a Preferred Species by Boral. In the log pricing system SBG is classified as a High Value species. High Value species are valued slightly lower than Key Hardwoods.

Price Schedule is a term defined in the 1999 Boral WSA and the 1997 Timber Term Agreement. It was a schedule calculating the price of Timber prepared by State Forests in accordance with the principles of the **Price System** and annexed to both Agreements in Schedule 5 of these Agreements. All prices (also known as **Stumpage Prices**) are usually expressed as a rate per cubic metre or tonne of log product.

Price System is a term used in the Price clauses of the 1999 Boral WSA and the 1997 Timber Term Agreement. It is the means by which FCNSW sets and varies the price of Timber from time to time. FCNSW defines its Price System as - a state-wide system that includes a stumpage price setting and a price review mechanism.

Price Zone is a geographic area referred to in a WSA and in the **Pricing System**. On the North Coast there are 32 Price Zones. The value of logs can vary from one Price Zone to another. The areas currently defined as Price Zones and **Management Areas** (refer definition above) share common boundaries and the terms remain interchangeable to this day (i.e., In Schedule 3 of the WSAs there are maps that are titled Price Zones and Management Areas).

Quota (or sawlog quota) refers to a State based entitlement that was provided to members of Timber NSW before 1997. The quota was the sawlog quota allocation that attached to a sawmiller's timber licence. This Crown licence was granted each year. A quota was the timber that was to be supplied to the sawmiller from an area known as a Management Area located on Crown land and was described by volume in log lengths and diameters.

The quota system was put aside when the timber term agreements were introduced in 1997 as part of the 1996 NSW Forestry Industry Reform Agenda.

Regional Forest Agreements (RFA) are agreements between the Commonwealth and the State. On the NSW North Coast RFAs were executed in 1999. RFAs are a 20 year plan for the conservation and sustainable management of native forests. The objective of RFAs is to balance competing economic, social and environmental demands on forests by setting obligations and commitments for forest management that deliver certainty of resource access and supply to industry, ecologically sustainable forest management and a comprehensive, adequate and representative reserve

system. The Commonwealth and the NSW State Government signed off on this in 1996.

NSW Forest Agreements (FA) are similar to RFAs but are made by state Ministers and contain more operational detail. NSW FAs provide for Integrated Forestry Operations Approvals (IFOA) which detail the operating conditions for timber harvesting and other forest based operations. An IFOA applies where RFAs and FAs were in place. (Exceptions to this rule later occurred in the Western Region, which had no RFAs or FAs).

Run of the bush is a term that reflects that when FCNSW go into an area (compartment) to harvest timber it is not precisely known what timber will be available. So the bush will yield what log species and log quality it can and the sawmiller who has been allotted the compartment (on his/her plan of operations) has to accept the species mix that is generated by the timber harvest.

Schedule 5 extracts the Specifications Clause of the 1997 and 1999 Agreements to illustrate the differences between these two Agreements.

Schedule 6 extracts the Base Allocation Clause and Review of Base Allocation Clause of the Boral WSA 1999 and the Common Agreement Holders of the Hardwood Timber Terms Agreement 1997.

The practice of different agreements between the Boral Group and the Common Agreement Holders continued through to the Boral 2003 WSA and the WSA 2004 (provided to the Common Agreement Holders who remained in the sawmilling timber industry). But the differences between the 2003 WSA and the 2004 WSA were far greater particularly in the contractual provisions on Specifications, the differences being the essence of the first complaint.

Species Mix is a term that is used by sawmillers to refer to the timber that WSA holders might receive as Grade 1 high quality timber. Traditionally, a timber licence or quota simply referred to the quantity of hardwood sawlogs (by quality and size category) that could be taken and included a specification that detailed how logs were graded and their minimum dimensions (diameter and length).

In the WSA the term “Species” is used in Schedule 1 setting out the ‘Specifications for hardwood Timber’ to be supplied. The Species are : “All species of the Genera Eucalyptus, Corymbia, Lophostemon and Syncarpia.” There are over 50 commercial hardwood species covered by this definition. Individual WSA holders commonly receive between 30 and 35 different commercial species in their log mix. The mix of species will vary depending on the **Price Zone** (also named in Schedule 1) from which the timber is sourced. If the delivered log species mix does not contain a percentage of **Preferred Species** the profitability of the timber supplied in the hands of a sawmiller is lessened. This is a critical issue that can directly impact on the sawmill’s viability.

Where a WSA is not specific in its Specifications the delivered log species mix will be subject to the contractual convention of **Run of the Bush**. Species Mix therefore is a

key issue for a sawmiller's profitability where the **Run of the Bush** is a key feature of timber supply.

Stumpage Price is the price assigned to felled timber at the stump (in the bush) before it has been extracted. There are a large number of factors that are used to determine stumpage price. These factors are detailed in the **Price System**. The most important factor is the quality of the timber (the amount of log defect). The highest priced timbers (in roundwood form) are poles, piles and girders then high quality sawlog and veneer log. Logs that attract lower stumpage prices include salvage logs/low quality sawlog and pulp logs.

For high quality sawlogs different stumpage prices apply to different species and different log sizes. Larger diameter logs attract higher stumpages than smaller diameter logs. Stumpage prices also vary between Price Zones.

Supply Zones are geographic areas referred to in Boral's 1999, 2003 and 2014 WSAs. The NSW North Coast is divided into six Supply Zones. FCNSW timber supplied from a Supply Zone must come from the State forests (or Crown Timber Lands) within that Supply Zone.

Timber NSW is an incorporated association of most saw millers in New South Wales. Timber NSW was established in 1906 as the representative organisation of the timber and forest products industry in NSW. Its predecessor was **NSW Forests Products Association Ltd (NSW FPA)** and before that the Country Sawmillers Association.

http://timbernsw.com.au/about-us/

Timber Specifications is a term also known as 'Specifications' and is part of the Timber Term Agreements and WSAs that are company specific. The Specifications are set out in Schedules appended to the agreements and set out the base allocation of cubic metres of timber, the minimum diameter and minimum log length that can be delivered. In the 1999 Timber Term Agreement and the WSAs the type of timber species is also named.

Timber Term Supply Agreement is a name given to the contracts signed by saw millers in January 1997. The term for this Agreement was 5 years.

In February 1999, a Variation Agreement was issued by State Forests to operate from 1 February 1999 varying these Agreements. This variation arose out of a Cabinet Minute of the NSW State Government recorded in November 1998. Timber Term Supply Agreement was also known as **'Term Agreements'** or '**Timber Term Agreements' or 'Hardwood Timber Term Agreements'**.

These terms need to be distinguished from the term the "Hardwood Timber Wood Supply Agreement". This term relates to the 1999 Boral Hardwood Timber Wood Supply Agreement. This was the first time the descriptor 'wood supply agreement' was used.

The other matter for noting is that in the 1999 Variation to the 1997 Timber Term Agreements and in the 1999 Boral WSA, there is a Review of the 1997 Base Allocation

clause. In this clause there is a reference to the 'Agreement Holders' as a defined term. These are the three companies that make up the timber licence holders in the Boral Group. 'Common Agreement Holders', also a defined term, is a reference to the holders of the Timber Term Agreements and they were the balance of the Hardwood Timber sawmillers.

Tree Species is a botanical term that refers to woody perennial plants that are capable of interbreeding. Not every tree species is available for forestry harvesting but there are still around 50 eucalypt species that can be provided by FCNSW. **Schedule 7** sets out those tree species. What is noteworthy is that only ten[8] species out of the 50 are recognised as **preferred species** and only five[9] that are produced in large volumes (more than 10,000m3/year) on forested Crown land. The distribution of preferred species is concentrated within the coastal region which has the best climate for producing high quality logs.

Upper North East (UNE) and Lower North East (LNE) are **NSW Forest Agreement** regions, which cover the North Coast **Area of Supply.** The UNE Region extends from the Queensland Board south to Coffs Harbour and west to Glen Innes and Armidale. The LNE Region runs from Coffs Harbour south to Gosford and west to Walcha and Scone. Forest Agreements were made under the *Forestry and National Park Estate Act 1998* and specify, amongst other things, the sustained timber supply arrangements.

WSA is an abbreviation for 'wood supply agreement'. The first use of the 'wood supply agreement' appears to be the Boral February 1999 timber wood supply agreement. In March 2003, the NSW State Government commenced the creation of further national parks and reserves, which resulted in the following year the offer to release the 1999 Timber Trade Supply Agreements and a new Wood Supply Agreement being entered. The term of the 2004 WSA was twenty years.

WSA Type A, Type B, Type C, Type D. It was at this time that the four types of WSAs came into being: Type A, Type B, Type C and Type D. The differing wood types of contracts came into being to recognise differing levels of supply security with A representing the highest level. More broadly the Type is also a reflection of the wood quality. Higher quality log allocations are in Type A and Type B WSAs while lower quality logs are located under Type C and Type D WSAs.

In 2004 the terms of all WSAs were within a region, for example, the North Coast hardwood contracts were in a template form usually with the only variation being timber specifications in Schedule 1.

> Type A – The highest agreement class providing a guaranteed supply of High Quality Log – Type A sawlog agreements contain two Allocations. Allocation 1 specifies the volume of High Quality Large Sawlog (HQ). Allocation 2 specifies the

[8] Ten becomes nine if Sydney Blue Gum is excluded. Sydney Blue Gum is only a preferred species of Boral, it is not regarded as a preferred species of the Common Agreement Holders

[9] Four if Sydney Blue Gum is excluded.

volume of High Quality Small Sawlogs (HQS). Allocation 2 constitutes between 20% and 25% of the total Allocation.

Type B – Similar to Type A, but with slightly less security High security is provided on Allocation 1 and lower security is provided on Allocation 2.

Type C – A single Allocation of Lower Quality Graded Logs (salvage) which are a by-product of harvesting high quality logs

Type D – A single Allocation of Lower Quality Graded Logs with the least security.

NSW State Government Procurement Guidelines

The Objectives for State Government Procurement include amongst its Objectives 'Fair and open competition.[10] The following material is extracted from the Government's website.

Relating to	Value	Obligation	Reference
Fair and open competition	Any	You **must** treat potential suppliers equitably and to discriminate based on business size, location or ownership, except where targeted policy measures or preferences apply (eg SME and Regional Procurement Policy)	Promoting competition (hyperlink)
	Any	You **should** assess the impact of contract terms and extensions on market competition, including how they will limit new suppliers from doing busines with government	PBD – 2019-05 Enforceable Procurement provisions
Probity and fairness	Any	You **must** ensure procurement is far, ethical, transparent and probity rich and ensure that probity is routinely considered in procurement decisions.	Independent Commission Against Corruption Act 1988.

The modern meaning of the word 'procurement' is the process of finding and agreeing to terms and acquiring goods services or woks from an external source.

The role of Forest Corporation NSW in contracting with the timber sawmiller and contract harvesters and contract harvest haulage businesses is to 'procure' a service that will allow the Crown to take hardwood timber form the State Forests and put into the commercial environment and the economy. This view is supported by a look at the NSW legislation regarding forestry, the 1919 Act and the two former Acts before this, and what a licence permitted. It can be argued that this view is not supportable. Forest Corporation NSW

[10] https://buy.nsw.gov.au/__data/assets/pdf_file/0014/600233/210205-Procurement-Policy-Framework_v1_7-Section-1-Objectives.pdf accessed 11 June 2021.

clearly hold this view as it has no policy statement in its Annual Reports on its website referring to this issue.

But the view is very much alive that this Government State owned corporation failed to follow the principles of contracting set out in NSW State Government policy in 2014. If the circumstances that the State Government policy was in place then, they certainly have taken no steps to remedy the circumstances with wood supply agreements in NSW since the policy was created. This has not permitted work to be done to trace the history of the State Government's Procurement Policy. This work requires a legislative and guideline review.

Timber NSW submission to the NSW Legislative Council Inquiry into the long-term sustainability and future of the timber and forest products industry

TERM OF REFERENCE 1(a): the nature of, and relationship within, the value chain between the timber and forest products industry, logistics companies, manufacturers, retailers, exporters and their relationship with timber supply and environmental management, and opportunities to enhance supply chains

Hardwood Timber – An Essential Renewable

For millennia, timber has been prized as a renewable, recyclable natural resource that is beautiful, versatile and characteristic of the land that produces it.

New South Wales boasts a diverse array of native and plantation forests that have produced remarkable timbers for generations past and will supply many generations to come.

Timber is not only a renewable and recyclable resource, but it is energy-efficient to produce. Importantly, timber acts as a carbon store, giving it an important role to play in reducing carbon emissions. Less than three per cent of land in NSW is used to produce timber. Timber production is a renewable land-use. It is a cyclical process that involves the harvest and regeneration of forests on a continuing basis.

NSW native hardwood forests provide a variety of indigenous species which produce timber that is visually attractive, dense, strong and durable. The supply of hardwood timber is essential to the ongoing success of the Federal Government's Homebuilder program. Yet currently, demand far outpaces supply.

Hardwood timber is used for nation-building structural purposes such as power poles, wharves and bridges, for flooring, decks and pergolas and for lower value applications such as landscaping sleepers, fencing and pallets. Decorative hardwood furnishings account for small volumes but service high value niche markets. Timber unsuitable for use in solid wood products is sold as pulpwood for woodchip export or as firewood for domestic heating.

The Value Chain

The industry's value chain begins with working forests – both State Forests and Private Native Forests - which are managed for the sustainable production of native and plantation timber.

It continues with harvest and haul, proceeds in accordance with Wood Supply Agreements to manufacturers for primary and secondary processing of a wide range of

wood products, then distributed to wholesalers and on to export or domestic retailers, who look for timber certification.

Timber NSW Members are drawn from almost all stages of the hardwood timber value chain. A full list of Timber NSW's Members can be accessed at timbernsw.com.au/list-of-members.

The close regulation of the production of timber in NSW at every stage of the process is among the world's most stringent.

Supporting Regional Communities

New South Wales' timber and forest products industry contributes millions each year to the state's economy. It is also a major employer in rural and New South Wales, supporting many communities.

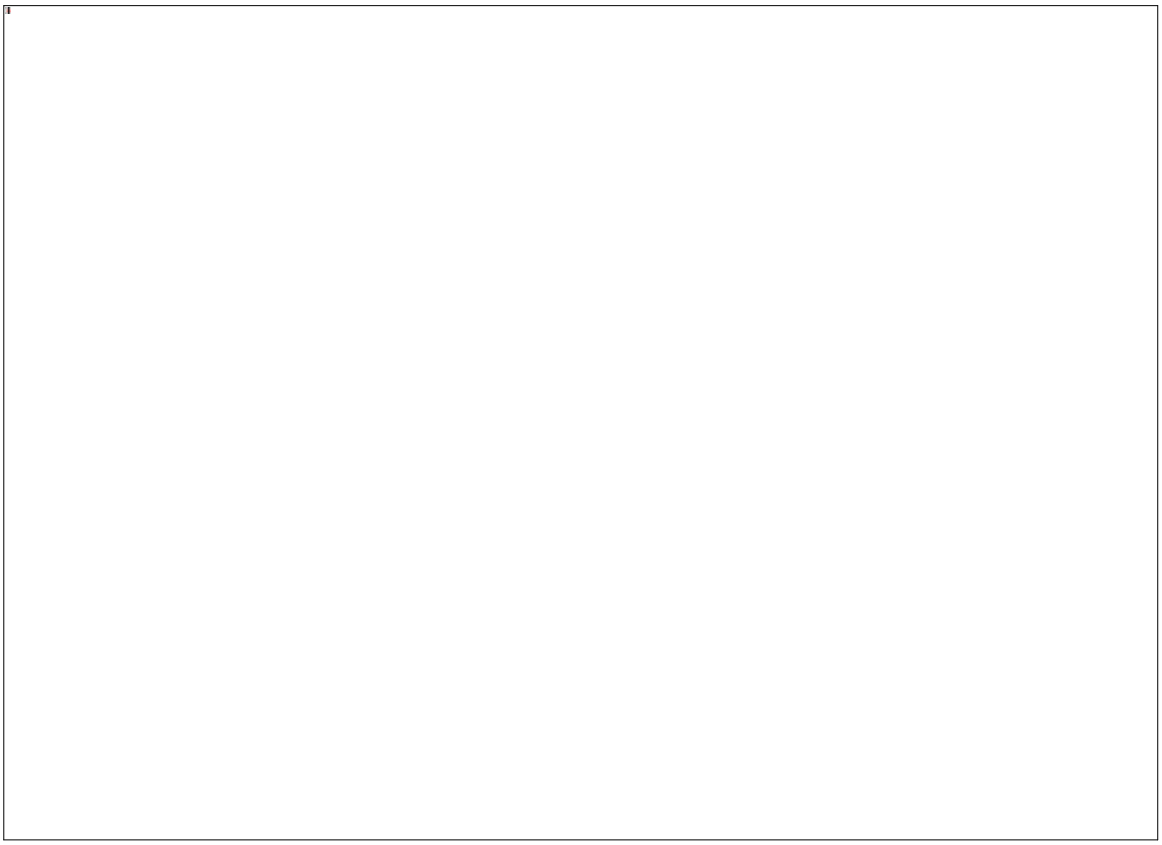
- Timber Industry Value Added $2.4 billion
- Exporter Annual Contribution to Exports $219.5 million
- Regional Employer Total Employment 22,000 people

THE NSW HARDWOOD TIMBER INDUSTRY VALUE CHAIN

The industry's value chain begins with working forests – both State forests and private forests - which are managed for the sustainable production of native and plantation timber.

WORKING FORESTS

New South Wales has over 20 million hectares of forest which cover a quarter of the State. Less than 3% of NSW land and less than 10 per cent of NSW forest are used for domestic timber production. Timber production is a renewable land-use that is undertaken on both public and private land in forestry plantations and multiple-use native forests.



Almost all native timbers harvested in NSW are from hardwood species (Eucalypts) which grow in tall open forests east of the Great Dividing Range. In Western NSW Cypress pine which is a softwood is also selectively harvested as is River Red Gum which grows in the NSW Riverina.

In total there are over 50 commercial species, the most common being Coastal Blackbutt, Spotted Gum, Sydney Blue Gum, Stringybark, Silvertop Ash and Ironbark.
Species such as Coastal Blackbutt, Spotted Gum, Flooded Gum, Dunn's White Gum and Gympie Messmate are also grown in hardwood plantations located on the State's north coast.

Exotic softwood timber (Radiata pine and Southern Pine) is produced in softwood plantations. In total there are ~300,000 hectares of exotic softwood plantation which is located on the South West Slopes (Tumut), Central West Slopes (Oberon), the Northern Tablelands (Walcha) and the Southern Tablelands (Moss Vale and Bombala).

Managing forests for timber is a cyclical process that involves the harvest and regeneration of forests on a continuing basis. Every time a tree is harvested up to ten trees are re-established in its place. As the trees regrow, they seek more light and space and natural competition gives rise to some trees becoming dominant over overs.

Thinning, be it natural or mechanical, provides space for growing trees and plays an important role in maintaining forest health and productivity. By the time a forest reaches maturity only a small percentage of the original trees will have survived. When some or all of these trees are harvested and the renewable cycle begins again.

Forestry is therefore clearly distinguishable from deforestation or land clearing, which is the permanent removal of trees to make room for land use other than forestry.

GROWERS & SUPPLIERS

Timber has been harvested from NSW State forests since the *Forestry Act 1916* was passed and formal forest management began. To supplement timber supply from native forests public investment occurred in plantations beginning in earnest after the second world war.

Timber has also been sourced from private land for close to 200 years however for much of this time it has been a by-product of land-clearing for agriculture and urban development. In more recent decades private native forests have been managed specifically for forestry in a similar fashion to State forests. Since the late 1990s's investment has also occurred in private plantations.

It is important to distinguish the different timescales to produce native and plantation timber. Plantations rotation lengths range from 15 years (produce pulpwood to up to 40 years to produce sawlogs). In comparison trees in multi-aged native forests are slower grown and will typically be between 60 and 80 years of age by the time they are harvested.

Native State Forests vs Private Native Forests Around three quarters of the native timber produced in NSW comes from State forest with the balance from private property. There are ~1.7 million hectares of native State forests which are managed by the Forestry Corporation of NSW. In 2013 the NSW government corporatized the agency and charged it with making a return on investment to the people of NSW. Less than a half of all State forests is made available for timber production with the remainder managed for biodiversity conservation and environmental protection, There are around 7 million hectares of private native forest in NSW. The management of these forests is the responsibility of tens of thousands of individual landholders. A small proportion of these landholders participate in private native forestry. Private native forestry operations are authorized by Local Land Services and subject to an operating Code of Practice.
Native Forests vs Plantations It is important to distinguish between native forests and plantations. Native forests comprise tree species which are endemic to Australia. When harvested or disturbed, native forests regenerate naturally. Plantation forests are planted forests, usually for the purpose of wood production. Silviculture is the art and science of controlling the establishment, growth, composition, health, and quality of forests to meet human needs and values such as timber. Of the total forest estate designated for timber production, 75 per cent is native forestry and 25 per cent plantation forestry.

All forestry activities carried out in New South Wales are strictly governed by laws, standards and conditions agreed by State and Federal governments. In fact, forests in New South Wales are some of the most heavily protected in the world.

LAND TYPE	FOREST TYPE & HARVESTING SCALE	REGULATION
PUBLIC LAND	Native Forests	Integrated Forest Operations Approval (IFOA's)

NSW State Forests Managed by Forestry Corporation of NSW (Forestry Corporation)	On average 7 thousand hectares of forest canopy is removed each year which equates to 0.035% of NSW forests	Authorisation for forestry activities on public lands is given as an Integrated Forestry Operations Approval (IFOA), which is regulated by the NSW Environment Protection Authority (EPA). There are four IFOAs which geographically cover the State's timber production areas. One for the coast, two that cover the western slopes and one that covers the Riverina. Each IFOA contains thousands of operating conditions. The NSW Forestry Corporation internally regulates its other forest management activities through Codes of Practice, which specify best management practice.
	Plantations On average 8 thousand hectares of forest canopy is removed each year which equates to 0.04% of NSW forests	Regulated by the Plantation and Reafforestation Act 1999 and the Plantation and Reafforestation (Code) Regulation 2001. The Act aims to promote plantation establishment and contains standards for plantation establishment, maintenance and harvesting. The Forest Practices Code Part 1 – Timber Harvesting in Forestry Corporation Plantations (2005) regulates harvesting operations throughout NSW Forestry Corporation softwood and hardwood plantations in New South Wales. It also provides information on good plantation management. The provisions of the Code are binding on all parties involved in the organisation, management and practice of obtaining timber products from NSW Forestry Corporation plantations.
PRIVATE LAND Managed by private landholders Timber NSW Member the Hurford Group covers the entire supply chain from the management and harvesting of forest resources, processing, manufacturing, sales and distribution of wood products in Australia and around the world.	Private Native Forests On average 2 thousand hectares of forest canopy is removed each year which equates to 0.01% of NSW forests	Regulated by Private Native Forestry Codes which are authorised by Local Land Services under the Local Land Services Act 2013 and audited by the NSW EPA. The Act requires approval for any harvesting of native forests, through the development of a property vegetation plan (PVP).
	Plantations On average 4 thousand hectares of forest canopy is removed each year which equates to 0.02% of NSW forests	As above, regulated by the Plantation and Reafforestation Act 1999 and the Plantation and Reafforestation (Code) Regulation 2001. The Act aims to promote plantation establishment and contains plantation standards. This applies to private and government-owned plantations.

CONTRACTS FOR SUPPLY: WOOD SUPPLY AGREEMENTS

Forestry Corporation supplies more than 4.5 million cubic metres of log products annually to the domestic and international timber manufacturing sector in accordance with long term wood supply agreements (WSA's). The WSAs currently on foot commenced in 2004 and are due to expire in 2023. Many of those who contracted with Forestry Corporation for wood supply are Timber NSW members.

Under the WSAs the timber mills are charged stumpage price and delivery charges (i.e. haulage costs). Delivery charges are determined by applying the rates set out in the Delivery Charge Schedule in accordance with the type of Timber, the Price Zone and the Delivery Site.

It is important to note that given the nature of native forests, which offer a diverse variety of native tree species (cf. plantations), the WSAs did not specify the amount of particular hardwood timber species to be supplied. Rather, the basis of the agreement was that high quality sawlogs would be supplied in accordance with establish industry principle known as 'the run of the forest' in that zone.

PLANNING - FOREST HARVESTING

Before a forest is harvested an operational plan is always prepared.

Each harvesting plan draws together specialist information on soil and water, threatened species, Aboriginal and European heritage, silviculture (the care and cultivation of trees), road construction and maintenance, and inventory data (information on the numbers and types of trees in the area).

The information is condensed into a succinct harvest plan, including detailed maps developed using a Geographic Information System (GIS).

On State forests all harvest plans are available for the public to view at the local Forests NSW office of which the plan has been prepared. Harvest plans are generally prepared on a forest compartment basis, covering an average area of 250 hectares. The harvest plan contains conditions that maintain environmental values while permitting timber harvesting by restricting the area to be disturbed to suitable locations, and defining which trees will or won't be felled, ensuring protection of the soil through erosion control, retaining wildlife habitat, and maintaining undisturbed vegetation around streams, drainage lines and wildlife corridors, rehabilitating timber harvesting sites, avoiding environmentally sensitive areas, which may include habitat for endangered species, rainforest, steep terrain, archaeological sites, scenic areas or recreation areas. Each harvest plan also addresses regulatory requirements for road construction, harvesting and fire management, as well as other forest activities.

Timber harvesting in State forests is undertaken by contractors. Forests NSW staff, in particular supervising forest officers (SFOs), strictly supervise harvesting contractors, ensuring compliance with the harvest plan and regulations that protect the forest environment.

Before any trees are cut down, a supervising forest officer or forester walks through the forest and uses paint or tape to mark the trees to be retained or removed, and the buffers and boundaries specified in the harvesting plan.

HARVESTING

Each year, only a very small percentage of NSW forests is harvested. The harvesting of native forests is very different to the harvesting of plantations.

Forest Type	Forest canopy harvested	NSW Forest Canopy Removed (% per year)
Hardwood and Cypress forest		
Publicly-owned native forest	7 thousand hectares a year (ave)	0.035%
Private native forest	2 thousand hectares a year (ave)	0.010%
Publicly-owned hardwood plantation	280 hectares a year (ave)	0.001%
Private hardwood plantation	1 thousand hectares a year (ave)	0.005%
Softwood Plantation		
Publicly-owned Plantation	8 thousand hectares a year (ave)	0.040%
Private softwood plantation	3.6 thousand hectares a year (ave)	0.020%
Total	22 thousand hectares a year (ave)	**0.11%**

Plantations are typically thinned at least once then clear fall harvested at around age 30 years for softwood and around 40 years for hardwood. In native forests harvesting is selective, there is no clear felling. Because native tree harvesting is selective harvesting cycles of 20 to 30 years are common.

On State forests and in plantations trees are mechanically harvested. The mechanical harvesters (see below) are being used to fell trees and remove limbs and bark. On private land native trees are usually felled using a chainsaw, with the operator removing the limbs and head of the tree where it has fallen.

On State forest the Forestry Corporation engages and supervises more than 100 contractors to undertake harvesting and haulage and other aspects of its operations. In native State forests Timber NSW Members Greensill Brothers and SA Relf & Sons are leading harvest and haulage contractors in NSW.

What is Thinning?
It is important to distinguish thinning and sawlog harvesting.

Thinning is a form of selective timber harvesting where the principal aim is to reduce the stocking density (stems per hectare) of the forest.

In native forests thinning of dense regrowth benefits the health of the forest by providing more space and light for retained trees to grow and mature. Thinning of dense, even-aged regrowth can also promote biodiversity (NRC 2014).

A forwarder, bulldozer or skidder then takes the tree to a log landing, or log dump, where an excavator removes bark. The logs are then sorted and graded by a qualified log grader before being loaded and transported by log truck to a timber mill.

Hardwood Plantation Harvesting
Cultivating a plantation involves planting established seedlings: around ~1,300 trees per hectare. Being close together, the seedlings grow straight as they compete for available moisture, sunlight and nutrients.

Over the length of a plantation 'rotation' the trees are thinned, with about 30-50 per cent of trees removed per thinning. This occurs at approximately ten year intervals, when tree growth slows due to competition between trees.

At 40 years of age the remaining plantation trees are clear-felled, allowing the site to be re-established.

Regeneration
Timber production is a renewable land-use. It is a cyclical process that involves the harvest and regeneration of forests on a continuing basis.

In the cooler months following harvesting, post-harvest burns are carried out to promote regeneration and reduce the fire hazard. Plantations are replanted. Every time a tree is harvested up to ten trees are re-established in its place.

Forestry is therefore clearly distinguishable from deforestation or land clearing, which is the permanent removal of trees to make room for land use other than forestry.

HAULAGE

As above, a bulldozer or skidder takes the felled trees to a log landing, or log dump, where an excavator removes bark. The logs are then sorted and graded by a qualified log grader before being hauled by truck to a timber mill.

There are two stages of haulage: log haulage and distribution of manufactured forest products to wholesalers and retailers.

In NSW, two systems administer log haulage.

- On the NSW North Coast, log haulage has been centralized. In 2018 a Forestry Corporation tender for a haulage consortium was won by Boral, which administers the Northhaul Consortium.
- On the NSW Southern Coast, each timber mill must organize its own log haulage.

WOOD PROCESSING & MANUFACTURING

The New South Wales wood processing industry is diverse, with mills of all types and sizes spread across the state producing a wide range of wood products.

In total there are 63 hardwood mills and 13 softwood mills processing more than 3.3 million cubic metres of sawlogs every year. These 21st century mills utilize laser and digital technology to optimize timber recovery from the logs.

Hardwood Timber Processing: Primary

In primary processing, or milling, the raw log can be processed in six different ways. It may be retained in round form, sawn, peeled or sliced, split, chipped or crushed.

Roundwood poles 	Hardwood round timber may be sold as high value, structural products such as poles, piles and bridge girders, forming an essential component of nation-building infrastructure. Timber NSW Member Koppers supply a range of treated timber utility poles, foundation and marine piles, construction products, and other treated timber log products for agricultural and landscape uses.
Sawnwood	Sawlogs and sawn timber production is the mainstay of the industry and generates the greatest value for both the forest grower and the primary processor. The manufacturing process depends on the quality of the sawlogs.

	Sawn timber may be sold green or as a dried and dressed product. Drying timber makes it more stable and increases its strength and immunity to decay. Most softwood sawn timber and over one third of all hardwood sawn timber is dried or 'seasoned' before it is sold. Timber NSW Member Coffs Harbour Hardwoods is one of the most diverse hardwood processors in Australia, providing a superb range of quality hardwood timber products in many different timber species for structural, commercial and residential use. Timber NSW Members SA Relf at Newell's Creek, Hayden Timbers at Gum Scrub and Arbuthnot Sawmills also produce industrial and landscaping timber (pallets, sleepers, general purpose green sawn) as well as kiln dried timber. Fencing timber, weatherboards and external cladding is provided by Timber NSW Members Caban's Rural Fencing in Ellalong and Heatherbrae's Weathertex.
Peeled Veneer 	High value veneer is produced by slicing or peeling logs and has a variety of value-added uses (see secondary processing). Timber NSW Member Big River Group supplies Building Products, Formwork, Flooring, Plywood, MaxiWall and MaxiFloor as well as technical advice for both residential and commercial projects.
Woodchips 	Low quality logs known as pulpwood are chipped. Woodchips are also a by-product of sawn timber processing and can be used in landscaping. The greatest demand for woodchips however is in secondary processing where there are a large variety of applications (see below). Located in Eden on the NSW far south coast, Timber NSW Member Allied Natural Wood Exports (ANWE) is a world class wood products export marketing and logistics company. ANWE concentrates on the export of woodchip and other wood products to the international market, including certified natural and plantation grown wood products from public and private growers.
Split Firewood	Medium and lower quality logs may be cut and split into fence posts and firewood.

	Timber NSW Member Gelletly Red Gum Firewood offers premium Red Gum firewood and kindling for commercial and residential customers, harvesting sustainable firewood from the Riverina.
Sawdust Residue 	The lowest value product is sawdust. This is sold to the equine, chicken and landscaping industries or burnt onsite to produce heat and energy.

Due to the natural variability in timber, the industry constantly strives to optimise the value of the products recovered from each processed log. The industry is careful to minimise waste and closely manages the production of lower value products, which can constitute a large proportion of the market by volume.

Hardwood Timber Processing: Secondary

From its 'green' or unseasoned state, timber can be allowed to dry naturally (known as air drying) or dried in kilns. Kilns extract moisture by artificially controlling the drying environment, including the wind speed, temperature and humidity.

Secondary processing adds further value to timber through a broad range of manufacturing processes. Most secondary processing activities use lower value chipped fibre to produce commodity products like pulp and paper, cardboard, reconstituted products like fibreboard and engineered wood products like laminated veneer lumber.

These processors are typically large-scale, capital intensive manufacturing operations employing many people. Medium scale secondary processing operations tend to be associated with adding value to sawn timber products such as the production of softwood frames and trusses.

Secondary processing that produces higher value appearance products like hardwood furniture and joinery tend to be smaller scale and rely more heavily on the workmanship and skills of individual tradespeople.

Timber NSW Members are leading producers and suppliers of high grade hardwood products including flooring, decking, reclaimed/recycled and architectural timber (dried and dressed), including:

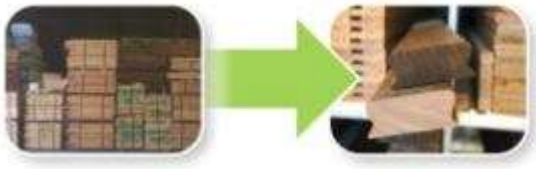
J Notaras & Sons in Grafton

Machin's Sawmill in Wingham

Grants Sawmilling in Narrandera

Ironwood in Sydney

Sawn Timber



Mouldings & Joinery

Frames & Trusses

Veneer Timber

Plywood & Formply

Engineered flooring and doors

Chipped Timber

Pulp, paper & cardboard

Wood-based panels (Particle Board & MDF)

External Timber cladding

Engineered wood products

Round and Sawn Treated Timber

Wood treated with preservatives

WHOLESALE DISTRIBUTION & LOGISTICS

The following Timber NSW Members provide wholesale distribution and logistics services for NSW hardwood timber, across NSW, nationwide and into international markets:

Allied Natural Wood Exports in Eden

Big River Group in Mount Druitt

Clarence Valley Timbers in Grafton

Gelletly Red Gum Firewood in Barham

Hurford Hardwoods in Tuncester

Pentarch Forestry in Eden.

A number of these also provide retail premises.

A full list of Timber NSW's Members can be accessed at timbernsw.com.au/list-of-members.

Hardwood Timber Import & Export: A $2 billion timber trade deficit

Australia is the sixth most forested nation on earth. Australian hardwood timber is a unique, renewable and recyclable resource that is in high demand, both domestically and internationally.

Australian governments, along with the Australian timber industry, are committed to best practice regulation of forestry and silviculture. For many generations, thousands of local communities across NSW and Australia have made their living as part of the timber industry.

Given all this, it is hard to justify Australia's $2 billion timber trade deficit. Further, given the shortage of timber supply, construction in Australia is turning to the use of building materials – steel, aluminium, plastic - which are far less environmentally friendly than timber. In the 40 years since steel house framing became available in Australia, it has captured 15 per cent of the national market, rising to a 20-25 per cent of the market in South Australia and SE Queensland.

While the long-term management of forests and plantations is a complex and demanding discipline, the alternatives – use of energy-intensive materials and timber imported over long distances from countries with far less stringent regulation than Australia – are not environmentally, socially or economically prudent.

Timber NSW submits that the NSW timber industry – hardwood and softwood - must be supported by the NSW government through careful long-term planning and closely monitored programs. This support must be accompanied by ongoing community education campaigns which inform Australians about the critical, nation-building role that the timber industry plays in Australia.

Case Study - The Timber Hunter – Sydney

We sought out Philip Browne for insights about what's going on at the wholesale end of the market. This is the picture he painted:

I'm looking out the window now at a Sydney power pole and it is NSW native hardwood. We all use timber whether in a paling fence, screens, floors, staircases, outdoor seating in public areas. It's everywhere you look.

John P Browne Pty is a third-generation family business, and we are The Timber Hunter. We specialise in the wholesale supply of Australian hardwood timber products for all purposes and are experts in flooring, decking and structural hardwoods.

I am Philip Browne, and my grandfather started the business in the depression. Despite the difficulties of the time, he saw the opportunity to link the country sawmills, where the processed timbers from local forests are made, with the market in Sydney. My father continued and I followed their footsteps evolving to suit the needs of the times.

We've been cultivating strong relationships with many of Australia's leading sawmills for more than 90 years. We link people who need native hardwood timber with those who produce it. We use our know-how to assist clients to decipher what type of timber is right for their project and the task of sourcing it is our business.

Despite the current trend toward integration in supply chains, we remain committed to my grandfather's original idea of connecting country sawmills to the city.

Timbers we've sourced have gone to be used by some of Australia's most highly regarded manufacturers, builders and craftspeople. Australia has many beautiful timber species - suited to such a wide range of applications.

My observations are:
Demand for hardwood is buoyant and it is quite difficult now to obtain supply.
Private native forestry supply is noticeably harder to find - everyone is looking to buy more there because state forest supply is so tight.

Australian native hardwoods are sought after because of their renowned strength and durability, there's a wide range of colours and these can be sourced in a variety of sizes. Buying Australian native timber resonates with people. They want to support local industry, local families and jobs – the whole thing.

Increasingly I am asked for certified timber, which, in my opinion is not really needed in Australia because such strict regulations surround harvest of timber. It's not like buying timber imported from somewhere with lax regulations. Government departments must usually have certified timber.

We have recently had an enquiry for the Opera House for a native hardwood floor and instructions are that it must be brushbox. Nothing else.

Heritage architects and builders are big users of native timbers as the old specifically must be replaced like for like.

The National Parks Service is a big buyer and user of hardwoods. Native timber is what they want everytime. It's used in the parks for many things – bollards along a walkway for example, walkways and boardwalks, picnic area for tables and seating, signage and so on Parliament House in Canberra was recently seeking the quality hardwood for decking.

Timber experienced a revival since the mid to late 1990s when everyone had to have a timber floor and it's gone on from there.

RETAILERS

In recent years, major materials retailers have made clear to consumers that they will only source timber products from legal and well-managed forest operations.

Timber NSW applauds this approach. The regulation of timber production in NSW is some of the most stringent in the world. Consumers should know where their timber is produced and whether it was produced in accordance with environmental best practice.

Consumers should also be aware of the benefits of timber as a material in comparison with far more energy-intensive materials.

This is where forest certification and chain of custody become relevant. Worldwide certification programs aim to prevent unregulated or illegally logged forest timber entering international markets. Buying certified local timber not only helps to reduce the market for timber from unregulated forests, but it also reduces emissions from importing timber.

Forest Certification

Forest certification is relevant to forest growers. In NSW this includes Forestry Corporation and private landholders who grow private native forests and plantations.

In Australia, along with many other countries, a detailed legal, institutional and economic framework has been established to ensure the conservation and sustainable management of forests, one that is supported by internationally recognised systems of forest management certification.

Forest certification is a voluntary, independent assessment of sustainable forest management activities. It shows that a forest estate has been managed in an environmentally sustainable way based on agreed standards.

Forestry Corporation: All Forestry Corporation log products are third party certified to the Australian Standard – AS4708—2007, in accordance with the Responsible Wood Certification System. This standard has been recognised through the international Programme for Endorsement of Certification Scheme (PEFC), which guarantees that timber has been grown and harvested from a sustainable forest. The certification status of any certified forestry business can be viewed in the certification register on the Responsible Wood website.

Private Native Forests: Private landholders who manage native forests and plantations are also able to seek certification. However, the take-up by private landholders has been slower, for a number of reasons.

Driving PNF Certification

A Private Native Forestry Plan is an approval to undertake private native forestry for a period of up to 15 years. Land Services (LLS, part of the DPI) provides assistance to those who want to establish a PNF operation.

As below, the NSW Timber industry submits that there are two practical ways that the NSW government can drive PNF certification: by securing ongoing demand for certified hardwood timber and by ensuring NSW public and private hardwood forests are certified in efficient and effective way.

1. **Make Third Party Forest Certification a Key Component in all Government Procurement**
   The NSW government should specify forest certification on all government funded projects. This creates a 'virtuous cycle' and a flow-on effect through the timber and forest supply chain to merchants, saw-millers and to foresters which rewards best practice and reassure consumers.

   Under the terms of the Public Governance, Performance and Accountability Act (PFPA 2013) and more recently the AS ISO 24000: 2018 Sustainable Procurement Guidelines the Federal Government and State Governments have stated willingness to preference timber that meets Australian Standards.

Where government has been wanting, certain sections of industry has led the renewed interest in timber certification. Thanks to the development of engineered timbers, specifically Cross Laminated Timbers, Laminated Veneer Lumber and Glue Laminated Timber, end-specifiers of building materials are being exposed to PEFC and Responsible Wood forest certification through the import and domestic use of timbers for commercial application. This has exposed more and more specifiers to forest certification which is flowing through to the timber and forest supply and value chain.

2. **Tailor PNF Approval Process to Include PEFC Certification**
There is an opportunity for LLS to amend the PNF approval process to 'package' and streamline the process of compliance with PEFC certification. This would involve an extension of the approved PNF Plan period from 15 years to 30 years (as required for PEFC Certification). This 30-year horizon would drive more investment in PNF and better forestry practices over the long term.

This proposal, 'NSW Gap Analysis Report, Comparison of NSW Private Native Forest Regulations and Responsible Wood Certification', was made by Forest Strategy Pty Ltd in May 2019 and submitted to LLS and Responsible Wood in July 2019.

We excerpt the conclusions of this submission below:

CONCLUSIONS
The voluntary certification of private native forest in NSW has had very little impact as a mechanism to improve forest operations to sustainable levels as defined by the Australian Standard for Sustainable Forest Management, with only 0.4% of private native forest available for forest operations achieving certification to either scheme.

A regulatory way to improve this ratio would be to include a deemed to satisfy pathway in the framework that allows certified forest to be automatically issued with a Private Native Forest Plan.

One market-based approach to improve this ratio is to make private native forest growers aware of markets for certified residual logs. Existing markets for export woodchips, engineered wood products and biomass energy are provided by organisations who are generally aware of the need for certified forest products but may have not fully considered the resource on private land before.

A market awareness campaign could be formulated and implemented for little cost using existing players. The advantage of this option is that it significantly reduces the unit cost for a private native forest grower of becoming certified and can substantially improve silvicultural outcomes by preventing the drivers for High Grading.

The regulatory framework as it is currently applied is reliable and predictable but based on a comparison with sustainability standards it is not demonstrating sustainable forest management of private native forest. This comparison with the Responsible Wood standard shows a 44% gap between the framework and the ability of forest growers to demonstrate their activities are meeting the minimum standard for sustainability. A parallel evaluation of the FSC Standard showed a 59% gap.

There are a number of ways to improve the framework and close some of the gaps. The recommended ways would be:

- *Ensuring basal area limits in the Codes allows explicitly for restorative silviculture*
- *Allowing Forest Management Plans to substitute for Forest Operations Plans*
- *Allowing Forest Operations Plans for 30 years or more*
- *Issuing more longer term Private Native Forest Plans for 30 years or more*
- *Strengthening Codes to prevent High Grading.*

A move to greater certification of private native forest will need to be accompanied by a communication strategy that is aimed at creating community support, market awareness and promoting the benefits of group scheme membership.

Timber NSW urges a prompt response by government to put this proposal into effect.

Chain of Custody Certification

Chain of Custody certification is a process to trace wood up the supply chain through careful inventory and stock control. The timber is tracked from the certified forest where the timber was harvested through the manufacturing process and the final point of sale, whether in Australia or overseas.

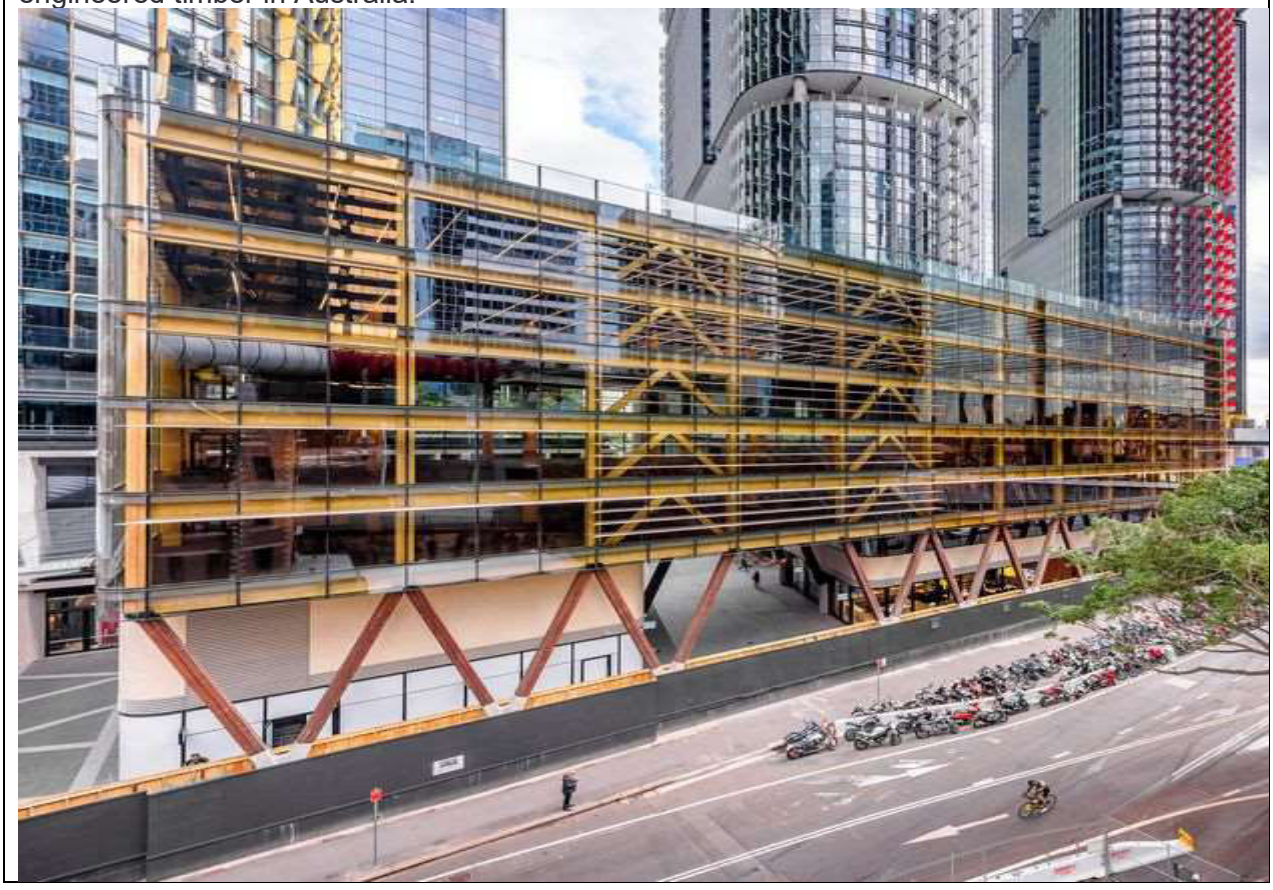
Each company in the supply chain needs to be independently certified to ensure the link in the chain of custody is not broken. Most of TNSW members are PEFC certified.

DESIGNERS, BUILDERS, INSTALLERS & USERS

CASE STUDY: International House Sydney

PROJECT | Andrew Nimmo
26 Jun 2018

This new commercial building in Barangaroo South, designed by Tzannes, celebrates the material, structural and aesthetic qualities of wood and sets a precedent for the use of engineered timber in Australia.



In many respects International House Sydney (IHS) by Tzannes is a sensible commercial building. It hugs its site boundaries and makes deliberate and positive public domain moves, with a two-storey street colonnade along Sussex Street that acts as a threshold to Barangaroo South and a two-storey covered plaza that marks a destination for the pedestrianized Mercantile Walk. The floor plate is clean and clear, save for a central row of columns and a core tucked to the western side.

International House Sydney, in the Barangaroo development, is the first engineered timber office building in Australia. The building had to be sensible; otherwise, it would not have been built. As it is Australia's first engineered timber office building, there was always a risk that the market would baulk at the idea: what about fire, what about termites, what's wrong with good old concrete?

This is not the first cross-laminated timber (CLT) building developed and built by Lendlease. In 2013 it completed Forte Living, a ten-storey apartment building in Melbourne that at the time was the first CLT building in Australia and the world's tallest. Since then, CLT buildings have been gaining a lot of traction around the world and it was a logical move for Lendlease to test the commercial market.

The Barangaroo development on the western edge of Sydney's CBD, Australia's largest urban renewal project, has been a contested site since the international design competition in 2005, with floor space ratios and building heights continually adjusted to suit the developers' ambitions. The IHS site is bookended by two of the main pedestrian access points to Barangaroo South: Napoleon Bridge to the north, which becomes Shipwright Walk, and Exchange Place to the south, which links up with the Sussex Street Bridge and the recently completed Wynyard Walk, where there is a constant flow of people to and from Wynyard Station.

Barangaroo South itself is dominated by the three buildings that make up International Towers Sydney by Rogers Stirk Harbour and Partners. These massive towers sit on street-aligned podiums three storeys high that tighten the feeling of scale at street level. If the intention was intimacy, the effect has been to create some of the most efficient wind tunnels in Sydney. Much of Barangaroo South is now finished and occupied and there is already a very active life beginning to emerge at street level, despite the gusty experience for the pedestrian. In general it feels like too much has been packed into this part of the city. International House, at a modest seven storeys and sitting on the eastern edge, is bespoke and almost dollhouse-like in comparison.

Cross-laminated timber panels form the floors of the building, while European spruce has been deployed for the internal structure. IHS could easily have been a concrete building and started out as one when Tzannes was first engaged. Four months were spent exploring timber options before returning to concrete, then later back to timber. While the architects were pushing for a full timber building, it needed a champion within Lendlease to become a reality, which founding director Alec Tzannes explains was found with senior project manager Jeremy Tompson. A fully timber-framed mid-rise commercial building was a new idea for the market – traditionally, commercial means concrete, glass, steel and aluminium.

Technical advances and research in the building industry tend to be very sluggish in making their way to market as contractors struggle to quantify and price the risks. That Lendlease took on the commercial risks associated with this building should be applauded and is in the spirit of its founder Dick Dusseldorp, who thrived on innovation and risk when building Lend Lease Corporation. Of course the company did its research, both in how to build it and in how to market it, and this appears to have paid off. The building is fully leased and Lendlease has engaged Tzannes to do another timber building in Barangaroo.

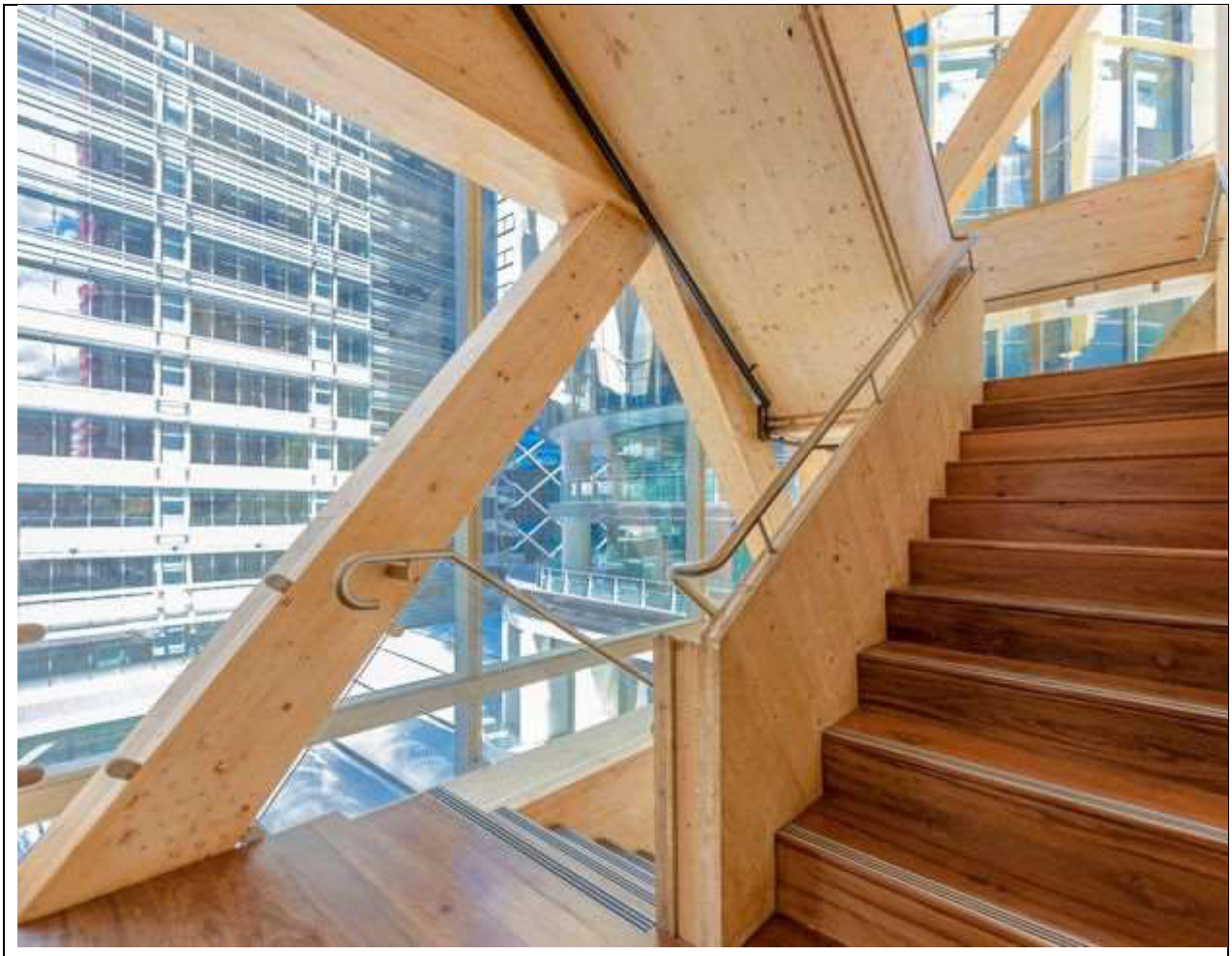
The building's striking northern facade interacts visually with Napoleon Bridge, one of the two main pedestrian access points to Barangaroo South. The timber is real and structural, which gives it integrity, and the priority of the idea and clarity of the expression are everywhere to be seen. Many timber-framed buildings hide their skeletons within cladding but IHS loudly proclaims its timber bones. The architects cite Shigeru Ban's Tamedia building in Zurich as a precedent, though this building is much more understated than the expressive and playful Ban building. Alec Tzannes acknowledges that structural timber buildings have their limitations and sees the technology as more suited to low-to-mid-rise construction. Many of the so-called "plyscrapers" around the world, in excess of ten storeys, are actually hybrid structures that incorporate concrete cores. The ten-storey 25 King development in Brisbane, also by Lendlease but with Bates Smart, will officially become Australia's tallest timber office building when completed in 2018.

CLT technology was developed in Switzerland in the 1970s. Sometimes described as "jumbo plywood," it is the logical extension of plywood into structure. Layers of timber are glued together, with the grain alternating at ninety-degree angles for each layer. Cross-laminating the layers of wood improves the structural properties of wood by distributing its along-the-grain strength in both directions.

In the IHS building CLT panels are used for floors and walls, along with a one-hundred-millimetre access floor. Columns, beams and bracing are glulam set in a six-by-nine-metre grid. There is no ceiling, with the black-painted chilled beams and other services fully exposed and carefully set out to avoid the visual chaos that is usually hidden away.

The structural timber performs very much like a series of precast concrete elements, though much lighter, and is assembled Meccano-like with bolts, plates and brackets. All the beams, columns and panels arrived pre-cut, including penetrations for services, flatpacked into containers like a giant piece of IKEA furniture. On site the timber structure is much more forgiving than traditional concrete and can easily be cut and drilled if necessary, without the fear of hitting reinforcement.

The internal structural timber is European spruce from Austria. Local pine could have been used; however, there were no local fabricators of CLT in Australia (although New Zealand company XLam is building a CLT plant in Albury-Wodonga, which will open in 2018).



The building's fire stairs are enclosed with fire-rated glass, welcoming light and views and encouraging circulation between floors.

Through the use of sprinklers and fire engineering, the fire rating for the structure was reduced from 120 minutes to ninety minutes. The timber burns at a predictable, tested rate and insulates itself against the fire as the outside face chars. For each exposed face, approximately sixty millimetres in thickness acts as a fire protection layer for the structural member. The building has sound environmental credentials, with a six-star Green Star rating, 352 photovoltaic roof panels, 2,700 tonnes of carbon sequestered in the timber structure and passive chilled beams that provide temperature control and make use of the precinct-wide heat exchange system with the harbour. The only negative is the material miles associated with transporting the structural timbers from Europe.

Externally, a white glazed brick base, rounded corners and strong horizontal lines give the building a certain retro Streamline Moderne expression reminiscent of late Art Deco architecture from the 1930s. The two-storey Sussex Street colonnade is supported by angled recycled ironbark props that are in turn supported by muscular and sculptural in situ concrete bases. This allows the structural grid of the building to adjust to the different structural grid of the basement carpark, which was already in place before the building was constructed.

Inside, you are immediately struck by the scent of the timber, which is much more pleasant than the dusty smell of new concrete or the chemical smell of paint and glue. It is not an overpowering smell, like being in a cedar sauna; rather, there is an aromatic background that is both reassuring and calming. The fire stairs are enclosed with fire-rated glass so that they appear visually open and inviting. They are intended to be used for general movement

between floors instead of people resorting to the lifts. The lobbies are clad in recycled turpentine, harvested from wharf piles unearthed during excavations on site.

As with all prefabricated buildings, there is additional time required in design, coordination, fabrication and transportation of the offsite components, but this is then recouped with less time spent on site. It makes for a very different kind of site, where most of the work is more like a large carpentry workshop. Work is not held up while concrete cures and is stripped.

It is rare in a commercial building to see such an elegantly and purely realized building where the legibility of structure, material and services is the aesthetic. It might sound trite, but the feeling of wellbeing and nurturing within this building is palpable. This is an architecture of substance.

Source: architectureau.com/articles/international-house-sydney

RECOMMENDATIONS

Problems

- The timber supply chain is complex, fragmented and siloed.
- As a result, the supply chain has potential to be more flexible and responsive at an industry level.
- In particular, as a part of the NSW circular economy, there is a need to create and support downstream markets for lower value logs and wood residues.
- There is a need to provide resource security by extending the Wood Supply Agreements, as detailed elsewhere in this submission.

Opportunities

- There is an opportunity for the NSW government to ensure that NSW timber is preferentially procured for government projects
- There is an opportunity to drive further timber supply through private native forestry by streamlining the certification process.

APPENDIX:

CASE STUDY: Koppers Wood Products, pole operation – Grafton

The NSW North Coast forests grow arguably the best poles in the world. It's why all four NSW pole producers are located here. The hardwood pole as an unprocessed timber product is worth twice as much as high quality sawlog. Hardwood poles are sustainably produced from native forest and is the preferred low-cost pole with positive environmental credentials to safely deliver power to homes and business across Australia.

I am Michael Combe, Australian Resource Manager with Koppers Wood Product Pty Ltd. Koppers is specialist pole manufacturer and supplier of Utility poles and piles. I am part of a forestry team employed by Koppers and appreciate the skill and science that goes into managing and protecting forests and high value timber recovery from forests.

Timber has some special uses that most people don't think about. One of them is power poles for the electricity networks that you see everywhere. The hardwood power pole is a renewable natural product designed to safely carry electric wires for power distribution.

Across Australia there are about 6 million power poles in service and nearly 80% are hardwood poles. Koppers supply more than half of power poles used in the Australian Electricity Network. Koppers also supply Telstra poles and the long hardwood poles used for wildlife crossings – you see along the new Pacific Highway upgrade and elsewhere.

Treated hardwood poles are strong and durable with a useful service life twice as long as it takes to grow them. Their non-conductive, safe in use and have a lower carbon footprint to produce than any alternative material including steel, concrete, aluminium and fibreglass.

Power distribution is part of critical infrastructure and an essential service to consumers. Koppers maintain a ready stock of treated poles to meet the year-round demand for new and replacement poles. Our poles stocks provided the emergency pole supply to assist Utility work teams to quickly get power back to communities devastated by wildfires in 2019-20. Big catastrophic events happen somewhere all the time. Our pole stocks were raided again following recent floods in NSW and cyclones in WA. Pole stocks are now critically low.

Koppers have operated the Grafton pole treatment facility since 1967. Being the flagship pole plant it plays a major role in the pole supply chain. Most of Koppers pole sales to Utilities is tied up in long term contracts to Utility customers in NSW, Victoria, Queensland and Western Australia. We also ship poles to near Pacific neighbours that are not self-sufficient in poles including the Philippines, Fiji, Samoa, Kiribati and New Zealand. So hardwood poles from North Coast forests, treated by us provide important critical infrastructure and strategic connection to our Pacific neighbours.

Koppers directly employ around 95 people in Australia with 30 permanent employees at Grafton. The Grafton Plant Manager started at 17 and worked his way up. The company provides stable long-term employment in the region with two of our staff reaching 40 years' service. Such employee longevity only happens when there is a safe and productive work site with good working conditions, a positive work culture and employee engagement.

Timber is a big part of Grafton. Many jobs revolve around it. Without a drastic change in wood supply our future is limited and it will affect our whole network of associated businesses.

Koppers foundation hardwood pole supply is delivered by Forestry Corporation of NSW from State Forest. The balance of supply comes from private landholders and up to 60 sustainable timber harvest operations authorised by Local Land Services of NSW. The pole supply chain from the forest to treatment plants and out to power Utilities is long and involves a lot of contractor

services and skills. We handle a lot of pole procurement and transport logistics working with local companies and smaller contractors. Business to business flow is important for the region's economy. We buy services and supplies locally. Freight is a big item - we use a Grafton transport company for outward bound pole delivery all over NSW and interstate. They invested in special crane trucks on their fleet to service us better. Another local company does most of the harvested pole haulage to our site along with a number of smaller companies and sole traders.

On product values Forestry Corporation of NSW and private suppliers are paid a royalty of around $150 per cubic metre by pole processors like us compared to about $80-$85 per cubic metre for a high-quality sawlog. So poles in the product mix add value for forest growers.

The damaged and lost infrastructure from the horror bushfire season in 2019-20 sent pole demand through the roof so to keep up with it we drew down on our stocks. Floods in 2021 have further reduced pole stocks to meet emergency supply. The fundamental nature of the pole business requires long term contracts with Utilities to meet critical infrastructure needs. Unfortunately, our Wood Supply Agreements with Forestry Corporation have limited flexibility to meet emergency pole replacement demands and are due to end in 2023. Political assurances that the current WSA's will be extended out to 2028 to bring these in line with Borals WSA has not happened and we are disappointed by the Government indifference. 20 year rolling WSA's are essential in our view to provide certainty to a stable high value power pole industry and deliver mutual benefit from synergy with long-term sustainable forest practice.

We are cautious about participating in tenders that go out beyond 2023 to supply power poles which is the core of our business. Most tenders with Utilities go out from 3 to 7 years. We watched from the sidelines as a recent tender closed. It was a customer we've dealt with for years. They rang thinking there'd been a mistake. But there was no mistake. We can't make a promise we cannot keep. We have no certainty of wood supply beyond 2023.

We understand that if this wood supply situation forces the NSW power sector to stop using hardwood poles, it will cost tens of millions extra every year to transition to other materials. Wooden poles are versatile and other materials less adaptable to new fittings. Nationwide it's estimated at $100 million extra cost annually.

I want to make it clear that we're only interested in timber harvested from regrowth forests – this means forest that's been harvested before (be it 50, 80 or more years ago) and now the next 'crop', if you like, is mature. NSW only permits selective harvest and it is tightly controlled under world class forest regulations that are widely accepted by industry.

Media hype never stops about "ancient" native forests being "logged" and "destroyed" in NSW. Sometimes it feels like Groundhog Day. But these things aren't true. There is no deforestation from authorised timber harvest. Maintaining healthy growing forests is vital to maintain our pole business and we are fully invested in sustaining forests for production and biodiversity. Koppers is Chain of Custody certified for raw wood products and has a robust chain of custody system in operation to identify all timber we source. Koppers do not accept any illegal timber or controversial timber into our pole supply mix.

Regrowth native forest is the preeminent source of pole supply supplemented by poles from hardwood plantations. State Forest sustainably managed by Forestry Corporation is the largest source of hardwood poles available to the Utility Sector. We can't fool ourselves there's a realistic alternative to a prudent, selective native forest harvesting cycle for many end uses.

Supply from Forestry Corporation of NSW has been under notified *Force Majeure* since Nov 2019 firstly for wildfire losses and in March 2021 for flood damage. The imposition of *Force Majeure* now looks to be a permanent condition of supply under our WSA. Its created great uncertainty for Koppers business and for our customers. We cannot give them any assurance about risk of pole supply.

Security of sustainable hardwood pole supply to meet critical infrastructure needs is critical to the pole industry, Utilities, low cost electricity supply to consumers across Australia, regional employment opportunities and sustaining rural communities. There is an urgent need to extend WSAs for poles immediately and increase the security of supply to rolling 20-year WSAs.

Timber NSW submission to the NSW Legislative Council Inquiry into the long-term sustainability and future of the timber and forest products industry

TERM OF REFERENCE 1(b): the impact of external influences on the timber and forest products industry, including but not limited to drought, water, fire, regulatory structures, habitat protection and local, state and federal policies regarding climate change and plantation establishment

The impacts of external influences on the NSW timber and forest products have been extensive.

DROUGHT & FLOOD

Drought makes existing levels of fuel load even more dangerous and fire-prone. Extended droughts cause tree mortality and reduce forest growth rates, which impacts on sustainable yields.

Forestry Corporation is NSW's second biggest manager of roads. The impact of the NSW 2020 Floods was to add further damage to road and bridge infrastructure on Forestry Corporation land. The floods highlighted the importance of undertaking regular road and trail maintenance. In the absence of this, flood damage can be far greater due to blocked pipes and ineffective drainage.

If Forestry Corporation had not progressively scaled back its maintenance budgets over the past decade, the effects of the 2020 floods would be lessened.

FIRE

Impacts of 2019-20 Bushfires on the Timber & Forest Products Industry

The NSW timber and forest products industry has been more heavily impacted by the 2019/20 Bushfires than any other industry and more than any other state of Australia.

It is only with time, data gathering and analysis that the impacts of the catastrophic 2019-20 Bushfires on the NSW hardwood timber industry will become fully known. Despite initial analyses by the industry and Forestry Corporation, it will be two to three years before the full impacts can be known across different timescales.

However, we submit that the impact of the fires means that 'business as usual' timber production is no longer an option in the short term. Special attention needs to be given to assess the medium and longer-term impacts on sustainable timber supply.

It is essential that the NSW government work with experts and the industry to implement proactive forest management and clear disaster management practices as preventative measures for the future. Imposing heavy environmental measures *after* the fires is the wrong approach at the wrong time. Instead, active and adaptive forest management

across all tenures must continually remove fuel loads from the forest floor while maintaining and staffing appropriately other fire management systems.

An economic, environmental and societal catastrophe of this scale cannot be allowed to happen again.

The Timber Industry has been Heavily Impacted by the Bushfires

The impacts of the fires on the industry have been incurred on multiple fronts and include:

- direct losses of processing facilities
- imposition of heavy additional environmental restrictions on harvesting native forests
- major losses of standing timber resources
- loss of resource security.

These are detailed below. First, we encapsulate the problems faced by the industry by reproducing an article written by Timber NSW member, Steve Dobbyns.

Article: Australian Rural & Regional News

Opinion – Native forests of NSW north coast

15 April 2021

The Editor

Steve Dobbyns, BSc (Forestry), MIFA/AFG, RFP 110, Timber NSW VP & Director, FWCA Director, Jamax Forest Solutions

The native forests of the north coast of NSW are not just the backdrop for an idyllic seaside lifestyle for its 1.7 million residents, they also sustain a hardwood timber industry that has been in existence for more than 150 years.

Of the 6.3 million hectares of forested land on the north coast, more than half is on private property (3.4 M ha) with the balance in public ownership. Of the 3 million hectares of public forest, 90% is already in conservation reserves and only 10% is available for timber harvesting. The reserve system on the north coast is already comprehensive, adequate and representative and already exceeds the International Union for Conservation of Nature protected area threshold target of 15% by a further 10%.

The hardwood timber industry on the NSW north coast supports over 3000 jobs and produces around 75% of the State's high quality hardwood logs, such as high-quality sawlogs for floorboards, decking and structural beams, and poles, piles, girders and veneer logs.
The Government's forest grower, Forestry Corporation of NSW is the principal supplier of high-quality hardwood logs in NSW, accounting for around 60% of all supply, with Boral the largest buyer of FCNSW high quality hardwood sawlogs. Eleven other companies share the remaining 30% of FCNSW's high quality sawlogs production, but these mills account for the largest share of hardwood log supply from private property.

Despite research indicating that there is "more than enough residues in the North Coast's sustainably managed forests and sawmills to power more than 200,000 local homes per year", produce biofuels and high-value chemicals, almost half a decade later there is still only limited opportunities to remove material that would otherwise rot and emit greenhouse gases or provide fuel for the next wildfire from the forest.

The 2019/20 Black Summer bushfires have emerged as a tipping point for the hardwood timber industry on the NSW north coast. Over 50% of the area of public State forests available for timber harvesting on the north coast was impacted by fire during the Black Summer. A similar proportion of Private Native Forestry properties were also impacted.

The hardwood timber industry on the NSW north coast has been concerned about inequity in log supply from the public estate for many years. Following the 2019/20 Black Summer bushfires, log supply has been extremely restricted and largely confined to plantation operations.

The NSW forest regulator, NSW EPA, and FCNSW have been in ongoing block-by-block negotiations over access to burnt compartments due to the regulator's perceived concerns over salvage harvesting. The regulator has also resisted FCNSW's attempts to access unburnt compartments due to their view that these areas are required as undisturbed refugia for wildlife following the fires.

Many of the major Black Summer fires originated from lightning strikes in remote areas of National Parks and conservation areas, where they were allowed to continue to burn for weeks and months in relatively benign conditions, until they emerged on a blow-up day on multiple fronts. Ironically, rather than focus attention on the failed lock-it-up-and-leave-it or wilderness strategy employed by conservation managers or the landscape adoption of cool burning similar to Indigenous practitioners over the past 60,000 years, there has been an increasing call to lock up more multiple use, proactively managed, production forests and condemn these forests and their inhabitants, particularly the koala, to a similar fate.

Direct Losses of Processing Facilities

The businesses of forest growers, contractors and processors, of all types, public and private, large and small, have been heavily impacted by the fires. There has been anxiety and distress due to the unprecedented state of operational and financial uncertainty. Ramifications are severe across the industry.

The impacts have been most immediately felt by those who have had forests or plant and equipment destroyed, followed by contractors and processors - whose livelihoods, and those of their employees, depend upon access to resources no longer available.

Processing facilities were burnt with the Eden woodchip mill owned by Allied Natural Wood Exports, one of several that suffered direct fire damage. At the chip mill, about 75,000 tonnes of woodchips were lost in the blaze, along with 4,000 tonnes of hardwood logs, conveyors and a workshop filled with spare parts and tools.

The Tarmac Sawmilling Company in Rappville on the North Coast also suffered extensive damage from the Busbys Flat fire on 8 October 2019, and two other, small hardwood mills in Rappville also suffered significant fire damage. Another sawmill, Porters in Forbes River, was completely destroyed by fire.

Further downstream, major flow-on effects were triggered when the fires prevented access to the forest. Harvesting and haulage contractors, sawmills and value adding plants and timber traders have been impacted. These firms provide thousands of regional

jobs. In the supply chain there are thousands of more jobs in manufacturing, transport, wholesale retail and construction which all depend on ongoing forestry supply.

Disaster Management Chaos & Heavy Additional Environmental Restrictions
It is important to make clear in this submission how badly the timber industry was failed by the disaster management efforts of the NSW government during and immediately after the fires.

The roles and priorities of the different organisations in responding to the fires and their aftermath were completely confused. The NSW government was ill-prepared for the fires and unable to deal with them on a number of levels, both during and after the fires.

Lack of Interagency Coordination:

- *During the Fires*: From September 2019 to February 2020, as a fire front approached arguments between agencies arose about who would be in control of the fire. As fire raced towards houses and farming/plantation land, arguments raged between agencies about who controlled the fire and how long it would take to gain a permit (which takes two days) to put in a firebreak. As fire raced down and burnt houses, agencies were still arguing about control and threatening anyone who took immediate and decisive action to prevent the fire from gaining ground.
- *After the Fires*:
    - *Role of the EPA*: Despite only one per cent (1%) of the NSW public forest estate being allocated for native timber harvesting each year, the EPA prevented any harvesting in unburnt forest and made harvesting in burnt forest economically unviable due to extreme regulation. This halted the remaining supply of timber to the native forest industry, which was guaranteed by Wood Supply Agreements.
    - *Role of Forestry Corporation*: Four months after the fires there was no tangible progress in quantifying the impacts and the long-term effect on timber resources. Instead, the efforts of Forestry Corporation were directed to addressing the heavy environmental demands of the EPA. As an example, in June 2020, Forestry Corporation released *2019–20 Wildfires Environmental impacts and implications for timber harvesting in NSW State forests*, but it wasn't until April 2021 that Forestry Corporation released *2019–20 Wildfires NSW Coastal Hardwood Forests Sustainable Yield Review* (although December 2020).

Major Losses of Standing Timber Resources
In terms of native timber, there are two sources in NSW: from State Forests and from Private Native Forests.

State Forests
Since the 2019-20 Bushfires, Forestry Corporation has reported on the environmental and timber resource impacts in two different reports.

In June 2020, Forestry Corporation released *2019–20 Wildfires Environmental impacts and implications for timber harvesting in NSW State forests*.

In essence, this report found that the significant environmental protection measures already in place and the small amount of the forest estate allocated to forestry meant that only a few further short-term environmental protections were necessary post-fires.

In relation to fauna it found that:

"*Over the next five years of proposed harvesting, 99 percent of the public forest would not be subject to harvesting and approximately one per cent might be harvested. The potential for significant impact on any of species over the next five years from timber harvesting operations assessed is low as most preferred habitat is not available for harvest, and only a small proportion of that available will be harvested in the coming five years and robust protections, including additional clumps, will be in place to mitigate impacts*."

Of course, the fires did not discriminate between the different tenure types in NSW:

All public forest tenure classifications within the RFA regions:
Fire impacts on public forest by tenure type

Tenure type	Unburnt	Burnt	Total
National Park & nature reserve	1,439,634	2,048,959	3,488,593
Native State Forest	423,482	774,350	1,197,832
Softwood plantation	14,904	10,224	25,128
Hardwood plantation	13,304	4,957	18,261
Leasehold land	120,537	33,099	153,636
Vacant Crown Land	143,690	58,220	201,910
Other public forest types	94,423	117,824	212,247

Notably, this report considered that fuel management operations were essential across tenure types:

"*However, future fuel management operations should be conducted to avoid further burning within rainforest communities and also reduce fuel loads in the landscape generally, and adjoining rainforest communities specifically, to reduce the risk of future wildfires having such a large impact on those communities*."

In April 2021 Forest Corp released *2019–20 Wildfires NSW Coastal Hardwood Forests Sustainable Yield Review* (dated December 2020), providing modelling and analysis of the impact of the 2019/20 NSW bushfires on growing stock and sustainable yields have been impacted to some degree across all RFA regions.

In essence, this report found that the impact of the bushfires was to reduce the supply of timber available under the Wood Supply Agreements over the next 10 years, particularly in the Southern regions of NSW. All considered, around 60 per cent of the areas zoned for timber production in the NSW native forest estate were affected by the 2019-20 Bushfires.

Overview of fire impact on short-term (10 year) wood supply for NSW RFA regions

Annualised sustained yield for first three reporting periods			
RFA region	Year range	High-quality logs (m3)	Modelled Reduction due to fire Impacts %
North East	2020 – 2031	230,000	4%
Eden	2020 – 2034	22,700	13%
South Coast	2020 – 2034	35,000	30%
Tumut	2020 – 2034	25,800	27%

Private Native Forests
Anecdotal evidence suggests that on private land around a third of all private native forests with an approved plan were burnt.

Lack of Resource Security
Northern and Southern NSW feature amongst the greatest amount of forest per capita in the world. The State's forests are concentrated in regions where most people live. Sydney is surrounded by native forest on three sides, while in the north east region 60 per cent of the land has forest cover.

The production of timber is a major industry for Australia, as the sixth most forested nation on earth. The demand for timber has never been higher and yet each year Australia runs a $2billion net timber deficit.

Timber is a resource that must be actively managed, like any other. The industry has been penalized by the government's lack of a proactive approach and forward planning for bushfires to protect the resource. Given the timescales of the industry, the impacts of this negligence will be felt for many generations.

In the wake of yet further catastrophic fires, it is incumbent upon the state and federal government governments to work with the timber industry to ensure resource security for the industry over the long term. An essential part of this is preventing further bushfire damage to the resource in future as far as possible and taking steps to reduce the impact of any wildfires should they occur.

How to Prevent/Minimise the Impacts of Further Catastrophic Bushfires

Prevention and damage minimisation of future fires relies upon understanding what causes bushfires and what contributes to the scope and scale of the impacts of bushfires.

Causes of the 2019-20 Bushfires
Australia is world renowned for its bushfires. However, prior to the summer of 2019/20, few Australians had any direct experience of wildfires and fewer still had an opinion on policy and practice.

Historically, large bushfires in NSW have mostly occurred in remote National Parks and had limited or no impact on people's day to day lives. There has been general understanding that bushfires can impact on life and property but not until the 2019/20 fires occurred was the level of that impact really appreciated.

Recently, eminent scientists published an article concerning the causes of the fires. The abstract of that article is reproduced below.

The 2019–20 wildfires in eastern Australia presented a globally important opportunity to evaluate the respective roles of climatic drivers and natural and anthropogenic disturbances in causing high-severity fires. Here, we show the overwhelming dominance of fire weather in causing complete scorch or consumption of forest canopies in natural and plantation forests in three regions across the geographic range of these fires. Sampling 32% (2.35 Mha) of the area burnt we found that >44% of the native forests suffered severe canopy damage.

Past logging and wildfire disturbance in natural forests had a very low effect on severe canopy damage, reflecting the limited extent logged in the last 25 years (4.5% in eastern Victoria, 5.3% in southern New South Wales (NSW) and 7.8% in northern NSW). The most important variables determining severe canopy damage were broad spatial factors (mostly topographic) followed by fire weather. Timber plantations affected by fire were concentrated in NSW and 26% were burnt by the fires and >70% of the NSW plantations suffered severe canopy damage showing that this intensive means of wood production is extremely vulnerable to wildfire.

***The massive geographic scale and severity of these Australian fires is best explained by extrinsic factors: an historically anomalous drought coupled with strong, hot dry westerly winds that caused uninterrupted, and often dangerous, fire weather over the entire fire season**.*

Source: Bowman D et al (2021) *The severity and extent of the Australia 2019–20 Eucalyptus forest fires are not the legacy of forest management* (Nature Ecology & Evolution) https://doi.org/10.1038/s41559-021-01464-6

The message to be taken from these findings is that while we cannot control weather patterns and broader climate conditions, we can proactively take steps to manage forests to prevent wildfires of the scope and scale seen in 2019-20. Where prevention is impossible, we can work to reduce the catastrophic impacts of bushfires to all forest values (social, environmental and economic) and all forest tenures.

What Contributed to the Scope & Scale of the 2019-20 Bushfires?

While experts are clear that drought and weather conditions combined to create the fires, there are a number of further likely contributors to the 2019-20 Bushfires, as detailed below.

The Declining Role of Forestry Corporation in Forest Management

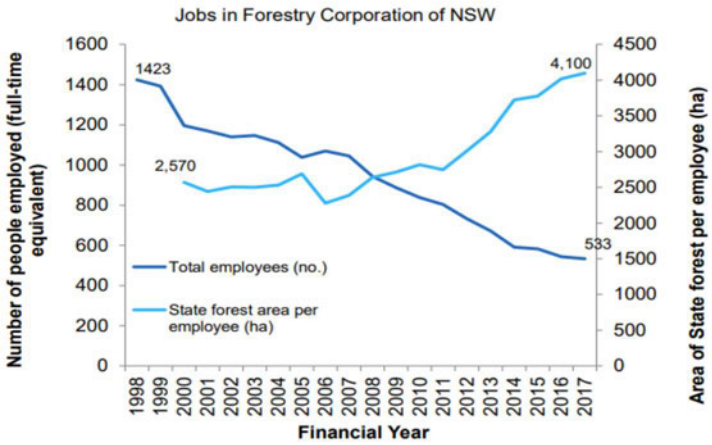
In the past State Forests (now called Forestry Corporation) had an exceptionally good fire management record. Until the early 1990s the agency employed large groups of forestry field workers to undertake controlled burning, suppress wildfires and to maintain an extensive road and fire trail network, with highly experienced field supervisors to oversee them.

The 1990s saw the transfer of more than half of all State Forests to National Parks. Accordingly, reduced timber production reduced the budgets available to employ field workers and access heavy equipment. Districts closed and management consolidated into regional centres.

For several decades, Forestry Corporation was able to maintain its good fire record, benefitting from previous infrastructure and investment. However, when the agency corporatized in 2013 its capacity and willingness to undertake active fire management

further declined. Over the course of the last eight years a key goal of the agency has been to make its native hardwood division cost neutral. This has seen a deliberate reduction of its operating expenditure.

The principal target of the cost cutting has been forestry field workers. Since 2012 the area of State forest per employee has gone from c. 2,800 hectares per employee to over 4,000 hectares, as below.



Changes in number of State forest employees / State forest area per employee (1998-2017). (Source: DPI (2018) Assessment of matters pertaining to renewal of NSW Regional Forest Agreements)

The greater coverage means that field employees are now located further from the forests and spend more time travelling. This naturally translates to less time for prescribed burning. The amount of prescribed burning is the lowest it has ever been in the organisation's 100+ year history.

Expenditure on the maintenance of roads and trails and controlled burning has also been systematically reduced. The length of trafficable fire trails in State Forests is now far less than previous years.

Amongst the current senior management team there is extraordinarily little on ground practical fire management experience. Until the 2019/20 fires it was not seen as a priority. The perceived need for foresters at Forestry Corporation has also waned, with senior management removing the requirement to have a professional forestry qualification (which includes training in fire science) in most of its key management positions.

The Approach to Forest Management by NSW National Parks

It is important to note that natural disasters, pest, weeds etc. do not distinguish between the 'tenure type' of the forest. This can mean that due to different forest management regimes, certain tenure types become uniquely vulnerable, placing adjoining tenures in jeopardy as well.

The National Parks & Wildlife Service (NPWS) oversees large areas of land in NSW. There are over two million hectares of declared wilderness (i.e. National Park) in NSW, representing about 2.6 per cent of the State and 30 per cent of all reserves (OEH Annual Report 2018-19).

The Wilderness Act 1987

The approach to National Park forest management is in accordance with policies which essentially take a '*terra nullius'* view of the landscape.

The misleading theory behind wilderness is that these forests are in an essentially unmodified state due to limited human intervention. Unfortunately, the Wilderness Act does not acknowledge or consider the implications of thousands of years of Aboriginal cultural burning.

Under section 9 of the Wilderness Act 1987, wilderness areas are managed according to the following management principles:

- to restore (if applicable) and to protect the unmodified state of the area and its plant and animal communities;
- to preserve the capacity of the area to evolve in the absence of significant human interference; and
- to provide opportunities for solitude and appropriate self-reliant recreation.

In total, the 2019-20 wildfires burnt 5.3 million hectares of land, 4.1 million hectares of which was forest. In NSW, the biggest wildfires in the summer of 2019/20 started in National Parks (e.g. Wallangarra, Bee's Nest, Long Gully, Carrai Creek, Gospers Mountain, Currowan, Dunns Creek).

Virtually all the major wildfires that contributed to the total began in national parks that had not been the subject of prescribed burning.

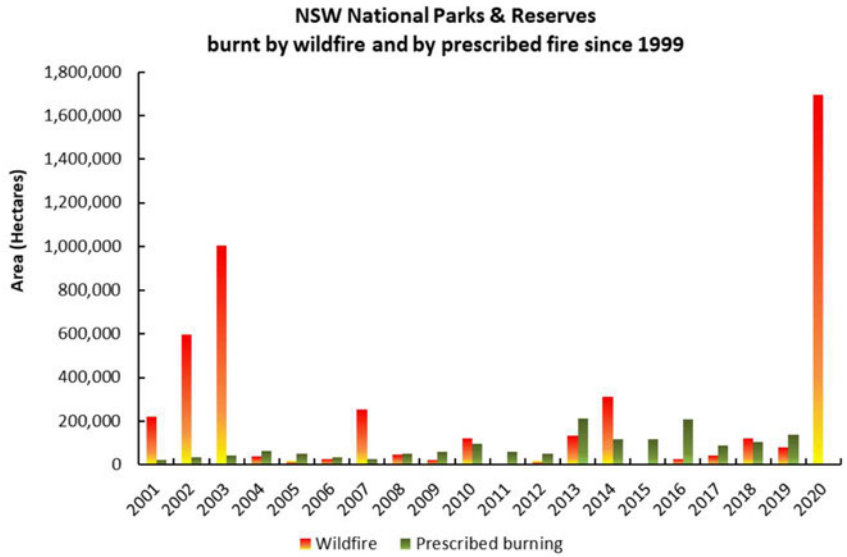
A 'terra nullius' view of forests reserved as National Park means that wildfires rather than prescribed burning are viewed as the norm. Wildfires in National Parks are essentially treated by the NPWS as 'natural events'. Provided they are located well within a Park's boundary, they are routinely allowed to run their course.

This is a perverse misreading of the role of Indigenous Australians in using prescribed fires – not wildfires – to manage the forest estate. What many Australians are unaware of is that fire is critical for eucalypt forest regeneration and is also needed to maintain eucalypt forest health, particularly in dry and semi-moist sclerophyll forests which are adapted to more frequent lower intensity fire.

Modern Australia is dismissive of the importance of Aboriginal fire management practice. Aborigines who arrived in Australia 65,000 year ago were the world's greatest fire practitioners. Aborigines had a deep cultural connection with fire and used it successfully to maintain safe and healthy forest landscapes.

Aborigines understood how to use fire to manage their environment to their advantage. They did this through frequent and widespread use. Current NSW fire policies do not understand the intentional nature of Aboriginal burning practices.

What NPWS do not publicly acknowledge or declare is the relationship between prescribed fire and wildfire and the differing environmental impacts that they have. NPWS do very little prescribed burning and, as below, the result is infrequent but very large wildfires.



Area of forest burnt by wildfires and by prescribed fire on National Parks & Reserves

This lack of active management was further compounded by how NPWS responded to the fires, which had a major bearing on the catastrophic outcome.

The Gospers Mountain fire started in the Wollomi National Park which is a declared Wilderness area. Most of this Park is not subject to controlled burning and when the fire started it burnt for days before a serious attempt at suppression was mounted. By the time this occurred it was too late. The fire rapidly developed and went on to become the largest megafire (512,000ha) in the State's recorded history.

The detrimental impact of this 'preventable' megafire on wildlife and biodiversity is a national disgrace. It is also an indictment on the NPWS, whose primary role is to protect wildlife.

Where the Gospers Mountain fire started is less than 70km from Richmond RAAF base, where RFS water bombers are stationed. If an aerial water bomber had been promptly dispatched from Richmond, Gospers Mountain fire could have been extinguished more quickly. Yet the RFS could not act without the consent of the NPWS. It is assumed that this consent was not forthcoming because it was not until a week or more later, once the fire was officially declared an emergency, that the RFS became seriously involved.

The Hunter Valley features another declared wilderness area known as the Barringtons. This area covers 58,000 hectares of the Mount Royal and Barrington Tops National Parks. It includes large tracts of tall eucalypt forest in rugged terrain. Like the Wollemi National Park, these forests had not been subject to any NPWS prescribed burning. As a result, the area had accumulated very heavy fuel loads.

Another consequence of the lack of active management by NPWS was that most of the area's roads and trails were washed out and non-trafficable to fire fighters. Like the track erosion, feral animals and weeds have been allowed to run unchecked within this wilderness area.

In December 2019 two wildfires arose on the western side of the declared wilderness. NPWS allowed the fires to burn for several weeks before any concerted suppression

effort was attempted. Over the course of weeks, the fires grew, joined and ran up onto the Barrington Tops.

Once on top, the blaze was primed to burn out the entire Barrington Tops National Park. At this point, with an incredible stroke of luck, six inches of rain extinguished the blaze. Had this not occurred the impact on the World Heritage listed Gondwana Rainforests would have been catastrophic.

The Lack of Fire Hazard Reduction

Climate change is contributing to longer, more severe droughts, and higher temperatures, leading to longer bushfire seasons and thus shorter windows for hazard reduction burns. This makes it even more essential to deploy more resources, increase fuel load reduction and manage our forests intelligently.

In strategic areas, mechanical biomass removal must be conducted in conjunction with fuel reduction burns to reduce understory and dense forest regrowth and the intensity of wildfires that may occur close to communities and assets.

"In terms of rate of spread, the important fuel factors are those that affect the flame length and the rate of ignition. These include fuel fineness, the bulk density of the fuel bed which is a combination of the total fuel load and the height of the fuel bed the continuity or spacing of fuels, particularly if they are clumped as are many natural fuels, and the fraction of dead and green material within the fuel bed."
(Dr Phil Cheney, Former CSIRO bushfire scientist, Joint Select Committee on Bushfire, 10 December 2002)

"Thinning to reduce fire risk is intended to slow the rate fire spreads, lower flame heights and improve recovery after wildfire hits. This was shown in a 2016 extensive review of US research, which found thinning and prescribed burning helped reduce fire severity, tree mortality and crown scorch."
(Professor Rod Keenan, University of Melbourne, The Conversation, 20 January 2020)

"There's obviously been a change in the logging industry. The bush is not being logged to the same extent it was … There's been a change in the amount of fuel ... more fuel levels and a changing climate and changing weather on top of that. These are things our values have demanded, but it has created the situation we are in now."
(Former Victorian Emergency Management Commissioner Craig Lapsley, The Age, 6 January 2020)

"Sensible logging [is needed] to enable access to forests in fire. The carbon removed (timber) can be stored in dwelling construction. And, along with fuel reduction, we then have a better chance to control the fires and protect species and assets."
(Robert Gottliebsen, Economist, The Australian, 13 January 2020)

"Fires are a landscape problem. They are not a problem resulting from insufficient or inadequate means of suppression but from fuel continuity, [and] accumulation of fuels from vegetation… The solution is resilient landscapes that balance the hazards, reduce risk and can be established and sustained."
(Peter Moore, Fire Management Specialist, FAO, Financial Review, 5 January 2020)

How Do Prescribed Burning & Mechanical Thinning Work*?*

Research has found that in the eucalypt forests of south-eastern Australia, an annual fuel reduction program of five per cent of the landscape could reduce the extent of bushfires

by as much as 50 per cent (L. McCaw, 2013). As below, this can be done by a combination of prescribed fire and by mechanical thinning.

Prescribed Fire
The use of prescribed fire as a forest management technique has long been contested. Aboriginals, foresters and farmers alike have all been calling for a more proactive approach to prescribed burning for many decades.

However, bushfire risk in Australia can be significantly reduced through a far more proactive approach of targeted reduction of understory and dense forest regrowth around strategically important assets such as power sub-stations, telecommunications towers, water catchments and timber plantations.

Federal, state and local governments must work more closely with rural communities to create buffers within a 5km radius of at-risk towns and strategic assets. This will reduce fuel loads and improve access for firefighters, which in turn will reduce the risk of bushfires developing and engulfing towns and important rural assets.

Mechanical Thinning
Mechanical fuel reduction is the removal by contractors of fuel loads from the forest floor. It is a widely accepted bushfire mitigation tool in other fire-prone nations. However despite its proven efficacy, it is underutilised in Australia.

After a bushfire, forestry contractors are deployed for the vital job of removing burnt and dangerous trees, particularly around roads. This is a very specialised task that requires equipment unique to the forestry industry and years of training. **Yet this activity was expressly prohibited following the 2019-20 Bushfires.**

Working in Combination
A Deloitte Access Economics analysis found the economic benefits of removing fuel from the bush, in combination with fuel reduction burning, could dramatically reduce the damage caused by bushfires and massively outweigh the costs.

Biomass removal and fuel reduction burning must be ongoing to prevent the undergrowth regenerating within a short number of seasons and should be combined with more aggressive fire break construction.

The more traditional fuel reduction burning should also continue to be employed, as fire is vital to remove the finer fuels on the forest floor, reducing the risk of ignition and fire spread.

The strategic use of hazard reduction burns and mechanical fuel reduction is consistent with how Indigenous Australians managed the land for tens of thousands of years. They used ‘fire-stick farming’ to burn off excess fuel loads during cooler weather, preventing intense forest fires and promoting forest regeneration.

The combination of mechanical and fire-based fuel load reduction can be applied around NSW regional towns and rural villages to create a manageable ‘buffer zone’, making it easier for communities to create fire breaks and defend their towns.

In the event that prescribed burns are more challenging and costly closer to homes, due to smoke and the risk of fires getting out of control, then deploying machinery to reduce fuel loads around communities should be employed as a more appropriate and cost-effective option.

A Persistent Refusal to Undertake Appropriate Fuel Reduction

Fuel Reduction Recommendations by Bushfire Inquiries Are Repeatedly Ignored
Where bushfires have impacted on life and property there have been official inquiries and inquests. In total Australia has had over 50. However the tragedy is that these have not led to any tangible shift in the minimalist and reactive approach to fire management taken by the NSW government.

Across dozens of inquiries after major bushfires in Australia, each has identified fuel load as a significant contributing factor and recommended that more be done to address this fuel build-up in our forests.

Their views, however, have carried little weight in the political arena, particularly when pitted against advocates of minimalist intervention. Our national response has been to do less burning off and limited mechanical fuel removal, even though this method can be done year-round and avoids exposure to smoke.

Examples of where much was said, but nothing changed, include the 2003 Canberra fires which started in the Brindabella National Park and the 2013 fires which began in the Blue Mountains and Warrumbungle National Parks. Both inquiries and inquests revealed the shortcomings of passive fire management practices but did not result in any major change in practice.

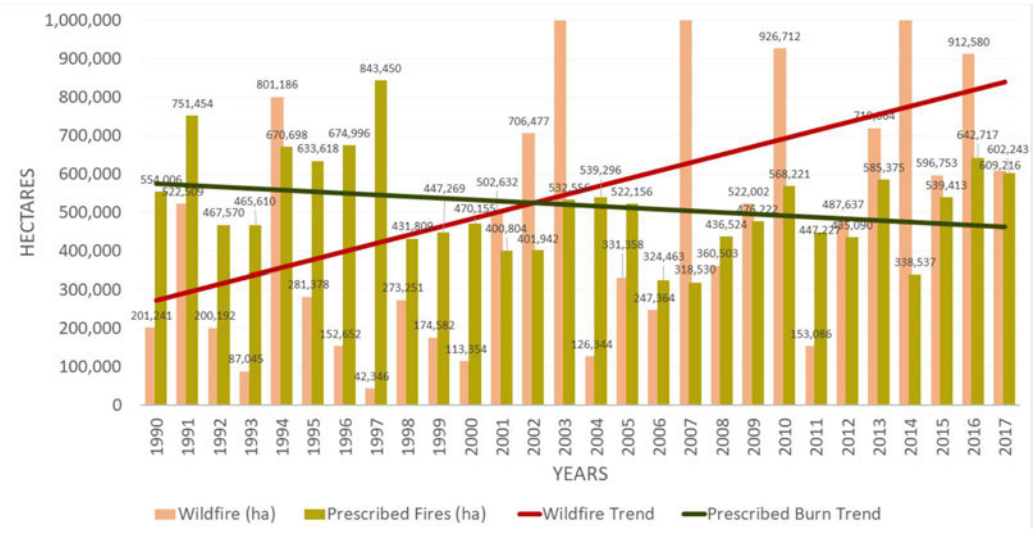
The NSW Government's response to the Coronial Inquest and Parliamentary Inquiry into the 2013 Wambelong fire was made public in 2016. There were 23 recommendations arising from the Inquest with 13 'supported' and 10 'supported in part'. The Parliamentary Inquiry made 29 recommendations, with only 8 'supported', 12 'supported in part', 6 'not supported', 2 'completed' and one 'noted'.

If one were to summarise the Government's responses to the recommendations, 'minimalist' and 'non-committal' would be appropriate words to use.

The first recommendation of the Parliamentary Inquiry into the 2013 Wambelong fire (and of the other 50-odd inquiries around Australia for similar events since 1967) was that the government commit to a long-term program of prescribed burning.

Fuel Load Management Has Been Minimalist and Reactive
As the rate of prescribed burning has declined over the past 30 years, the area of native forest in Australia burnt through bushfires has increased significantly.

State governments are failing to meet their own annual hazard reduction burn targets, pointing to the need for additional means of removing fuel loads from our forests.



Over the last 15 years the average area of NSW forest (public and private) that has been fuel hazard reduced is only 167,000 hectares per year. As a percentage of the NSW forest estate this equates to less than one per cent (1%). Most of this burning has occurred in narrow strips around the perimeter of the estate, called asset protection zones. This means that most of our native forests go for decades without fire and then inevitably become subject to catastrophic wildfire.

The Forest Industry Advisory Council, a statutory advisory body to the Federal Government, recommended in its 2016 report *Transforming Australia's Forest Products Industry* that the Federal government commit to a $300 million, ten year programme of mechanical fuel reduction as a bushfire mitigation measure.

In 2016 the Government's response was that it supports the principles of increased hazard reduction but was unwilling to commit to the recommended five-year annual rolling target of five per cent for public land. Since 2016 there has been no appreciable change in the amount of hazard reduction undertaken on public land, with the average for the last three years being less than 1.6 per cent.

The political debate about prescribed burning has been polarised into an overly simplistic debate about the merits of hazard reduction burning and its effectiveness on moderating wildfire. There has been little debate about the importance of prescribed burning for ecosystem health.

The Preference for Disaster Management Over Forest Management
Timber NSW submits that an obsession with 'last stand' emergency response has been at the expense of been appropriate active and adaptive forest management across tenures. The NSW government has ignored preventative measures, instead funding firefighting efforts that are increasingly unable to stop catastrophic fires. The result is environmental, social and economic devastation.

In NSW resources and funds made available for hazard reduction have been tightly constrained and when compared to funds made available for emergency response, they pale into insignificance.

In NSW, the main recipient of bushfire funding is the Rural Fire Service (RFS). The RFS has recently publicly acknowledged that it is better resourced now than it has ever been.

In FY2019 its expenses exceeded $550 million. Emergency expenditure in FY2020 may double this.

Despite having an enormous budget, nearly 1,000 FTE staff and over 70,000 volunteers, the RFS has averaged less than 25,000 hectares of fuel hazard reduction per year over the past 15 years.

The RFS' focus is on saving life and property along the peri-urban interface. In effect this means that it mostly acts as a 'last line' of defence after an emergency has been declared. The organisation is heavily dependent on its volunteers, who have a mix of experience and expertise. During the 2019/20 fires the people of NSW became entirely reliant upon these volunteers to undertake what was an impossible task.

In analysis of the 2019/20 fires, the RFS admitted that it was never going to be able to provide protection for everyone. What it did not admit was that, for the last 20 years it has been at the helm of how public money was being spent on bushfire mitigation.

To understand how the NSW Government allowed its citizens to become so reliant on the RFS and to end up in such a vulnerable position, it is necessary to touch on the organisation's history and how it emerged from more humble decentralised beginnings.

The Evolution of the RFS: Cure not Prevention

Those who founded the modern day RFS were not qualified professionals but were a group of influential volunteers. Since 1997 (when the Rural Fires Act came into force) the RFS has grown exponentially in size and power.

The rapid growth of the RFS may be attributed to the organisation's early realisation of the value of positive media. With popularity came more funding and with more funding came power and influence. However, the RFS' growth came at the expense of the professional forest-based fire management agencies.

The RFS have always staunchly defended their emergency response model arguing that state of the art emergency management systems and centralised control are essential for a State that has so much fire prone forests.

With limited knowledge the decision making in Incident Control Centres is naturally conservative and slow to react. Yet in a wildfire emergency the ability to make timely decisions is critical and will often determine whether civilian life and property is saved or not.

In the 2019/20 fires there were countless examples where the on-ground crews knew what needed to be done to save life and property but were instructed to wait for further instructions or to stay put on the sideline.

One notable example occurred on the day that the Currowan fire engulfed Batemans Bay. In this case members of the Nelligan Brigade with many decades of experience resigned from the RFS in disgust simply because they were unable to obtain the authority to act. As dozens of RFS crews waited on the sideline in Batemans Bay, private individuals with home-made fire-fighting units went about saving dozens of properties, pets and most importantly some human lives. The message arising from this is that in the event of a wildfire emergency you cannot rely upon public authorities.

Giving more decision-making authority to local volunteers operating at the fire front was a recommendation (no.18) of the Parliamentary Inquiry into the Wambelong Fire and a recurring theme in the 2019/20 fires. Unfortunately, this recommendation was not supported by the NSW Government.

Timber NSW submits that this decision must be reviewed.

Conclusions & Recommendations

- *NSW Forests are Undermanaged*: In essence, the NSW forest estate was tragically undermanaged, contributing to the scope and scale of the catastrophe.
- *Reform Forest Management & Disaster Management*: It is essential that the NSW government work with experts and the industry to implement proactive forest management and clear disaster management programs as preventative measures for the future.
- Imposing heavy environmental measures *after* the fires is the wrong approach at the wrong time. Instead, active and adaptive forest management across all tenures must continually remove fuel loads from the forest floor while maintaining and staffing appropriately other fire management systems.
- *Remove Forest Fuel Loads*: Over the long term, there must be a NSW government commitment to serious fuel load management. Currently neither NPWS nor FCNSW has an enviable record in this matter, despite public claims of "meeting their reduction targets". The truth is that these targets are way below the recommended fuel reduction calculations made in the Royal Commission after the Black Saturday Bushfires in Victoria.
- *Traditional Burning*: Encourage indigenous cool burning practises and management to be introduced on a broad scale on crown lands.
- *Plantations are Vulnerable*: Special preventative precautions are needed for plantations, which are uniquely vulnerable to wildfire
- *Salvage for Infrastructure Replacement and Utilisation*: access to material suitable for the replacement of poles, fencing and bridge girders is paramount so salvage operations need to be fast tracked. Series of crisis salvage harvesting measures of fire-impacted areas recommended by Timber NSW on behalf of the industry were largely ignored.
  Industry Assistance: Without immediate intervention the bushfire disaster will cause a major economic contraction in the many regions where the timber industry has a major socio-economic impact. The industry received no greater crisis support than any other business in NSW. Industry participants have been ineligible for early recovery funding.
- *Finance and Cash Flow*: many businesses have significant financial obligations to service. The interruption to supply will affect cash-flow and quickly tip many small, medium and larger businesses into financial difficulty, and ultimately rapid shut-down. With business revenue hit, many will have no choice but to cut costs hard to maintain viability or simply to survive.
- *Redundancies and Lay-offs*: Businesses are reviewing staff levels and redundancies are already underway. This will mean increased regional unemployment and loss of skills and expertise.

- *Business Insurance*: A further complication arising is the prospect of insurance coverage being removed. Already a number of large insurance companies have indicated they will no longer provide insurance coverage to timber processors and contractors. This jeopardises finance, operation and staffing in this sector.

REGULATORY STRUCTURES
This submission covers issues relating to regulatory structures elsewhere in the response to Term 1(f) Role of Government.

HABITAT PROTECTION
Why the Creation of the Great Koala National Park (GKNP) is a Bad Idea
What exactly is proposed?
A Great Koala National Park (GKNP) was proposed as one of the NSW Labor Party's 2019 election commitments. Although the commitment did not define the geographical boundaries, the National Parks Association proposes to add 175,000ha (equating to around 10 per cent of NSW's managed native forests) of NSW State Forests to existing protected areas, to form a 315,000ha reserve around Coffs Harbour. The proposal would continue a NSW government practice from the last two decades of converting NSW timber production forests into permanent reserves and national parks.

Notably, this proposal is exactly what the findings of the NSW government's 2013 Inquiry into the Management of Public Land in NSW recommended against.

Impact of creating the GKNP on the NSW Timber Industry
The hardwood forestry industry is a major industry in the NSW North Coast region and has been operating for over 100 years. The creation of a GKNP would be catastrophic for the NSW hardwood timber industry and is neither necessary for, nor effective to, protect koala species in NSW.

Impact on Hardwood Supply from State Forests
Hardwood timber from State Forests is supplied in accordance with long term Wood Supply Agreements (WSAs). If State Forests are converted into National Parks, then these WSAs would need to be cancelled.

In 2019 Ernst & Young was commissioned by the industry to identify the annual economic impact of the cancellation of the WSAs that would result from the cessation of the supply of harvestable hardwood from one of Australia's key sources of hardwood logs.

The remaining term of these WSAs is limited, as most WSAs end in 2023. However, the analysis can be used to indicate the likely ongoing losses to the region over the long term from what is effectively a policy to terminate the hardwood timber industry on the NSW North Coast.

The EY Report found that the cancellation of the WSAs would:
- result in the loss of 415,000m3 of harvested hardwood timber every year.
- reduce a significant proportion (50 per cent) of NSW's hardwood supply.

- reduce supplies of a substantial amount of Australia's Blackbutt/flooded gum and spotted gum timber species.
- result in the cessation of Forestry Corporation's native hardwood harvesting operations on the North Coast of NSW.
- would likely lead to industry rationalization. ASX listed company Boral, the largest participant in this market, has stated that if their WSA is cancelled they would cease their hardwood business across Australia.

On the basis of the impact of cancelled WSAs for the North Coast region, Ernst & Young estimate the following annual losses across NSW, most of which accrue in the North Coast region:

- Loss of economic output per annum $757M
- Loss of $292M in value adding to hardwood timber
- Loss of support for 1,871 jobs

Given that the current WSAs end in 2023, the creation of the GKNP would preclude the creation of new WSAs for the North Coast region and effectively end native hardwood production in the region.

In light of the growing Australian demand for forest products, which is expected to increase by 43 per cent by 2040, this loss of harvestable hardwood will affect supply chains across Australia.

Recommendation

- It is understood that the NSW Government wants to be seen to be 'saving' the koala. If implemented (as proposed by the NSW National Parks Association) a GKNP would not only remove forests that are crucial to the State's domestic timber supply, it would also fundamentally damage the economics of harvesting native timber on the NSW north coast. As such, it would likely trigger a collapse of the broader industry that relies upon supply from the target area.
- There must be a moratorium on future conversion of State forests to National Parks within RFA regions, as supported by the 2013 NSW Public Land Management in NSW Inquiry.

CLIMATE CHANGE POLICIES

Forests have always been an important part of the global carbon cycle, playing multiple roles in climate regulation. In the 21st century, these roles must be integrated within the emerging carbon economy. In Australia this is not currently the case. Timber is much more than a commodity. NSW's forests and wood product industries contribute to long term carbon emissions abatement in numerous ways.

Industry and government must work together to ensure that policy recognises and supports the role that the industry can play in climate change mitigation and energy substitution. The forest estate in NSW can and should be managed to deliver a full range of public policy outcomes. A wider perspective is key.

Five Ways Timber Reduces Carbon Emissions

6. Carbon sequestration in growing forests
7. A renewable substitute for emissions-intensive building materials like steel, aluminium and concrete
8. Bioenergy from wood waste replaces carbon-intensive fossil fuels such as coal, oil and gas
9. Long term carbon storage in wood products
10. Recyclable timber products extend carbon storage benefits.

As one of the world's highest carbon emitters, Australia also has a strong and growing need to develop markets for carbon abatement and renewable energy sources like wood waste.

Critical to the future of the timber industry is expanding these new carbon economy markets and attracting long term investment. Yet the timber industry faces obstacles accessing the Carbon Farming Initiative and Renewable Energy Target Scheme that drive Australia's carbon economy.

There are exciting opportunities ahead, but current policy settings and high sovereign risk are preventing the industry from reaching its potential. The role of government is critical.

Timber NSW seeks:

- Solid Policy Framework: A solid, supportive policy framework that recognises the broader role of the timber industry in the 21st century.
- Reduced Sovereign Risk: Cogent, stable regulation as a platform from which to attract ongoing industry investment and create jobs.
- Level Playing Field: Recognition of timber in the carbon economy alongside solar, wind and other renewable energy solutions.

Case Study: Carbon Credits in Tree Farming
Tree growers need clarity around the various policy mechanisms for carbon sequestration payments.

Findings: The Melbourne University/FWPA/Industry study found that for landowners, receiving additional financial benefits such as tax concessions or carbon credits can increase willingness to consider planting trees for commercial harvest.

Implications: The perceived 'relative advantage' of plantation forestry in economic terms can be enhanced by incorporating additional payments for ecosystem services, such as a carbon price, and quantifying the on-farm benefits associated with increasing trees in the rural landscape.

Case Study: Carbon Farming

The NE NSW Regional Forestry Hub is undertaking a major project with the following aims:

1. Explore the potential for long rotation crops and the impact of staggered payments across the growing cycle to improve the economics of new tree establishment.
2. Analyse the policy and marketplace status of this, referencing NSW DPI research and federal government programs.
3. Prepare an online "Guide to" for the industry and for potential new plantation growers to break down the "carbon mumbo jumbo".
4. Ensure this guide is made available across industry on a continuous and consistent basis.

- There is a clear relationship between tax concessions or carbon credits and landholder willingness to consider planting trees for commercial harvest.
- The various government mechanisms on which these payments are made are not easily accessible to tree growers.
- A consolidation and synthesis of these carbon sequestration mechanisms is a logical way forward to incentivize and access the benefits associated with exploring long rotation cropping.

However, whether or not the mechanisms are accessible does not address the on-the-ground practicality of carbon farming in New South Wales. To assist with this issue, a project currently being undertaken by the North East NSW Regional Forestry Hub will create a "Growers' Guide to Carbon Sequestration Payments in NSW."

The Guide will clearly articulate the pathways and mechanisms for carbon credits payment. It will also describe potential tax concessions and deductions concerning growing new and existing native hardwood plantations in NSW.

"*I have recently been going through a due diligence process on a re- planting project at one of our farm forest properties. I can say that so far I am far from impressed by the returns and the cost involved in compliance. It seems that the Australian process is so risk averse that the compliance requirements are killing the opportunity. I can't see with the current settings that the process will be accessible to the average North Coast farmer or rural landholder*." *Andrew Hurford – Hurford Forests.*

Additionally, through the Emissions Reduction Fund (ERF) the Commonwealth Clean Energy Regulator is reviewing forestry eligibility.

The new plantation forestry method is one of the five method development priorities.
Building on the existing ERF plantation forestry method, the new method will offer more opportunities for the plantation forestry industry to deliver low-cost abatement.

The existing plantation forestry method contains two activities that the ERF are looking to retain in this method:

- Establishing a new plantation on a site that has not had a plantation for seven years
- Converting an existing plantation from a short rotation to a long rotation.

During initial consultation, feedback indicated the following key adjustments could be made to improve the useability of the method:

- Expanding eligible species types: In the 2017 method, the activity for establishing a new plantation has two species that are excluded:
  - Indian Sandalwood – excluded in all NPI regions
  - African Mahogany – excluded in the Northern Territory.

  These were excluded as evidence then available indicated that new plantations of that type were likely to occur in a business as usual scenario. Feedback has indicated this is no longer the case and the ERF is working with ABARES to obtain the most recent data on plantations of these types.

- Expanding eligibility outside the NPI regions: The 2017 method limits eligibility to plantations within the NPI regions. The ERF is investigating whether this could be expanded to areas outside the NPI.

Plantations have reduced in size along with investment over the past 20 years. Unless there is a clear concise pathway with criteria that fits plantation forestry – both softwood and hardwood – with their vastly different growing and harvesting cycles and opportunities, there will be no incentive to invest long term in plantation forestry.

PLANTATION ESTABLISHMENT POLICIES

Overview

With a few exceptions, Australia's commercial forestry regions are concentrated in Tasmania and the South Eastern corner of mainland Australia. This limits land available for expansion of plantations.

When comparing wood production from plantations and native forests it is helpful to distinguish between hardwood and softwood plantations. New South Wales has ~306,000 hectares of softwood (pine) plantations and ~87,000 hectares of hardwood plantations. This section mainly focuses on hardwood plantations.

Hardwood plantations are no longer seen as a viable replacement for native wood resources. There must be a balance between the supply of timber from native forests and the supply of plantation timber for a range of economic and environmental reasons, as well as differences in timber quality.

From a community perspective, community education and clear signage is needed to ensure harvesting and regeneration of plantations is not mistaken for land clearing.

Private Native Forestry, or Farm Forestry, should be facilitated as part of the necessary balance of supply between native forestry and plantations.

Given the economics of plantations, their establishment and success are fundamentally premised on strongly favourable policy settings, accompanied by direct financial support. The role of government is critical.

Australian timber resources are changing in response to changing conditions. In addition to policy changes, hardwood timber supply is being altered by catastrophic fires and, potentially, by climate change.

The economics of plantations require strategic thinking and long-term planning. Given the challenges in generating significant plantation expansion, one key solution in the shorter term is greater productivity from the existing forest footprint and greater utilization of the timber resource, including those parts which are currently treated as waste products.

Australia's timber and construction industries will need to respond and adapt to the changing resource and to changing patterns of demand and supply.

Plantations Are One Source of Hardwood Timber
There are three possible sources of hardwood timber supply for Australian markets:

- Australian native forests
  - public
  - private
- Australian hardwood plantations
- Imported timber

While Australia has never been self-sufficient in timber, as a nation we produce more than 30 million tonnes each year, with around one third of this exported to Asian markets as hardwood woodchips or round logs.

Limited Australian Regions Support Plantations
With a few exceptions, Australia's commercial forestry regions are concentrated in Tasmania and the South Eastern corner of mainland Australia. Commercial forestry is only possible in the south eastern regions of Australia and plantations are even more limited in where they can be successfully established.

Research into the economics of the plantation forest industry has repeatedly shown that the optimal areas to develop new wood plantations are within 100 kilometres of major processing facilities and ports. These important facilities – including pulp and paper mills, sawmills, wood panel plants and port facilities - provide the most significant domestic and export market opportunities for the industry. Realistically, suitable available land for expanding the Australian plantation estate is limited to certain key regions.

The Balance between Native Forests & Plantations
There must be a balance between the supply of timber from native forests and the supply of plantation timber. The wood produced from native forests is not always interchangeable with plantation wood. Likewise, plantation projects compete with agricultural uses for suitable land.

The main advantage of plantations over native forests is that they grow wood much more quickly, producing a more uniform and consistent product in a much smaller space. Being concentrated in one location makes plantation wood less costly to harvest and process. The uniformity of plantation timber also makes it well suited for use as commodity products like paper, reconstituted and engineered wood.

A typical softwood plantation has a rotation length of 30 to 35 years. New South Wales softwood plantations have been producing sawlogs for more than five decades with many plantations on their second or third rotation. Apart from the impact of the 2019-20 bushfires the softwood plantations have performed well, accounting for three quarters of New South Wales domestic wood production in recent years.

Most New South Wales hardwood plantations were planted in the 1990s. A hardwood plantation takes between 35 to 45 years to reach commercial maturity, so most are still developing. The performance of New South Wales hardwood plantations has been mixed in terms of their health, growth rates and the quality of their timber.

However, despite high expectations, hardwood plantations are no longer seen as a viable replacement for native wood resources. Effectively, they should be viewed as a valuable supplement to native wood supply. However, while native forest supply has reduced radically in recent decades, it has not been supplemented by increased plantation supply.

Harvest levels from Australian native forests declined by more than 50 per cent in the decade from 2008/9 to 2018/19 (ABARES 2020). The proportion of native forest logs harvested as a percentage of total harvest has also reduced from about 35 per cent to about 10 per cent over the same period.

This decline has been driven almost entirely by state government policy decisions aimed at managing the perceptions of commercial native forestry as a political challenge. Hardwood timber production from public native forests is plagued by a lack of resource security due to continued sovereign risk: the likelihood that the NSW government actions will further reduce access to public forests.

Public Perceptions of Plantations

Plantations are far more intensive than native forestry. While most people understand the abstract concept of plantations, the long rotation periods of plantations can mean that there is resistance to harvesting timber which locals may not have realized was a plantation. Community education and clear signage is needed to ensure harvesting and regeneration of plantations is not confused with land clearing for other purposes.

This resistance has been seen in Bellingen in NSW, despite Forestry Corporation's detailed communications and highly regulated harvesting practices that ensure the safety and relocation of established fauna in those plantations.

FORESTRY CORPORATION MEDIA RELEASE
Operations resume in Tarkeeth timber plantations
01 Apr 2021

The final stage of a long-term operation to gradually harvest and replant timber plantations will commence this month in Tarkeeth State Forest, southeast of Bellingen.
Forestry Corporation of NSW's Plantation Manager Craig Busby said an operation would be carried out over the coming months to harvest and replant the last of the mature timber plantations in the forest.
"Tarkeeth State Forest contains 850 hectares of timber plantations, which were planted in the 1960s and 70s on an old dairy farm. In recent years we have been gradually harvesting the mature trees for timber and replanting each harvested area to grow timber for the next generation," Mr Busby said.

"We have replanted 1,100 seedlings in every hectare harvested, with many of the trees planted just a few years ago now seven to eight metres tall.

"This year's harvesting operations in these timber plantations are being carried out in line with the detailed plans that are available on our website.

"After the mature timber is harvested, we will carry out controlled burning of waste material, such as branches and off-cuts, to clear the site for the seedlings to be planted. The new seedlings, which will be cultivated in our Grafton nursery from specially selected trees, will grow for up to 40 years before they are next harvested for timber.

"Timber is an essential renewable resource and in the year following the widespread Black Summer fires we have prioritised timber production from plantations like the ones in Tarkeeth State Forest to reduce operations in native forests.

"These plantation harvesting operations will produce a range of renewably-sourced products, including power poles structural timbers for bridges and girders, and flooring and decking for houses, while the residue including tree crowns and branches will produce products including firewood.

"The plantations will be a worksite during these operations, so areas may be closed for the community's safety. To ensure safety there will also be access restrictions in place for internal roads. We thank the community for continuing to pay attention to safety signage and not entering closed areas."

The Unfulfilled Promise of Private Native Forestry/Farm Forestry

Private native forestry is relatively new as a source of hardwood in NSW. The current policy settings disincentivize PNF and fail to support landowners in undertaking effective and sustainable private forestry.

There is over 150,000 hectares of small-scale planted forest in Australia that has been established by farmers for wood production and a range of other benefits such as soil and water conservation, salinity control, biodiversity and agricultural productivity (e.g. shade and shelter for livestock).

Well targeted forestry activities can be complementary to a broad range of farm level and wood production objectives, given a continuum of tree planting activities that can support agricultural productivity and farm profitability.

The potential for the farm forestry sector to contribute further to plantation wood supply is significant, and has a deep history in many countries, but has failed to realise its full potential in Australia.

Part of the problem in the past has been the high transaction costs for the processing industry in dealing with highly dispersed and small parcels of forest. For small private owners, the marketing of wood as an individual grower has also posed challenges.

In the southern United States and Scandinavia, there is a long history of industrial wood supply from a large number of small private landowners and farmers as well as the development of marketing cooperatives.

In Sweden, for example, around 50 per cent of forest land is owned by individuals and families. A number of successful marketing cooperatives have been developed, including Norra Skogsagarna – which has 16,000 members and collectively produces and sells around two million cubic metres of wood each year.

In the south-eastern United States, which is known as the wood basket of the nation, around 57 per cent of the total forest area is owned by small family landowners who actively participate in forestry production in regional and global markets.

In New Zealand, over 620,000 hectares or 37 per cent of the plantation forest, is owned by private individuals with parcels of no more than 10,000 hectares. The New Zealand Farm Forestry Association (NZFFA) acts as a national network of farm foresters who share information for mutual commercial benefit.

In Australia, the Australian Forest Growers (AFG) organisation represents an established network of small-scale farm foresters. The SMARTimbers initiative in western Victoria is also an example of a local initiative of farm foresters marketing small quantities of plantation and native forest products.

There are lessons that can be drawn from overseas and local experience to build better linkages between the farm forestry sector and the broader plantation growing and processing industry.

The Economics: Plantations vs. Native Forestry
There are pro's and con's to each of native forestry and plantation silviculture.

Considerations	**Native Forest**	**Plantations**
Acquisition of Land	No	Yes
Establishment Costs	No	Yes
Ongoing Management	Yes	Yes
Long rotation period	No	Yes
Cashflow issues	No	Yes
Faster, Intensive Cultivation & Harvesting	No	Yes
Selective Harvesting	Yes	No
Use of Herbicides & Fertiliser	No	Yes
Susceptible to pests/weeds/fires	Somewhat	Highly

Plantation expansion projects require acquisition of suitable land, significant establishment costs and long (15-30 year) plantation rotation periods. In many ways, plantations have more in common with agricultural crops than they do native forests, producing high returns but also are requiring high input costs. Most plantation costs arise at the beginning of their rotation, while most of the returns come from the final harvest. This lumpy cashflow profile can make plantations a risky financial venture when compared with the economics of native forestry.

An important feature of the plantation forest industry is the integrated use of high-quality logs for timber as well as pulpwood and lower quality wood that is converted into value-added products such as paper and wood-based panels. The existence of strategically located processing facilities such as paper and panel board mills provide a high-value market for pulpwood and other processing residues from the sawmilling industry. This

integrated value chain improves the overall profitability of the industry and underpins many regional jobs.

Some also believe that sourcing wood from plantations rather than native forests is more environmentally responsible. However, a holistic perspective is needed. Both have their pros and cons and a balance must be struck between the different methods of timber supply.

To ensure successful establishment plantations require deep cultivation and applications of herbicide and fertiliser. No such treatments are required to produce timber from native forests. Native forestry is more akin to permaculture than cropping as it is dependent upon natural processes. While growing wood in native forests is relatively low cost, harvesting can be relatively expensive compared to plantations.

The uniformity of plantations (e.g., single species of the same age) makes them more susceptible to pests, weeds and diseases. Damage from insect pests can be a particular problem for plantations of native hardwood species. Plantations are also more susceptible to wildfires than native forests and as such can be a high-risk option within fire prone environments. During the 2019-20 bushfires tens of thousands of hectares of timber plantations were destroyed in New South Wales resulting in financial loses in the hundreds of millions.

The Economics of Native Forestry

- There is a misperception that if native forests are not cultivated for timber, they can be left unmanaged. This is not the case.
- If native forests are not used for wood production, they must still be actively managed to protect other values (i.e. environmental and social aims), for example by preventing catastrophic bushfire, weeds and pests.
- Revenues from timber production in native forests help to defray forest management costs, enabling the forest to be managed on a cost neutral basis or at a small profit.
- Without timber revenue, annual native forest management costs are c.$68 per hectare. If wood production from NSW State Forests were to cease, the ongoing management cost more than $100 million per year.

Plantations & The Role of Government

Given the economics of plantations, their establishment and success are fundamentally premised on strongly favourable policy settings, accompanied by direct financial support. Since the 1960s Australia has benefited from a number of active policy interventions to expand the national plantation estate.

The aim of these policies has been to build a greater degree of domestic independence in timber production, to stimulate regional economies and provide employment opportunities.

Plantation policy in Australia over the past 20 years has been driven by the National Forest Policy Statement 1992 (NFPS) and the Plantations for Australia: 2020 Vision. A key goal of the NFPS was to ‘expand Australia’s commercial plantations of softwood and

hardwoods so as to provide an additional, economically reliable and high-quality wood resource for industry'. The Plantations for Australia: 2020 Vision,
launched by the federal and state governments in 1997, aimed to 'enhance wealth creation and international competitiveness by trebling the area of wood plantations to 3 million hectares by 2020.'

In the 1990s, the emergence of managed investment schemes - which utilised existing plantation taxation arrangements and pooled capital from a large number of small investors - led to a surge in investment in new hardwood plantations largely for woodchip export markets.

However, since the collapse of many former managed investment schemes companies, not long after the Global Financial Crisis, new plantation investment in Australia has effectively ceased. In addition to the crisis in new plantings, the total
area of plantation in Australia has actually gone backwards in the past few years as sub-optimal areas are harvested and not replanted. This rationalisation is expected to continue at a faster pace in the next few years.

If the intention behind reducing NSW public native forest supply in recent decades was to substitute more plantation hardwood resources, then there has not been the requisite investment in plantations to address the sharp decline in native hardwood supply in recent years.

In 2018 the Federal Government released a paper '*Growing a Better Australia'* which highlighted the need for a billion more plantation trees (equivalent to 400,000 hectares). The plan however was only supported by $20 million in budget funding, a commitment equivalent to the cost of a few thousand hectares.

Adapting to Changes in Demand
Nearly half of all Australian plantations are eucalypt hardwoods, grown on short 15year rotations for the production of woodchips for Asian markets.

Hardwood plantations in Australia produce an enormous resource for which there has never been successful attempts to find a domestic market, partly due to social licence issues (e.g., Gunns) and partly because of the stability of this Asian market until recently.

However immediately before COVID and in the Chinese trade disputes since, this market experienced a significant reduction in demand due to trade volatility which appears to be reversing. However there remains a risk that this market may be caught up in trade sanctions going forward.

Given the growing domestic demand for timber and the shrinking availability of imported timber, along with Chinese trade sanctions, it is worth considering whether keeping woodchips in Australia for the production of hardwood pulp would provide longer term security of supply and great retention of value along the supply chain.
If so, this raises questions around where and how such woodchips would be processed domestically, a development which would require fundamental changes to the wood processing industry in Australia.

Adapting to Changes in the Resource
Australian timber resources are changing in response to changing conditions. In addition to policy changes, hardwood timber supply is being altered by catastrophic fires and, potentially, by climate change.

The largest existential risk to long term fibre availability in Australia is fire. Geddes (2020) shows that for plantations, in the period since 2000 the area of productive forest lost in fires has far exceeded the combined losses stretching back to 1920. The damage has increased exponentially since 2010. Since the 2019-20 bushfires, hardwood plantations have been an important source of unburnt timber.

Over the longer term, as climate change progresses, more complex responses will be required, such as deployment of new genetic material, product diversification, development of new practices and products or changes in the distribution of plantations. These sorts of responses are likely to provide additional benefits but at a greater cost than initial within-rotation adaptations (Pinkard et al 2010).

Further, timber being produced now is smaller in diameter than previously produced and yet demand for timber continues to grow, suggesting new uses for timber previously judged as unsuitable. With climate change, the area suitable for plantations may reduce and the available species may need to be reconsidered. This reduced volume and altered species may present a challenge for our domestic timber processing sector.

Over the last 20 years, the timber and forest products industry has introduced considerable innovation to overcome the limited supply of hardwood. Softwood products have made considerable inroads into structural markets that have been the traditional domain of native hardwood. This has occurred through the production of engineered wood products and the treating of softwood timber to make it suitable for outdoor use.

Successful adaptation may require integration across all facets of timber production, from seedling production to processing. Developing adaptation strategies will be complex, requiring strategic planning to assist in operational decision-making by a range of enterprises and stakeholders (e.g., industry, researchers, governments).

Industry Integration, Productivity & Utilisation
Like the forest estate and timber resources as a whole, the economics of plantations require strategic thinking and long-term planning.

Given the challenges in generating significant plantation expansion, one key solution in the shorter term is to grow and produce more wood from the existing forest footprint and utilize more of the timber resource, including those parts which are currently treated as waste products.

That is, in the short-medium term NSW must emphasise the:

- productivity of forests and plantations

- full utilization of the wood supplied.

Most productivity measures have significant lead times, so reduction in rotation length is one possible approach, which has its own risks and challenges.

While the nature of Australia's forest fibre resources is changing, generally the markets for wood products and the way the markets want to use the wood are not. While forest products markets in Europe are more fully integrated, Australian markets have tended not to utilize side stream raw materials such as sawdust, chips and bark for conversion to pulp, board, paper and engineered sheet materials. Part of moving towards greater integration is to change perceptions of relative value and importance of solid wood versus manufactured wood products.

How Australia's timber and construction industry responds to the changing resource will be key. This coordinating role of active and adaptive management of the natural resource is an essential role of government.

Recommendations:

- Facilitate private investment in new plantations where it is needed most – by better targeting access to the Carbon Farming Initiative under the Emissions Reduction Fund and the continuation of the plantation taxation arrangement in areas the plantation hubs
- Support the development of a national farm forestry cooperative for farmers within the plantation hubs
- Direct funding for training and skills development to lift productivity and address critical skill demand shortages within the plantation hubs.

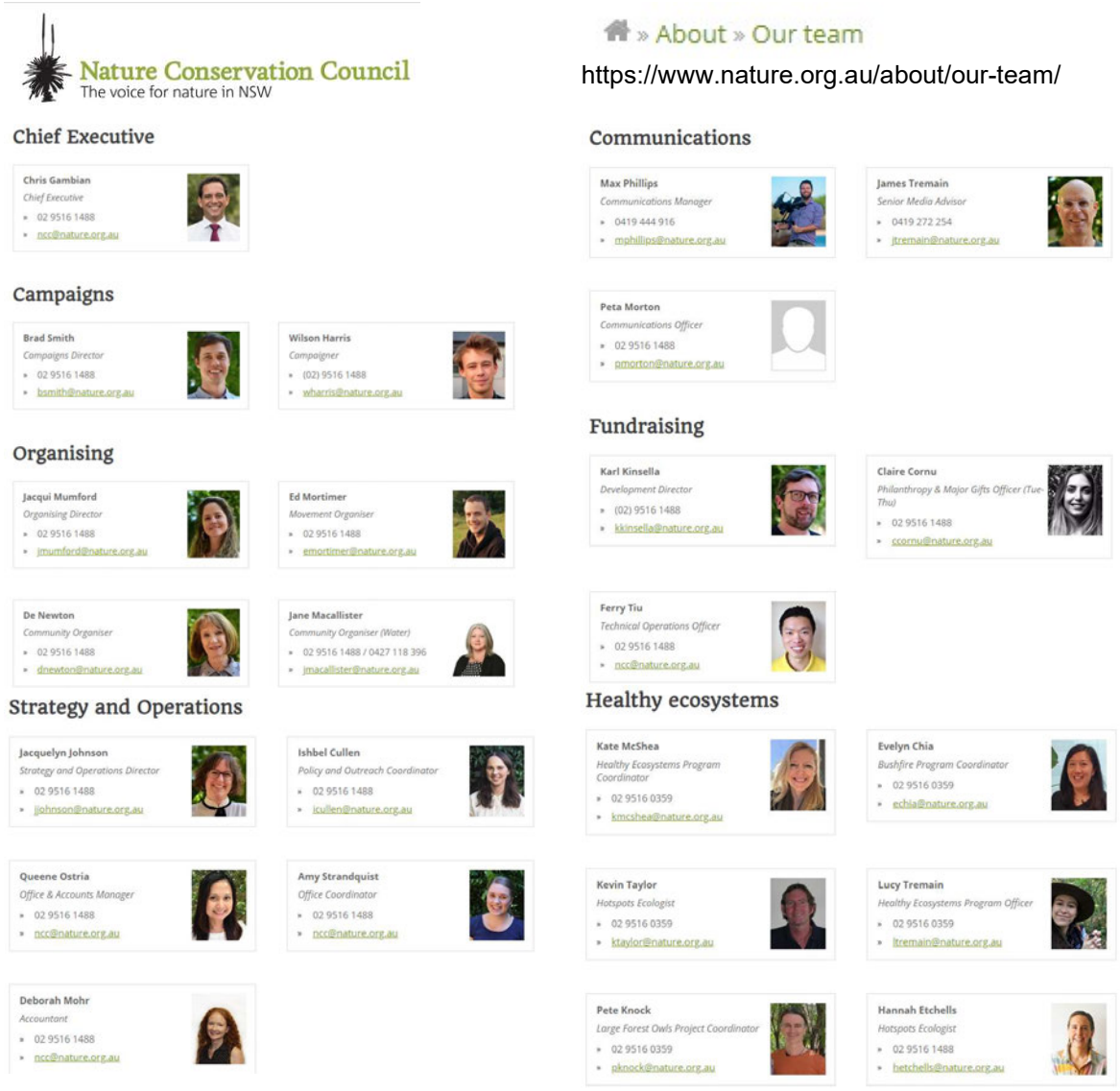
OTHER EXTERNAL INFLUENCES

The Impact of Environmental Activists

Despite the science, care and attention which is now being given to ensuring that practices are ecologically sustainable, the business of native forest harvesting continues to be portrayed in a poor light. It also attracts a disproportionate amount of adverse media.

A key reason is that ENGOs have successfully turned campaigning against native forestry into a multi-million-dollar business. In NSW alone there are six organisations (three large) which together employ dozens of people whose sole role is to identify and implement ways of ending native timber harvesting.

The NSW Nature Conservation Council employs twenty-four people and has an organisational structure that is similar to an ASX listed company.



Nature Conservation Council
The voice for nature in NSW

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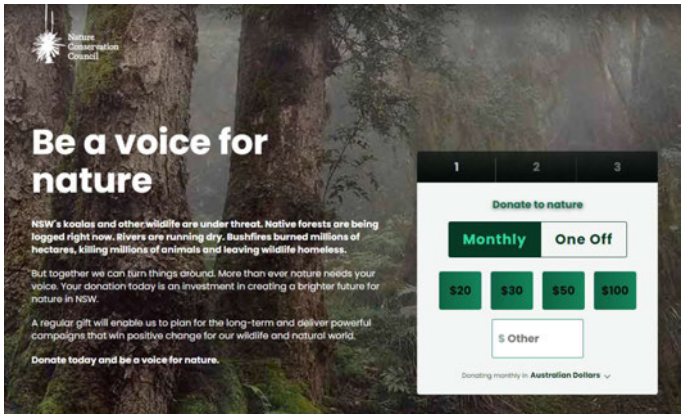
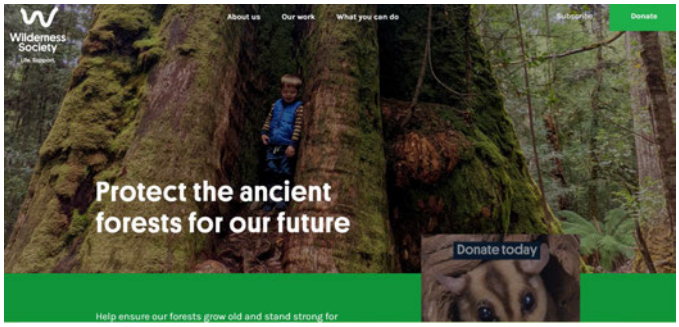
The business of discrediting the native timber industry is funded by ‘tax deductible’ donations. Donations are secured using sophisticated, emotional advertising and fund-raising techniques. Prospective donors are encouraged to believe that all native forests are under threat and campaigns are always linked to popular causes like saving the koala.

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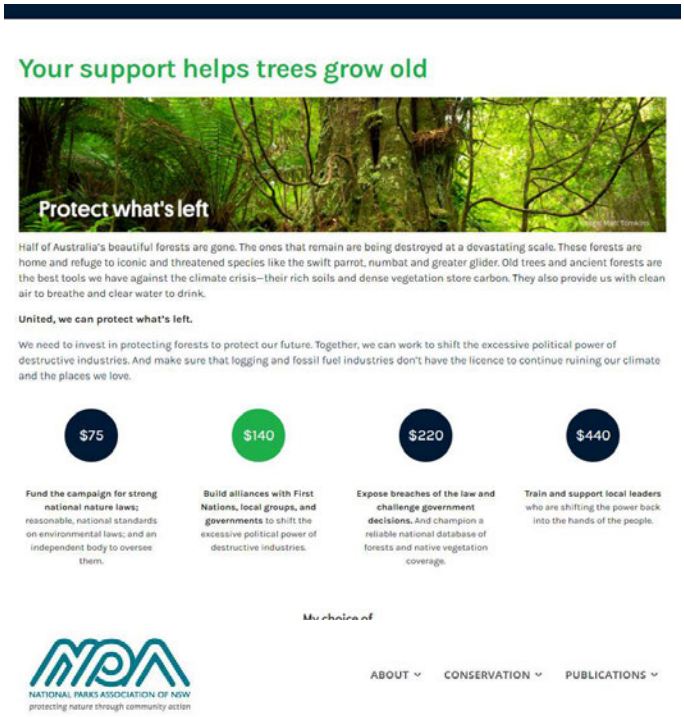
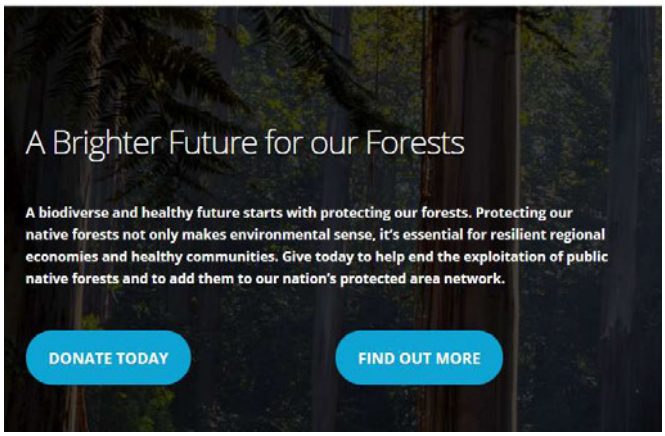

Your support helps trees grow old
Protect what's left
Half of Australia's beautiful forests are gone. The ones that remain are being destroyed at a devastating scale. These forests are home and refuge to iconic and threatened species like the swift parrot, numbat and greater glider. Old trees and ancient forests are the best tools we have against the climate crisis—their rich soils and dense vegetation store carbon. They also provide us with clean air to breathe and clear water to drink.
United, we can protect what's left.
We need to invest in protecting forests to protect our future. Together, we can work to shift the excessive political power of destructive industries. And make sure that logging and fossil fuel industries don't have the licence to continue ruining our climate and the places we love.
$75
$140
$220
$440
Fund the campaign for strong national nature laws; reasonable, national standards on environmental laws; and an independent body to oversee them.
Build alliances with First Nations, local groups, and governments to shift the excessive political power of destructive industries.
Expose breaches of the law and challenge government decisions. And champion a reliable national database of forests and native vegetation coverage.
Train and support local leaders who are shifting the power back into the hands of the people.
NATIONAL PARKS ASSOCIATION OF NSW
protecting nature through community action
ABOUT
CONSERVATION
PUBLICATIONS


A Brighter Future for our Forests
A biodiverse and healthy future starts with protecting our forests. Protecting our native forests not only makes environmental sense, it's essential for resilient regional economies and healthy communities. Give today to help end the exploitation of public native forests and to add them to our nation's protected area network.
DONATE TODAY
FIND OUT MORE


North East Forest Alliance - NEFA
Now is the Time to StandUp4Forests
The North East Forest Alliance has always been effective in protecting our forest because of our dedicated band of volunteers. Now NEFA needs you to join us in campaigning for healthy native Forests4Ever. Please sign up today to do whatever you can before it is too late.
With the State & Federal Governments committed to wholesale vandalism of our native forests right now, it is more important than ever that you commit to helping defend them. Even if it's to write a letter to your MP or join us at a public meeting or protest, every contribution brings us closer to protecting our forests forever.
Download your #StandUp4Forests flyer here for more information on how and scroll down and tick the boxes beside the actions you feel you can take to help :-)
Sign in with Facebook
Sign in with Twitter
Sign in with Email
Donate
Volunteer
Find an Event

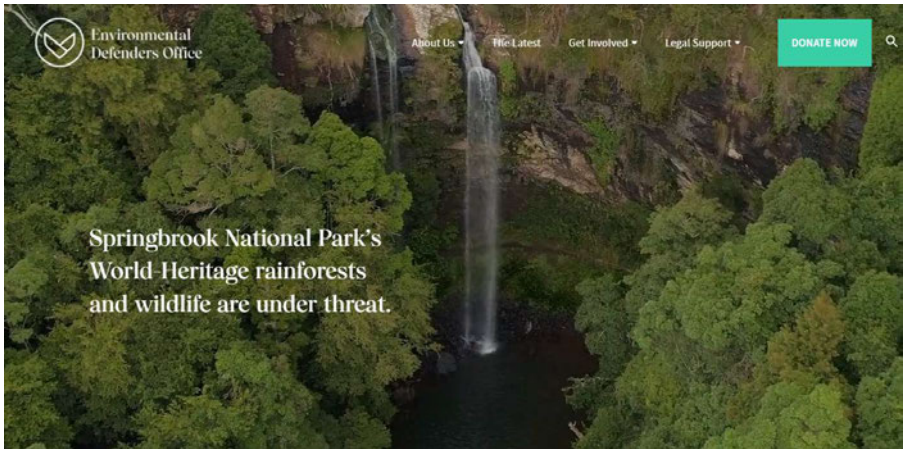
HOW TO DONATE TO SERCA FOR FOREST PROTECTION

Use either direct debit or Pay Pal to:

1. To Pay your group's $25 annual membership fee
2. Donate to support forest protection
3. Donate to the Great Southern Forest campaign

Make a direct bank deposit at any bank or use Internet bank transfer. The details are:

1. Bank name: Horizon Bank (Bermagui Branch)
2. Account name: SERCA (South East Region Conservation Alliance Inc.
3. BSB: 802-124
4. Account number: 76374



Recommendations

- The NSW government must acknowledge the requirement to balance forest values in its land management policies
- For a generation, NSW forest policy has been unduly influenced by environmental NGOs. The result is a poorly managed NSW forest estate, with a reactive and tragic approach to the management of fire.
- Timber NSW urges the NSW government to be guided by scientific evidence and to recommit to its international obligations under the Montreal Process.
- Finally, there is an important role for the NSW government to play in countering the public confusion and misinformation precipitated by the campaigns of many environmental NGOs.
- Continuing to indulge the requests of ENGOs to expand our National Parks and Reserves east of the Great Dividing Range will inevitably see timber supply from public native forests further eroded. There is no scientific evidence supporting the need for such reserves as every region which contributes to native timber supply already has a Comprehensive, Adequate and Representative (CAR) reserve system.

APPENDIX

TIMBER NSW

2 August 2019

The Chair

Ms Cate Faehrmann MLC

NSW Legislative Council

Portfolio Committee No. 7 – Planning and Environment

Parliament House

Sydney NSW 2000

Re: Inquiry into Koala populations and habitat in New South Wales

(a) the status of koala populations and koala habitat in New South Wales, including trends, key threats, resource availability, adequacy of protections and areas for further research,

Koalas in New South Wales are widespread and occur naturally at low densities. Within New South Wales the koala is known to occur in over 750 different vegetation types (Office of Environment and Heritage - OEH, 2019a) and is known to use137 different tree species (OEH, 2018a). Although widespread the koala is difficult to detect.

At the time of European settlement koalas were rare with few documented records (Gammage 2011; Jurskis 2015). Since European settlement koala populations have fluctuated greatly in response to changes in the way that forests and woodlands have been managed. In contrast to current populations, *P. cinereus* populations then had many more episodes of high mortality, population size appears markedly more volatile and overall abundance was much higher (Gordon and Hrdina 2005).

Around 100 years after European settlement koalas became super abundant. The most plausible explanation for this change is the disruption of Aboriginal fire regimes which led to mass eucalypt regeneration events and chronic decline of mature eucalypt trees in agricultural areas (Lunney and Leary 1988; Gammage 2011; Jurskis 2017). Eucalypt regrowth trees provide large volumes of soft young nutritious leaves in their expanding crowns[11], whereas declining mature trees continuously sprout and resprout nutritious and palatable epicormic[12] foliage (Jurskis 2017).

The harvest of koalas started in response to the great increase in abundance (Hrdina & Gordon 2004). At Bega in New South Wales, trade in koala skins was common from about 1870 through to possibly the early 1900s (Lunney and Leary 1988). Koalas were also commercially harvested in

[11] The leafy part of the tree

[12] Leaves which sprout from buds on the trunk or limbs of a tree.

the Pilliga. The trade in koala and possum pelts was regulated through seasonal controls and the issue of permits which specified harvest numbers. By the early 1900s the abundance of koalas in New South Wales had reduced. Koala abundance remained high in Queensland well after it had declined in the southern states (Gordon and Hrdina 2005). In Queensland, legislation to regulate the trade was introduced in 1906. After this date, the koala take ranged from about 450,000 to nearly 1,000,000 skins per season (Hrdina & Gordon 2004).

Crashes in koala populations have been attributed to a combination of over exploitation and drought. In New South Wales commercial harvesting ceased over hundred years ago. Droughts continue to this day. The Millennium Drought reduced the koala population in the Pilliga by 79% (Lunney *et al*. 2017).

In New South Wales today increases in koala numbers are isolated and infrequent. Eucalypt forests in decline such as those with Bell Minor Associated Dieback (BMAD) found around Urbenville and Woodenbong produce flushes of epicormic growth that support elevated koala numbers.

Concern about koala population decline is mostly focused on peri-urban areas. Along the eastern seaboard three koala populations have been formally listed as threatened under the Biodiversity Conservation Act 2016 - koalas in the Pittwater LGA (determined in 1998), the koala population at Hawks Nest and Tea Gardens (determined in 1999), and the koala population between the Tweed River and Brunswick River east of the Pacific Highway (determined in 2016). The NSW Threatened Species Scientific Committee has rejected proposals for listing koala populations as threatened at Bega (determined in 2007) and Port Stephens (determined in 2018).

In 2016 in response to growing pressure from animal welfare agencies and environment organisations the NSW Government engaged the NSW Chief Scientist to chair a government review into the decline of koala populations in key areas of NSW. The committee engaged Dr Martin Predavec to prepare an independent report. Dr Martin Predavec summarised the findings of four previously reported case studies. The case studies were at Coffs Harbour LGA, Campbelltown LGA, Pilliga and South Coast. Dr Predavec's reported that Koala populations in the Coffs Harbour LGA were stable, increasing in the Campbelltown LGA and in decline in the Pilliga and South Coast. As was expected the report's findings were inconclusive stating that "*in terms of koala population trends, the patterns discussed in the case studies should only be taken to reflect what was thought to be occurring at the time that the studies were completed: It is well recognised that koala population trends can change within a relatively short period of time."*

Knowledge gaps around the status of NSW koala populations in more remote forests were the trigger for new koala research. Law *et al*. (2017) developed a field validated koala habitat suitability model for 8.5 million hectares of north-eastern NSW. The published paper found that the largest determinant of koala habitat suitability was wildfire frequency (Figure 1). Law *et al*.'s 2017 finding suggests that the proportion of suitable koala habitat in this region could be greatly increased through improved fire management (i.e. controlled cool burning).

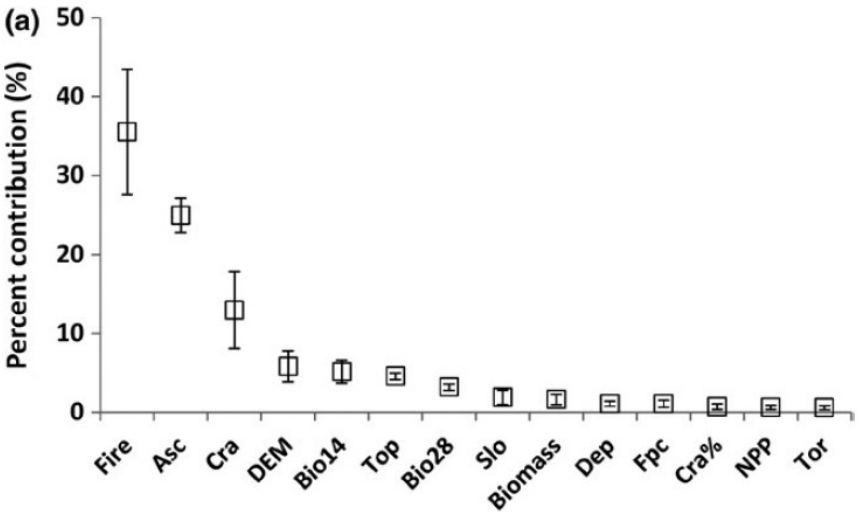


Figure 1 - Percent contribution of the 14 predictor variables – Fire (wildfire frequency), Asc (soil type), Cra (vegetation type) (Source: Law et al. 2017)

OEH is yet to acknowledge the significance of the wildfire frequency finding. This may be due to the poor wildfire record of the NSW National Parks & Wildlife Service (NPWS) (Figure 2).

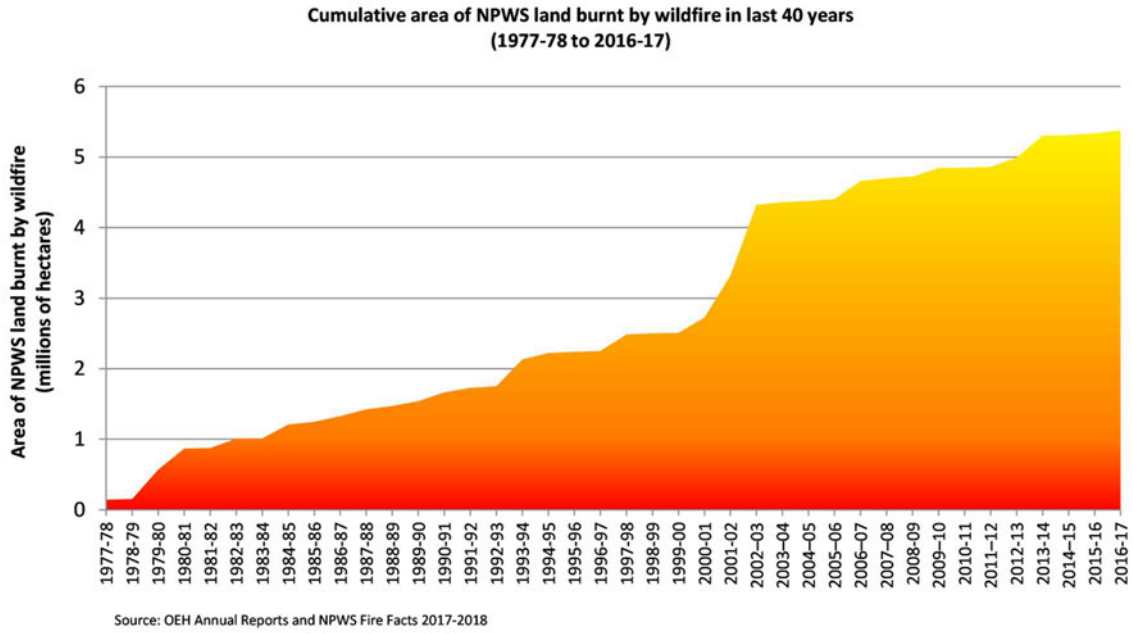


Figure 2 – Cumulate area of National Parks and Reserves burnt by wildfire in the last 40 years (1978-2017)

In the last twenty years alone around three million hectares of National Parks and reserves has been burnt in wildfire events, the more notable of these being the Great Divide fire (2003), Pilliga fires (2006 [Figure 3] and 2018), Warrumbungle fires (2013), and Blue Mountains fire (2013). OEH statistics (OEH 2019b) collected since 1989 show that canopy loss due to wildfire is more than double the canopy loss attributed to agricultural clearing. It should be noted that only intense wildfires consume tree canopies.

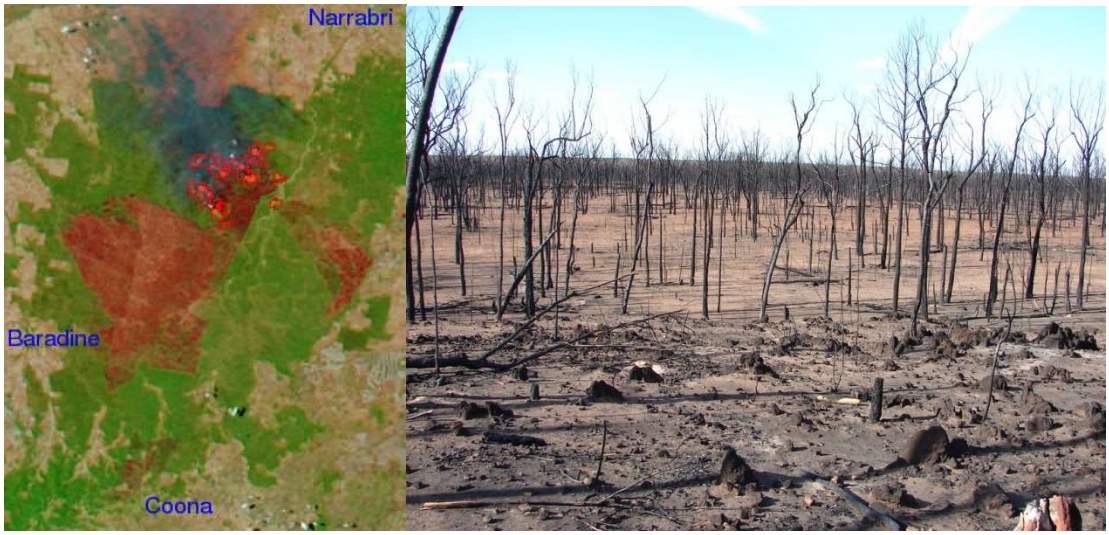


Figure 3 Satellite image showing extent of 2006 wildfire in the Pilliga (92,000 hectares) and photo of on-ground effect

Without more formal recognition of the threat which wildfires pose to koalas and their habitat, we anticipate that investment in koala conservation will continue to be misdirected.

The development of Law *et al.'s* (2017) habitat suitability model has been complemented with a koala occupancy survey (Law *et al.* 2018) in which 1.66 million hectares of forest classified as 'moderate-high' quality koala habitat was assessed. The survey of such a large area was possible through the novel use of acoustic recorders (Song Meters) and customised sound recognition software. The survey was conducted across 171 sites over three koala breeding seasons between 2015 and 2017. There were 2,513 validated koala bellows recorded at 106 (62%) sites and occupancy was found to be stable over the three breeding seasons. From these results Law *et al*. concluded that the hinterland forests of north-east NSW are supporting a widespread, though likely low density koala population that is considerably larger than previously estimated. We are aware that Dr Law has recently initiated a koala tracking program that will monitor where koalas go and how they are using their habitat.

More research of this type is needed to address community concern and guide conservation efforts. Occupancy surveys other NSW regions would advance scientific knowledge as would ongoing surveys in north-eastern NSW to monitor population stability.

Much of the concern about threats to koala populations and habitat is focused on forestry and land clearing. It is important to emphasise that forestry is not land clearing as it is regenerated or replanted. Evidence of the extent of these activities and their impact is frequently misrepresented or taken out of context.

In NSW there is 29 million hectares of land that supports native woody vegetation (OEH 2018c). In 2017-18 NSW woody vegetation change data (OEH 2019b) reveals that canopy removal from native forestry (selective timber harvesting) averages 8,930 hectares per year which equates to 0.03% of the NSW woody vegetation estate. Multiplied out over 30 years[13] total canopy removal equals 267,900 hectares which is still less than 1% of the NSW woody vegetation estate.

Native forests regenerate following harvesting and this regrowth becomes a highly desirable food resource for koalas. Research by Kavanagh *et al.* (1995) found that koalas respond favourably to forestry being three times more frequent in heavily harvested than unharvested forests. Law *et al.*

[13] 30 years being a common return interval for heavily harvested forest

(2018) found no statistical difference in koala occupancy between State forests subject to heavy harvesting and unharvested forests in National Parks and reserves.

Unlike forestry, the impacts of agricultural clearing on koala habitat can be permanent. Fortunately, the scale of agricultural clearing relative to extent of NSW koala habitat is very small. In 2017-18 NSW woody vegetation change data (OEH 2019b) reveals that canopy removal from agricultural clearing (cropping, pasture, thinning) is averaging 10,500 hectares per year with an additional 6,043 hectares per year attributed to other routine agricultural management or allowable activities. This clearing equates to 0.06% of the NSW woody vegetation estate or 5.7% of the estate if continued at the same rate for the next 100 years. Not included in the statistics are the areas of agricultural cleared land that are being returned to forest cover (principally through natural regeneration). In many cases this regrowth is suitable koala habitat and is offsetting the impact of canopy losses.

Land clearing associated with infrastructure has the greatest impact as it results in permanent land-use change (i.e. from natural to man-made). Infrastructure clearing is averaging 4,200 hectares per year which if continued for 100 years will reduce the woody vegetation estate by 1.5%. The impacts of clearing for infrastructure on koala habitat are often greater than their size alone suggests, as much of this activity occurs east of the Pacific highway in forests which support higher density koala populations.

Trends in clearing activity (changes from one year to the next) are also commonly misrepresented. For example, in a recent opinion article (Daley 2019) it states that the clearing of native vegetation in NSW has escalated by 800%. What isn't acknowledged is the change in the way that clearing is being measured.

Over the last ten years OEH has changed its assessment methodology four times (i.e. pre-2009 Landsat only; 2010-2015 Spot 5; 2016-2017 Sentinel and Spot 5; 2018 Sentinel only). Comparison of figures generated using different methods is not valid and can be very misleading. For example, the use of Sentinel 2 satellite imagery which was used in 2017-18 to quantify canopy removals generates much higher figures than the Spot 5 satellite imagery that was used prior to 2017.

In summary, koala conservation needs to take greater account of the koala's history pre and post European settlement and its capacity to expand and collapse in response to favourable and unfavourable conditions. Management of the key threats to koala populations and their habitat need to be based on science and statistical data, rather than exaggerated and misrepresented claims. The notion that koalas can be better protected in National Parks and Reserves than in State forests and on private land, has not been demonstrated and the evidence around wildfire history suggests that the reverse may be the case. The NSW Government should be sceptical when agencies and NGOs advocate that more parks and reserves are needed for koala conservation.

There is a significant opportunity to increase NSW koala populations by expanding the amount of suitable koala habitat. This can be achieved by the NSW Government altering its forest fire management policies and practices so that forests become less prone to wildfire. Clearing of native vegetation for agriculture and infrastructure should continue to be carefully managed with acknowledgement that the vast majority of koala populations and koala habitat (> 90%) is not affected by this activity. Forestry activities including thinning can improve the suitability of koala habitat by promoting forest regeneration (of preferred species) and healthy regrowth forests.

(b) the impacts on koalas and koala habitat from:

(i) the Coastal Integrated Forestry Operations Approvals and Regional Forest Agreements,

As detailed in (a) above, the scale of native timber harvesting impacts is monitored by OEH through the analysis of satellite imagery. The monitoring shows that the extent of harvesting disturbance is small relative to area in which koalas are known to occur.

Koala research by Kavanagh *et al.* (1995) and Law *et al.* (2018) reveals that 'at worst' forestry has no impact on koala populations and at best it is highly favourable.

The NSW EPA independently regulates native forestry operations. This agency has developed a comprehensive set of operating rules that provide multiple layers of environmental safeguards, which protect native animals including koalas and their habitat. The safeguards for koalas include:

- A comprehensive network of reserve corridors and protected areas which limit the scale and intensity of harvesting. These reserves typically account for around half of the proposed harvesting area.
- Employment of a team of professional ecologists with specialist training in fauna and flora identification. These ecologists are required to undertake targeted (pre-operational) surveys.
- If koalas are known to live in a State forest but their habitat has not been mapped (e.g. in some Southern forests) the Ecologists are required to undertake targeted koala surveys. These surveys involve using acoustic recording devices or targeted searches for koala scats (faecal pellets). If koalas are found no operations can proceed until the NSW EPA has reviewed the survey results and issued a determination including site-specific conditions
- In the North East Region where koala habitat has been mapped, records of koalas trigger the application of stringent species-specific conditions. These include exclusion zones with a radius of 25 metres or greater around trees in which koalas are found. Preferred browse trees are retained (either 10 per hectare or 5 per hectare depending on circumstance). Tallowwood, Swamp Mahogany and Red Gums which are preferred browse tree species are prioritised for retention
- If a koala is found its location is accurately reported.
- Detailed requirements which ensure that harvested forests are effectively regenerated and natural species mixes retained.

(ii) the Private Native Forestry Code of Practice,

On private land the scale and intensity of native timber harvesting is much lower than on State forests. 2017-18 NSW woody vegetation change data (OEH 2019) reveals that canopy removal from private native forestry averages just 1,770 hectares per year which accounts for less than 0.02% of the native forest trees on NSW private land.

The PNF Code has similar levels of environmental protection to those which apply on State forests. Retention of old growth forest, rainforests, steep slopes and riparian habitat provide a network of connected reserves. Tree retention requirements ensure that harvesting is selective and that habitat and feed trees are retained.

Koala habitat suitability has been mapped on the north coast where 80% of PNF activity occurs. This map can assist landholders to manage their forests in a way that is sympathetic to the needs of koalas (i.e. by maintaining their regrowth forests in a healthy and productive growing state).

(iii) the old growth forest remapping and rezoning program,

The old growth forest remapping and rezoning program has no connection to koala conservation. There is no research that suggests that koalas favour mature or old growth forest. The remapping pilot study has identified areas of old growth currently not protected that should be and areas currently protected that are not old growth. This mapping should be subjected to upgraded technology at all times considering the levels of accuracy now achieved by satellite imagery and Lidar.

(iv) the 2016 land management reforms, including the Local Land Services Amendment Act 2016 and associated regulations and codes

Refer to comments made in relation to land clearing in (a) above.

(c) the effectiveness of State Environmental Planning Policy 44 - Koala Habitat Protection, the NSW Koala Strategy and the Biodiversity Conservation Act 2016, including the threatened species provisions and associated regulations, in protecting koala habitat and responding to key threats,

State Environmental Planning Policy (SEPP) 44 - Koala Habitat Protection was originally designed to minimise the impacts of land clearing (permanent land-use change) associated with urban expansion along the eastern seaboard. The way the policy has been implemented by Local Government has been inconsistent and ad-hoc. Private native forestry (PNF) has been inadvertently captured by SEPP 44. Focusing on the protection of 'core koala habitat' is a flaw in the design of SEPP 44. Koalas in New South Wales are widespread, occurring at low densities across millions of hectares of forest. Trying to map 'core koala habitat' over such a vast area is impractical, cost prohibitive and achieves little for scientific koala conservation.

Private native forestry (PNF) is subject to SEPP 44 but shouldn't be. Forestry research (Kavanagh *et al.* 1995; Law *et al.* 2018) shows that native forestry is not detrimental to koalas and may be favourable. The absence of any demonstrable impacts provides strong grounds for having PNF excised from the requirements of SEPP 44. When SEPP 44 came into force there were very few maps of koala habitat suitability. Today there is a management scale koala habitat suitability map covering the entire north coast where 80% of PNF activity occurs. The current review of PNF provides an opportunity for koala habitat management requirements to be wholly incorporated within the PNF Codes (as they are under the Coastal IFOA).

The NSW Koala Strategy (OEH 2018b) is a document that promotes the case for more reserves. The NSW Koala Strategy does not acknowledge or incorporate the findings of Law *et al.'s* 2018 koala occupancy study. It prominently states that *"Recent studies estimate a 26% decline in numbers over the past three generations (15–21 years)".* Timber NSW believes this statement is inaccurate and misleading. There is also no mention of Law *et al.*'s 2017 finding that wildfire is a major determinant of koala habitat suitability. We conclude that the findings of Law *et al.*'s 2017 and Law *et al.*'s 2018 have been omitted because they do not support the case for new reserves.

(d) identification of key areas of koala habitat on private and public land that should be protected, including areas currently at risk of logging or clearing, and the likely impacts of climate change on koalas and koala distribution,

Koalas occur at low densities over millions of hectares. It is not practicable or effective to try and conserve koalas using a reserve-based approach. Directing public monies into purchasing land for koala reserves reduces the funds which could be available for improving the suitability of forests as koala habitat. Creation of reserves can only be justified where high suitability koala habitat is at risk of being permanently lost. State forests do not fall into this category as timber harvesting and koala populations happily coexist (Kavanagh *et al.* 1995; Law *et al.* 2018).

(e) the environmental, social and economic impacts of establishing new protected areas to conserve koala habitat, including national parks, and

The creation of a Great Koala National Park (GKNP) on the NSW north coast was NSW Labor Party policy at the last State election and remains their policy. 175,000 hectares of the region's most productive and economically important State forests were identified for inclusion in the GKNP. The State forests on the NSW North Coast operate as a single wood supply zone. If the GKNP had been implemented as proposed or is in the future, it impacts the entire region's native forest sector and arguably will lead to complete collapse of the industry.

Ernst & Young was engaged by the Australian Forest Products Association to provide an assessment of the impact of the proposed Great Koala National Park. Ernst & Young (2019) found that a collapse of the industry on the north coast caused by the creation of GKNP would result in the loss of $757million in output, $292 million in value-added and 1,871 jobs. A copy of the report is attached to this submission.

(f) any other related matter.

No comment.

References

Ernst & Young (2019) The economic impact of the cancellation of NSW North Coast Wood Supply Agreements due to the creation of the Great Koala National Park. Final Report 05 March 2019.

Gammage, B. (2011) The Biggest Estate on Earth: How Aborigines Made Australia. Allen & Unwin, Sydney.

Gordon, G. and Hrdina, E. (2005) Koala and possum populations in Queensland during the harvest period. *Australian Zoologist* 33, 69–99. doi:10.7882/AZ.2005.006

Hrdina, E. & Gordon, G. (2004) The Koala and Possum Trade in Queensland,

1906-1936. *Australian Zoologist* 32, 4, 543-585.

Jurskis, V. (2015) Firestick Ecology: Fairdinkum Science in Plain English. Connor Court Pty. Ltd.

Jurskis (2017) Ecological history of the koala and implications for management. Wild. Res. 44, 471-483. doi.org/10.1071/WR17032

Kavanagh, R. P., Debus, S., Tweedie, T., and Webster, R., (1995) Distribution of nocturnal forest birds and mammals in north-eastern New South Wales: relationships with environmental variables and management history. Wildl. Res. 22, 359–377. doi:10.1071/WR9950359

Law, B.S., Caccamo, G., Roe, P., Truskinger, A., Brassil, T., Gonsalves, L., McConville, A., Stanton, M. (2017) Development and field validation of a regional, management-scale habitat model: A koala *Phascolarctos cinereus* case study. *Ecology and Evolution* 7:7475–7489. doi: 10.1002/ece3.3300

Law, B.S., Brassil, T., Gonsalves, L., Roe, P., Truskinger, A., McConville, A., (2018) Passive acoustics and sound recognition provide new insights on status and resilience of an iconic endangered marsupial (koala Phascolarctos cinereus) to timber harvesting. PLoS ONE 13: e0205075. https://doi.org/10.1371/journal.pone.0205075

Lunney, D., Predavec, M., Sonawane, I., Kavanagh, R., Barrott-Brown, G., Phillips, S., Callaghan, J., Mitchell, D., Parnaby, H., Paull, D.C., Shannon, I., Ellis, M., Price, O., Milledge, D. (2017) The remaining koalas (Phascolarctos cinereus) of the Pilliga forests, north-west New South Wales: refugial persistence or a population on the road to extinction? Pac. Cons. Biol. 23, 277-294. doi.org/10.1071/PC17008

Lunney, D. and Leary, T. (1988) The impact on native mammals of land-use changes and exotic species in the Bega district, New South Wales, since settlement. *Australian Journal of Ecology* 13: 67-92

Mick Daley (2019) This is on you Berejiklian, Andrews, Palaszczuk, Hodgman, McGowan – stop killing our trees. Opinion article. Available at: https://www.thefifthestate.com.au/?s=This+is+on+you+Berejiklian (accessed 1/08/19)
OEH (2018a) A review of koala tree use across New South Wales. ISBN 978-1-925754-20-9

OEH (2018b) NSW Koala Strategy. Published by OEH on behalf of the NSW Government. ISBN 978-1-76039-938-2

OEH (2018c) NSW Woody Vegetation Extent 2011. Available at https://data.nsw.gov.au/data/dataset/nsw-woody-vegetation-extent-2011c0569

OEH website (2019a) Koala profile. Available at: https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10616

OEH (2019b) NSW Woody Vegetation Change 2017-18 spreadsheet (XLSX 175KB) Available at: https://www.environment.nsw.gov.au/vegetation/reports.htm

Timber NSW submission to the NSW Legislative Council Inquiry into the long term sustainability and future of the timber and forest products industry

TERM OF REFERENCE 1(c): projections for softwood and hardwood supply and demand over the next 30 years

NSW TIMBER - DEMAND AND SUPPLY FUNDAMENTALS

Domestic Supply of NSW Hardwood Timber

Australia is the seventh most forested nation in the world, with 134 million hectares of forest covering 17 per cent of the Australian continent (SOTF 2018). The state of NSW has 20 million hectares of forest, covering 25 per cent of the State.

In accordance with Australia's global obligations under the Montreal Process, NSW's forests are required to be managed to deliver a variety of environmental, economic and social outcomes.

Being well-forested gives NSW considerable scope and flexibility to determine how its forests are managed to achieve these multiple objectives, including ensuring a sustainable timber supply from NSW's public native forests.

NSW hardwood forests comprise a mix of native forests and timber plantations that, with best practice management, should produce a consistent and sustainable supply of hardwood timber over the long term.

It is important to remember that in contrast with other building materials, timber is the only major building product that completely regrows. It is the ultimate renewable, with harvested trees being regenerated through replanting.

NSW currently utilizes less than 10 per cent of its forests for timber production. In any given year, less than 0.2 per cent of NSW forests are subject to timber harvesting.

The Circular Economy: Supplying Lower Quality Logs & Residues

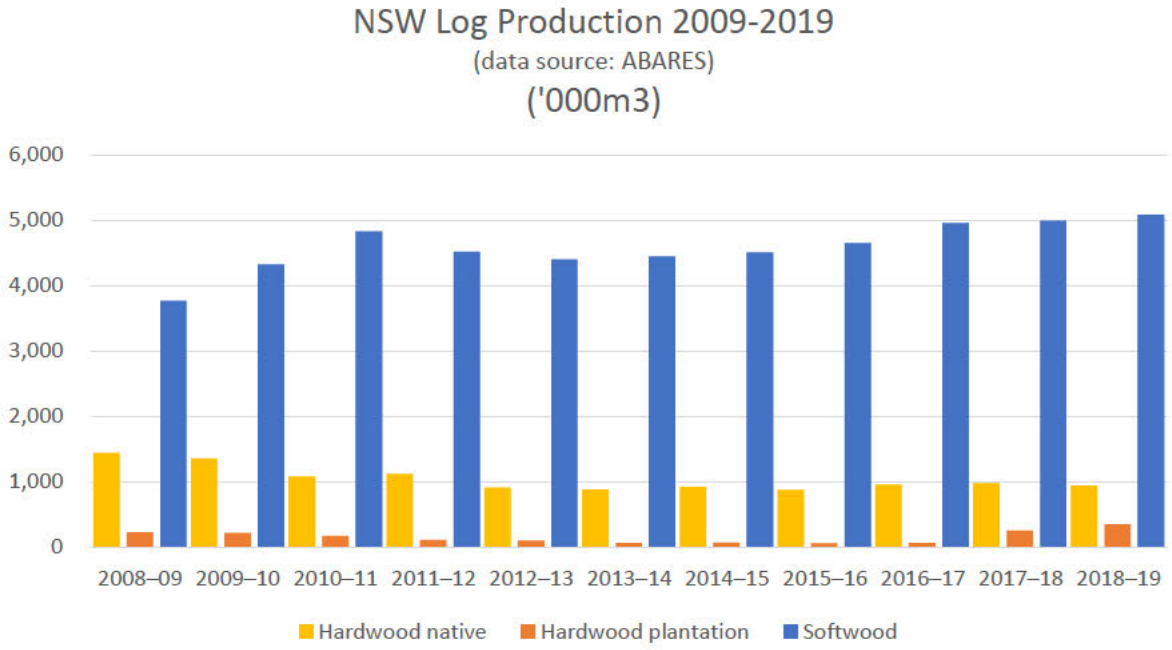
- The timber industry harvests both high value logs and lower value logs (e.g. pulp), as well as creating residues (i.e. waste).
- While here we mainly discuss supply and demand for high value logs, there are important question to answer about:
  - increasing the utilization of lower quality harvested timber, and
  - facilitating the development of markets for lower quality logs and residues.
- This would create not only economic & social benefits but important environmental benefits.

Sources of NSW Timber

NSW Timber is supplied from a few different sources. Of the total amount of timber produced by NSW each year, 80 per cent is softwood and 20 per cent is hardwood. This is mainly because softwood pine has become the timber of preference for NSW residential house frames and is the main fibre source for commodity products like plywood, fibreboard and paperboard. Softwood is supplied mostly by exotic pine plantations.

Timber Type	Resource Ownership	Silviculture Type	Species Type
Softwood 80%	Publicly Owned 76%	Plantations	Exotic Pine
	Privately Owned 24%	Plantations	Exotic Pine
Hardwood 20%	Publicly Owned 65%	Native Forestry	Eucalypt and Cypress (5%)
	Publicly Owned 6%	Plantations	White Gum Blackbutt, Spotted Gum
	Privately Owned 22%	Native Forestry (aka 'Farm Forestry' or 'Private Native Forestry')	Eucalypt and Cypress (5%)
	Privately Owned 7%	Plantations	Blackbutt, Spotted Gum White Gum

In contrast, the overwhelming majority of hardwood (87%) is supplied from native forests, both public (75%) and private (25%). Only 13 per cent of hardwood is supplied by plantations.

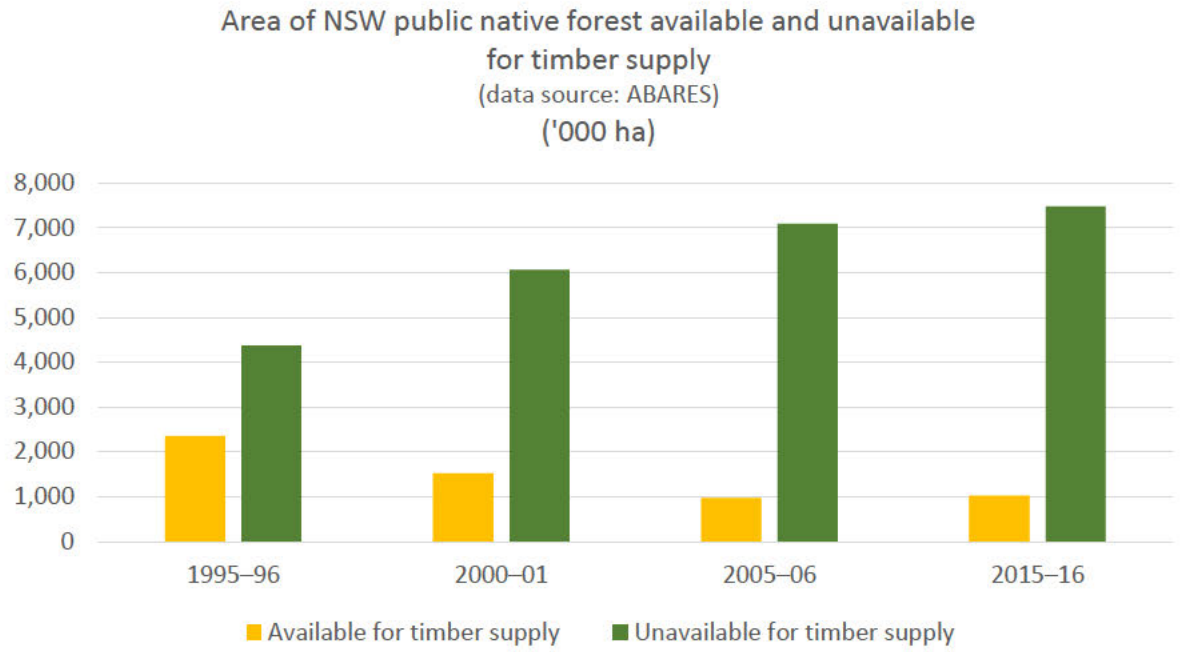


Supplying Timber from Native Forests

Public Land: NSW State Forests

In 2021 less than one third of the public native forests that historically contributed to hardwood timber supply are still productive forests.

As per the diagram below, in the past 25 years the area of NSW public native forest available for timber supply has more than halved. This is primarily due to transfer of State Forest to National Parks and Reserves and tightening the environmental regulation (IFOAs) within designated harvesting areas in State Forests.



Currently the NSW government makes only 12 per cent of public native forests available for timber supply. Where selective harvesting is permitted, the operating conditions are extremely strict.

Native eucalypt and cypress hardwood timber is generally recognised for its strength, durability and feature and comes in an array of different colours and textures. The diversity of native timbers and their inherent variability naturally lend themself to a diverse range of uses. Many of these uses can attract high prices especially when compared to commodity pine products.

Hardwood forests also generate large volumes of lower quality/lower value logs (pulpwood) which are utilised for export woodchip (for producing high-quality paper). There is also great potential for developing markets for bioenergy.

Timber from NSW State Forests is supplied to the NSW timber industry in accordance with long term (20 year) Wood Supply Agreements (WSAs). As detailed in the response of this submission to Term 1(f), there have been considerable problems with supply under the current WSAs.

This includes problems with a lack of transparency in contract negotiations with the NSW government and problems with management of these contracts by the NSW government. Timber NSW makes detailed recommendations for the future of contractual wood supply arrangements in its response to Term 1(f).

Private Land: Private Native Forestry

Supply from private native forests comes from a large number of individuals who together contribute around 25 per cent of total native forest supply. Historically there has been limited encouragement to engage in private native forestry and today only around 7 per cent of private forest landholders have an approved Private Native Forestry Plan (PNF Plan). Rather than being considered by government as an actively engaged supply source, participation in PNF by landholders is often opportunistic and commonly driven by financial considerations.

Harvesting of private native forests has also tended to be very selective. Over time this has led to reduction of the yields per hectare and 'high grading', which causes a decline in forest productivity.

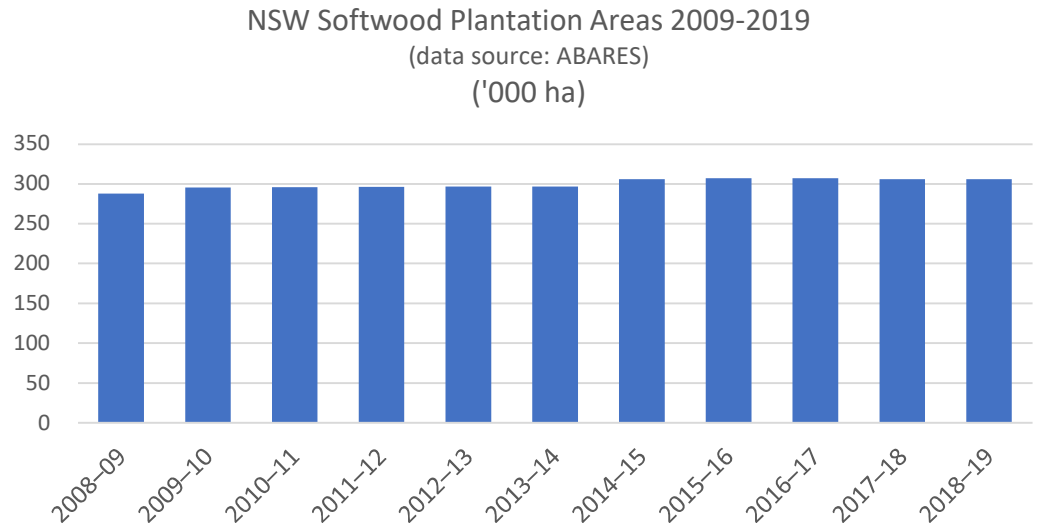
There is a significant opportunity to expand supply from private native forests. However for this to occur a greater level of interest and engagement is needed between landholders, with the NSW government as a facilitator.

Lack of understanding of how PNF works and where to go to obtain assistance has been an obstacle to developing this source of timber supply. The appointment of LLS as the administrator of PNF has been a positive step, however the agency's limited budget limited has prevented it from implementing any proactive programs that could have a material effect on landholder participation.

Plantations

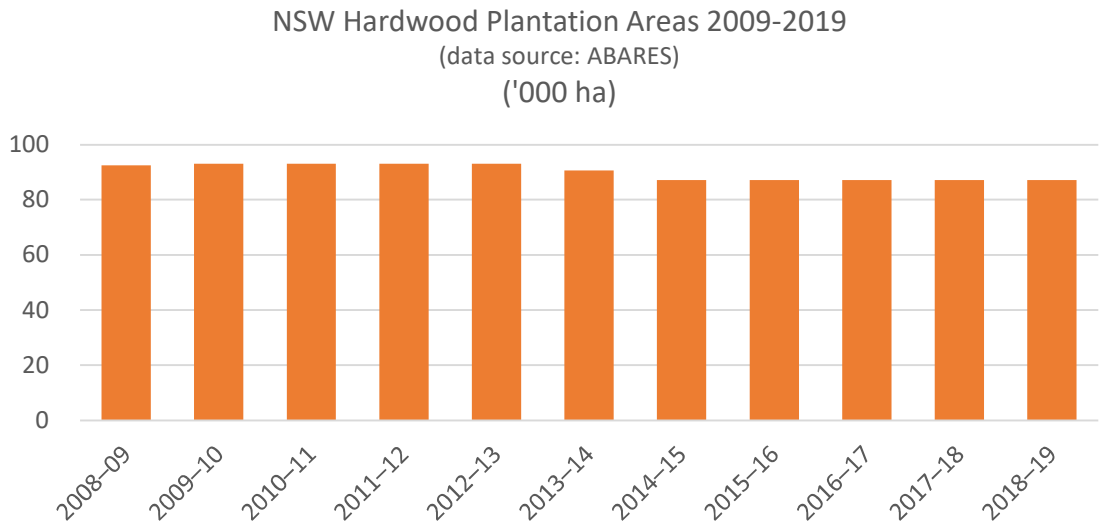
Softwood

In NSW there are c.300,000 hectares of exotic softwood plantation which is on the South West Slopes (Tumut), Central West Slopes (Oberon), the Northern Tablelands (Walcha) and the Southern Tablelands (Moss Vale and Bombala). These plantations are almost entirely the product of government investment which ramped up after the second world war and continued for more than four decades.



Hardwood

Although most hardwood timber is sourced from native forests, both public and private, 13 per cent of hardwood comes from public and private hardwood plantations East of the Great Dividing Range.



In NSW around 50 commercial eucalypt species are utilised. Of these, Blackbutt and Spotted Gum are the most widespread and are the preferred species for use in flooring and decking.

Domestic Demand for Timber

From Eden to Kyogle, Barham and Baradine NSW native forests boast arguably the world's greatest range of homegrown timbers. NSW hardwood timber is prized by Australians as a renewable, recyclable natural resource that is beautiful, versatile and characteristic of the land that produces it. It is a unique product of NSW.

Domestic demand for NSW timber and forest products has remained solid over recent decades, supported by the continuous growth in the State's economy. The NSW timber industry plays an important role in servicing this economy. The COVID-19-related housing boom has created record demand for NSW timber.

In particular, the timber industry underpins vitally important supply and demand relationships with the Australian design, manufacturing, construction and housing sectors, which includes new dwellings and alterations and additions.

- 75% of sawn timber produced is used in residential construction.
- 20% of timber consumed in Australia is used by the furniture industry.
- 5% of timber usage is by the kitchen sector alone.

The attractive feature and toughness of New South Wales hardwood eucalypts makes them highly suitable for flooring and decking and other products that people like to have on display in their homes and offices.

Hardwoods are also well suited to outdoor applications due to their strength and natural durability. Transmission poles, timber bridges, wharves and jetties are all made from highly durable New South Wales hardwoods. The toughness of hardwood also makes it well suited to industrial applications like pallets and mining timber props.

Reconstituted hardwood is made into weatherboard cladding products which are renowned for their durability and versatility. Hardwood chips are used to make high quality writing and photocopy paper.

Balancing NSW Timber Demand & Supply: The International Timber Trade

A Longstanding Timber Trade Deficit

Australia is well known for exporting commodity resources and for offshoring manufacturing. For more than two decades Australia has maintained an annual timber trade deficit of around $2 billion.

This timber trade deficit is the result of constraints on domestic timber supply and gaps in Australian timber product manufacturing capabilities.

NSW Exports Commodity Timber

International demand for Australian forest products is underpinned by commodity markets, which utilise lower grade (pulpwood) logs. As below, key export markets include both hardwood and softwood.

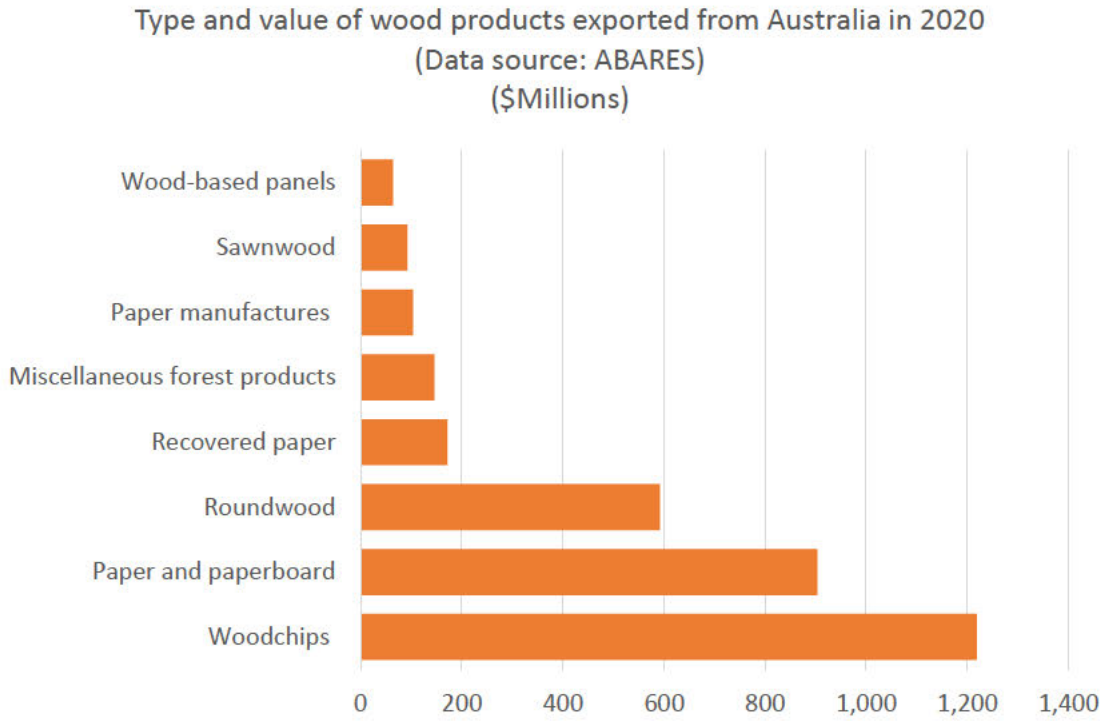
Hardwood Exports:

- The market for Australian woodchips is principally a hardwood market that is underpinned by pulp and paper manufacturing plants in South East Asia.
- The importance of these exports is that they provide a market for the by-products of sawlog harvesting operations and timber supplied by thinning native regrowth and hardwood plantations for optimum forest health.
- There is currently no domestic market to utilise these by-products. In the absence of these markets, these by-products are treated as waste.

Softwood Exports:

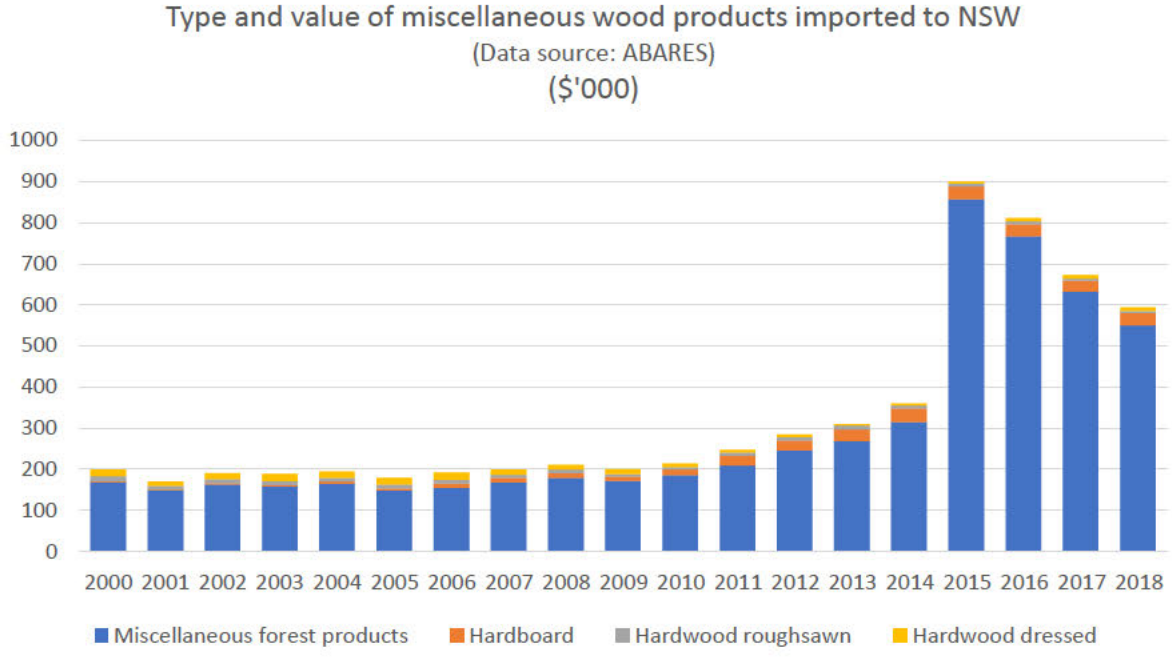
- In NSW the export market for roundwood has been principally for small softwood logs (mainly pine) which are not in high demand domestically. These logs have been exported to China and other south-east Asian nations where most are peeled and manufactured into plywood.
- The export market for Australian paper and paperboard has been a major value-adding success story for the softwood sector, converting low value

pulpwood into high value paper and cardboard products. Constraints on softwood supply have restrained the further expansion of this market.

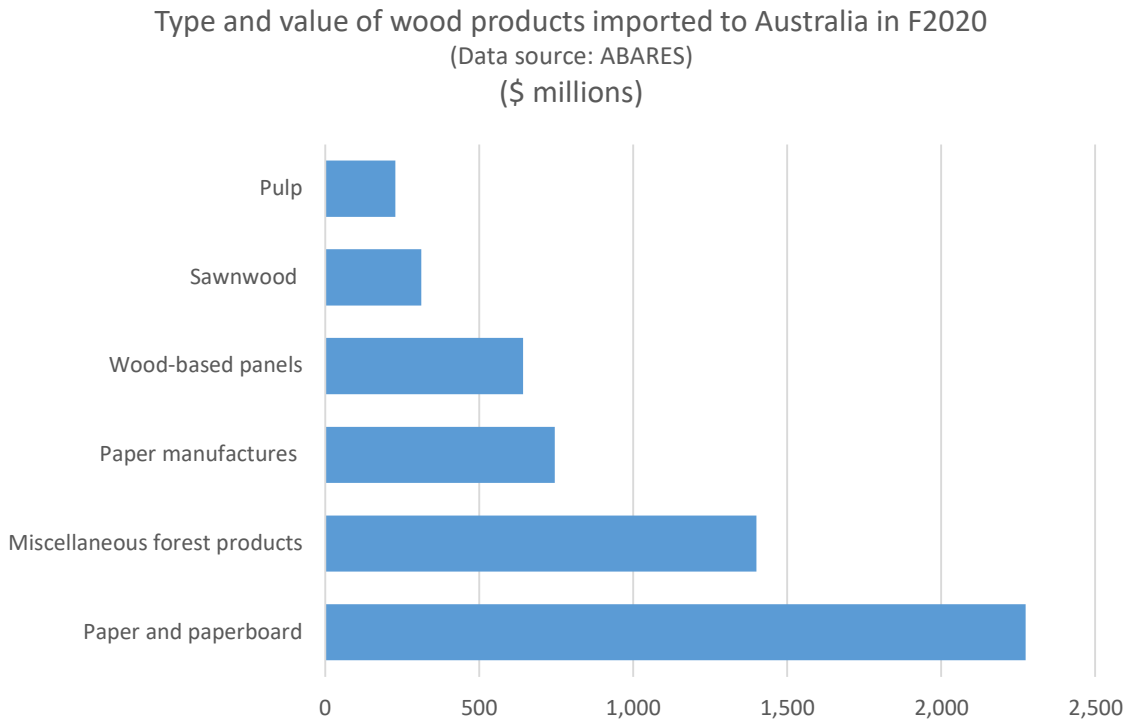


NSW Imports Value-Added Wood Products

In contrast to timber exports, timber products imported to Australia have a high level of value adding. The sharp rise in the value of imported furniture, hardwood and miscellaneous forest products to NSW highlights where our domestic manufacturing is least competitive.



The profile, below, of imported wood products highlights where Australia has been unable to compete or unable to meet demand with its own supply.



DRIVERS OF FUTURE SUPPLY AND DEMAND

The International Timber Market

In the 21st century, it is easy to think of demand and supply in abstract terms and to believe that natural resources from one part of the world are easily interchangeable with those from elsewhere and that offshoring is a normal part of the supply chain.

Certainly, global timber supply and demand has traditionally been governed by free markets and global economics. After the global financial crisis, global supplies of timber were plentiful and relatively affordable, with imported timber flowing freely into Australia. However, before the arrival of COVID-19, global markets (particularly the US) had recovered, raising prices and drawing down reserves filtering through to smaller markets like Australia[14].

When COVID-19 arrived, it prompted an unprecedented level of market intervention by foreign governments (similar to Australia's *HomeBuilder* program). On top of tightening global supply, this triggered a global supply shortage and a spike in international timber prices.

Supply Chain Resilience

The pandemic has greatly enhanced the awareness of Australian businesses to their exposure to sovereign risk[15] and provided a timely reminder that supply chains should be structured in ways that limit this exposure and promote resilience. The current COVID-19 global pandemic has caused both public and private sectors to question the validity and reliability of business models that offshore major sections of supply chains.

While suppliers of NSW domestic timber have enjoyed strong demand for their product, they have also been impacted by other factors such as bushfires and the Chinese ban on

[14] Power J (2021) Hardware Journal

[15] In this case broadly defined as *any* risk to business profitability resulting from government policy changes

Australian timber imports. Before the ban, Chinese log exports were an important market for mostly low value timber for which there was limited domestic demand.

THE IMPACT OF DOMESTIC TIMBER SHORTAGES

Due to NSW government reallocations of production forests into reserves, the NSW timber industry faces significant obstacles in achieving consistent, reliable supply of hardwood timber, particularly of specific species.

The accompanying timber supply shortfall has been exacerbated by the catastrophic 2019 bushfires and by COVID-related restrictions on imported timber.

In the face of this sovereign risk, not only does it become difficult for the industry to plan and timber communities to survive, it also becomes difficult to attract and retain talent to, and investment in, the sector.

The misalignment of demand and supply also impacts further down the supply chain, exacerbated by the boosted demand for building materials triggered by the Federal Government's *HomeBuilder* program. This has been clearly demonstrated by media coverage.

As below, the misalignment of demand and supply for NSW timber hinders economic development, drives imports of timber from less regulated economies and encourages the use of high carbon-emitting alternatives to timber (such as steel and aluminium).

High prices and unreliable supply hinder economic development

- As HomeBuilder drives Australians to build detached homes, builders across the country will continue to have trouble accessing timber for house frames and interior fit outs, causing delays and add cost to the average house
- Finding and matching timber to its best end-use will become increasingly difficult.

Increased importation of tropical rainforest timbers from developing countries like Papua New Guinea

- A failure to meet hardwood demand from domestic supply will increase demand for like species like merbau and other tropical hardwoods which grow in developing countries like Papua New Guinea where there are very few environmental controls.

Less timber use and increased use of high carbon emitting alternatives

- In the absence of timber, construction in Australia will increase its use of steel, aluminium and plastic. The processes required to produce these products create significant amounts of greenhouse gas emissions.
- For example, in the 40 years since steel house framing became available in Australia, it has captured 15 per cent of the national market, rising to a 20-25 per cent of the market in South Australia and SE Queensland.
- Timber is the most renewable, low energy alternative building material. The carbon benefits of wood include the lower energy requirements needed to manufacture timber products.
- It generally requires around:
    - 19 times more energy to make a product from steel rather than from kiln-dried hardwood;

- 45 times more to make a plastic product; and
- 85 times more energy to make a comparable aluminium product.

- Remembering that timber products also act as a long-term storage for carbon, the comparative advantages of timber products are significant.
- Sometimes these benefits go unrecognised, because energy rating schemes and environmental assessments are not based on full life cycle assessments of the products they compare.
- The Institute of Foresters Australia is clear in its insistence that the environmental credentials of building products be determined by a full life-cycle analysis. Timber is one of the most environmentally friendly building materials when the full life-cycle analysis of the building product is considered.
- The IFA Policy Statement 4.2 on this issue is reproduced in its entirety below.

Environmental Credentials of Timber as a Building Material IFA Forestry Policy Statement 4.2

The Institute of Foresters of Australia (IFA) advocates environmental credentials of building products, including energy use, should be determined by a full life-cycle analysis.

Timber has considerable environmental advantages as a building product. Timber sourced from forests certified by all internationally recognised forest certification schemes should be recognised in green building rating schemes and building regulations.

The Issue

There is increasing concern over the environmental impacts associated with different building products and the ongoing energy efficiency of different buildings. If the full life cycle is assessed, then timber has significant advantages over other construction materials such as brick, steel, aluminium or plastics. Current energy rating schemes for new buildings consider only operational energy, and not embodied life-cycle energy. This disadvantages timber as a building product, ignoring the life-cycle impacts of different building materials and resulting in perverse environmental impacts.

Background

In recent years, there has been a strong policy focus to increase the energy efficiency of new dwellings and commercial buildings. Standards for energy efficiency and environmental impacts of materials are being incorporated into building codes and regulations. “Green building” is now a well-established driver of change in the construction industry. Focus has shifted to increase the energy efficiency of new dwellings and commercial buildings by looking at the building materials rather than the energy used by occupants. When produced from a sustainably managed forest, timber comes from a renewable resource and little energy is used in the production process. It is natural, durable, biodegradable and recyclable, and stores carbon for long periods even after disposal. When the full life cycle of alternative building products is taken into account, other products generally have a much higher energy use in their extraction and production. Timber generally has a low energy requirement for production (embodied energy) compared with other building materials. Timber has other benefits when used in construction, including good thermal and acoustic properties. It also maximises the efficiency of insulation materials because the wood never gets cold or dissipates heat. Timber building materials create low waste on site and have low volatile chemical emissions.

Policy
The IFA supports and encourages:
• Using timber produced from sustainably managed forests as a building material
• International greenhouse gas accounting systems that recognise carbon sequestration in timber • Ongoing research into life-cycle assessments of building products and long-term monitoring of the actual energy use of inhabited buildings constructed from different products
• Communicating factual, balanced information on the environmental benefits of using sustainably produced timber from certified sources.

The IFA considers that:
• Timber is one of the most environmentally friendly building materials when the full life-cycle analysis of the building product is considered.

Source:https://www.forestry.org.au/Forestry/documents/policy/Policy4_2EnvironmentalCredentialsofTimberasaBuildingMaterial.pdf

Domestic Timber Supply

For both environmental and economic reasons, it is important to understand the full range of forest products produced by the NSW timber industry (see insert).

Markets for high value logs are well established and deliver the greatest return to the forest grower and wood processor. The issue however is ensuring sustainable supply through long term timber policy support and reducing fire risk.

The issue with lower quality logs is one of improved utilization. Some of these lower value logs are currently treated as waste. As below, creating demand/finding markets for these logs is currently more difficult, but is vitally important in a sustainable economy for both economic and environmental reasons.

Log Types

Wood comes from logs (roundwood) which are cut from the stem (bole) of felled trees. The type and quality of the logs determines what they can be used for. In NSW there are four main classes of log:

- Elite Logs – used to produce poles, piles and girders
- High-quality logs – principally used to produce value-added sawn timber
- Low-quality logs (Salvage logs) ¬– principally used to produce green sawn timber, industrial and fencing timber (industrial grade)
- Pulplogs – principally used to produce woodchips and fuelwood

Elite and high-quality logs are the most valuable of the log products and are the most tightly specified. Healthy mature trees with large, long, and straight stems are the main source of elite and high-quality logs. High quality logs are graded, measured and marked onsite before being loaded for transport.

Low-quality logs and pulplogs are a by-product of harvesting trees for elite and high-quality logs. They are also the principal product of forest thinning (see below). Lower quality logs are typically processed into industrial commodity products while pulplogs are typically chipped or cut into firewood.

The ratio of elite and high-quality log to low-quality log and pulplog depends upon the physical attributes of the forest and trees which are harvested from it. Small

trees, young trees, trees with poor form and old trees will typically produce a high proportion of low-quality log and pulplog a low proportion of high-quality log.

Cypress pine is somewhat of an exception, it is a small tree but because it grows straight and sound it often produces a high proportion of high-quality log.
The woody proportion of a harvested tree that cannot be utilised is classified as waste and is left in the forest. The amount of waste is determined by the strength of the market for low-quality log and pulplog.

The Supply of High-Quality Logs
Major problems with future timber supply are:

- sovereign risk of altered access to public native forests due to tenure reallocation
- lack of effective policy support
- risk of catastrophic bushfires.

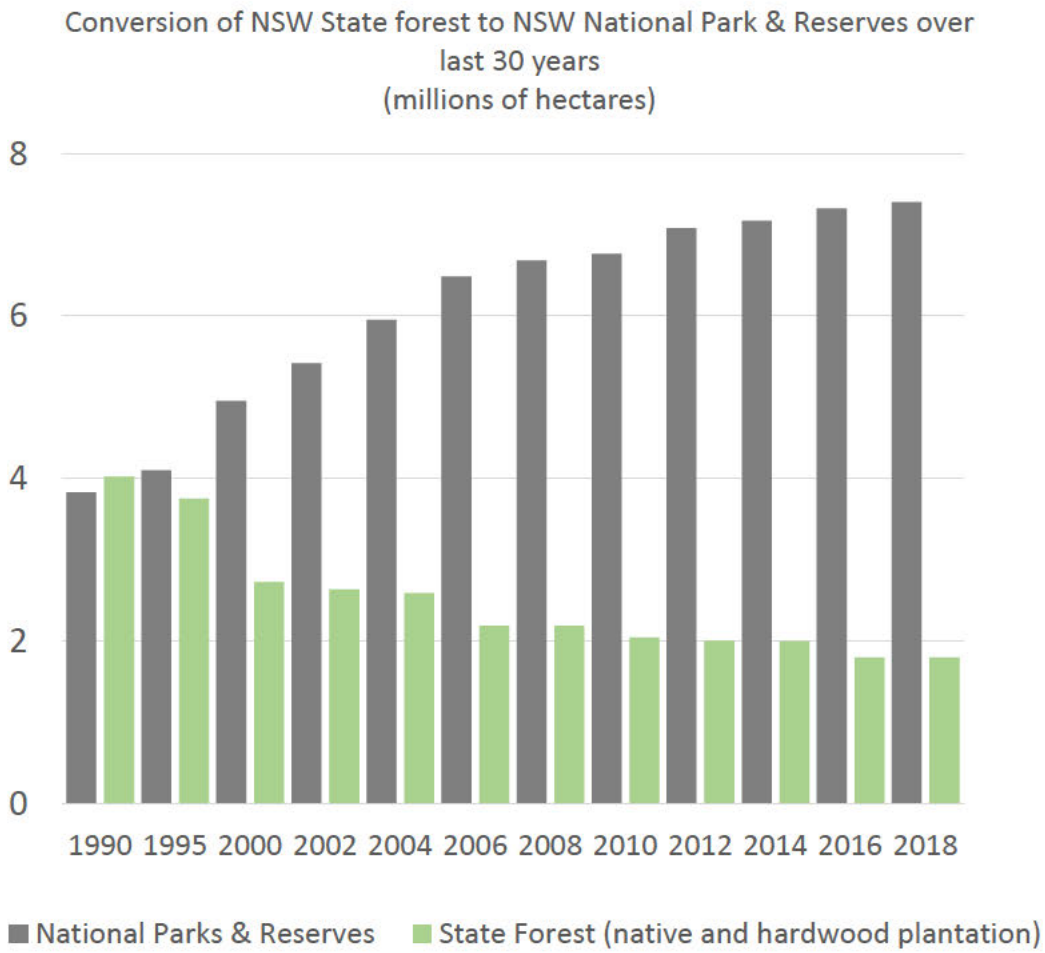
As below, addressing these issues requires clear long term policy support for the timber industry and active and adaptive forest management across all tenures to prevent bushfires (as far as possible) and to lessen the impact of fires that do occur.

High Sovereign Risk
Most of NSW's timber resources, whether plantations or native forests, are held in public ownership. Public ownership makes the future supply of domestically produced timber heavily dependent on public policy.

Under this operating environment, the NSW government can adjust the proportion and amount of timber made available and the terms of its supply. The government also controls how and whether forests are managed and protected and thus fire risk. Together, these factors create a high level of sovereign risk for the fully privatised timber processing and manufacturing sector.

The influence of government policy extends to the timber supplied from private land. Private Native Forestry (aka Farm Forestry) is controlled through forestry and environmental regulation which determines whether a forest may be utilised and under what terms.

It is not possible to predict reliably how future government policies will impact forestry. As such it is not possible to forecast whether NSW timber supply will be further restricted or enhanced. For the native hardwood sector the trend historically has been one of steady decline.



Bipartisan support based on industry and community consultation is required to deliver long term policy, legislative and contractual safeguards for timber supply in NSW.

Are Plantations the Answer?
Investment in new plantations is often proposed as a solution to the government's restriction on supply from native forests. There are however a number of obstacles including:

The availability of land: Finding cleared land that is suitable and affordable for timber plantations is a challenge for plantation forestry. Much suitable land is heavily contested by the agricultural sector for agricultural use.

Long term economics of plantations: With minimal government support the economics and risks of long rotation plantations remain fundamentally challenging. In 2018 the Federal Government released a paper '*Growing a Better Australia'* which highlighted the need for a billion more plantation trees (equivalent to 400,000 hectares). The plan however was only supported by $20 million in budget funding, a commitment equivalent to the cost of a few thousand hectares.

While the economics of plantation investment can be improved through mechanisms such as carbon sequestration credits and tax-based incentives, in recent decades these have had limited success.

- *Carbon sequestration schemes* have been hampered by the Commonwealth's overly complex and unduly restrictive operating rules. The issues which restrict participation have been a problem for over a decade and are presently the subject of a government review.
- *Tax based schemes* were effective in stimulating investment in short rotations, however the investment models were not sustainable and collapsed following the global financial crisis. Analysis revealed that the expansion of plantation had occurred too rapidly and in inappropriate areas. It was also found that many business models were undermined by corporate profiteering.

The 2019/20 bushfires highlighted that investment in long rotation plantations is high risk. This has since been reflected in rising insurance premiums, which have doubled since the bushfires.

Managing the risks of bushfires: When projecting future timber supply, special consideration must be given to the impact of bushfires. Plantations are far more vulnerable to destruction from bushfires than native forest. The 2019-20 bushfires had a catastrophic impact on the industry, destroying forests, forest infrastructure and numerous processing mills.

Softwood: Exotic softwood plantations were arguably the worst impacted as – unlike native forests and species - they have not evolved with fire and as had limited natural resistance. Salvage of burnt timber has temporarily enhanced timber supply however this is coming to an end. When salvage operations are completed a major supply adjustment will follow. The impact on sustainable supply has not yet been officially announced, however, in key areas like the south-west slopes the reduction in sustainable yield is expected to be as high as 40 per cent.

The NSW government appears committed to replacing plantations which have been destroyed by fire and it is understood that this will commence on scale in winter 2021. It will however take up to ten years to complete the replant, 13 years before the first plantations can be thinned (for pulpwood) and 22 years before the first cut of sawlogs can occur.

The ramifications of the shortfall in softwood timber supply are very serious. The closure of at least one large sawmill is likely and the relocation of a plymill at Wagga Wagga has already been announced. To mitigate the impact timber will need to be imported timber or sourced from other plantations regions. Whether this can occur economically (without government assistance) is highly doubtful.

Hardwood: Over four million hectares of native forest was burnt in the 2019-20 bushfires. These fires destroyed billions of dollars of high-quality hardwood timber (along with many other forest values). Although much of this resource was unavailable to industry the losses were real and will limit future timber supply options.

On State Forests designated for timber production, 60 per cent (on average) of the native forests were burnt, while on private land around 25 per cent of the native forests authorized for timber harvesting were impacted.

RFA Region/Sub-region	Total Net Harvest Area (hectares)	NHA mapped as fire-affected (hectares)	Proportion of NHA impacted by fire (per cent)
North Coast Region	408,500	200,000	49%
Eden Region	109,400	87,300	80%
South Coast Sub-Region (South Coast Region)	128,800	109,800	85%
Tumut Sub-Region (South Coast Region)	44,800	31,100	69%

Source: FCNSW (2020) 2019–20 Wildfires NSW Coastal Hardwood Forests Sustainable Yield Review

The intensity of the fires and the damage that they caused to native timber was highly variable. The worst impacts occurred in Eden, Tumut and the South Coast. In these areas the effect on sawlog sustained yield have been estimated by the Forestry Corporation at 13%, 27% and to 30% respectively, while in the less badly affected areas of the North East required reductions are estimated at 4%. No data is available on the impacts of timber availability from private native forests.

Annualised sustained yield for first three reporting periods			
RFA region	Year range	High-quality logs (m^3)	Modelled Reduction due to fire Impacts %
North East	2020 - 2031	230,000	4%
Eden	2020 - 2034	22,700	13%
South Coast	2020 - 2034	35,000	30%
Tumut	2020 - 2034	25,800	27%

Source: FCNSW (2020) 2019–20 Wildfires NSW Coastal Hardwood Forests Sustainable Yield Review

Following the fires the government responded by providing financial assistance to affected parties. The assistance included $140 million for Bushfire Industry Recovery and up to $10 million in matching funding for the Federal Government's $15 million program to assist with the additional cost of freight and storage for burnt logs.

Following the catastrophic fires, there must be wholesale forest land management reform moving forward and programs to prevent a reoccurrence.
What is well known within the timber industry, is that in the 30 years preceding the 2019-20 bushfires, the NSW government applied a minimalist approach to fuel hazard reduction and fire trail maintenance, choosing instead to concentrate its investment in centralised fire emergency response.

The extreme climate settings leading into the summer of 2019-20 meant that some large-scale bushfires were inevitable. However, lack of forest maintenance greatly hampered control by limiting the opportunity for rapid early suppression. This was critical in enabling small fires to develop into 'mega-fires'. As below, forest thinning and finding markets for forest residues is a key part of bushfire risk reduction.

The Utilisation of Lower Quality Logs

The greater utilization of lower quality logs and wood waste is an important issue, where Australia lags other advanced economies. It is a critical part of advancing NSW towards the circular economy. Essentially, greater utilization is about strengthening the timber supply chain to create greater value from timber resources and manufacturing expertise.

These resources can be by-products of forest management (residual biomass), by-products of sawlog harvesting (when the 'non-merchantable' portion of the tree is left on the forest floor), or by-products of sawmilling operations.

From an industry perspective, residual biomass has value and should not be regarded as 'waste' material. Effective and efficient use of residual biomass is important not only for forest health and safety but for increasing the economic returns from Australia's forests and forest product industries.

Currently, some timber by-products are used to maintain forest ecological health or mill site productivity, while others are used in the manufacture of other forest products or for production of heat or electricity.

However, with the support of the NSW government, there is an exciting opportunity to utilize timber by-products much more efficiently and supply nascent markets. This opportunity is covered in our response to Terms 1(a) and (e) of this submission.

Domestic Timber Demand

As reports from our counterparts in the construction industry attest, domestic timber demand is being driven to near record highs as a result of the impact of housing demand from low interest loans and the Australian government's $688 million *HomeBuilder* program, along with restrictions on supply caused by the bushfires, COVID-19 and limited global supply.

FRAME & TRUSS MANUFACTURERS ASSOCIATION (FTMA)

Briefing #8: May 2021

Pipeline of work continues to grow

"*With uncertainty on so many fronts, most of which are outside the control of individual businesses, industries and even countries, all we can do is focus on what is in our control*."

"*The value of building work in the pipeline has never grown faster, has rarely grown for as long and has never been so focussed on one sector: houses*."

A Housing Boom

- Australia is going through a housing boom that is without precedent in its history. The amount and value of work in the building pipeline has never been greater, has never been faster, has never been more focussed on free-standing houses.
- As a result, the construction industry face the most stretched supply chain in modern times.

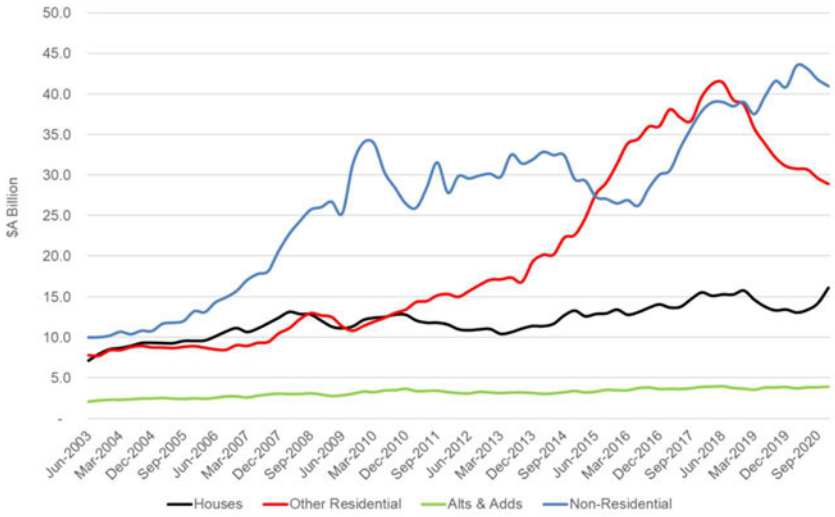
A Growing Homebuilding Pipeline

- In the December quarter of 2020, the value of building work 'in the pipeline' totalled $89.9 billion across Australia
- The value of free-standing houses in the pipeline for the quarter lifted by 13.4% to a new record value of $16.1 billion. Never has more work been added to the housing pipeline than in the December 2020 quarter.

Demand Moves to New Houses

- Falling by 2.3% in the December quarter, the pipeline value of all the other residential formats combined is declining, as demand rushes toward new houses.

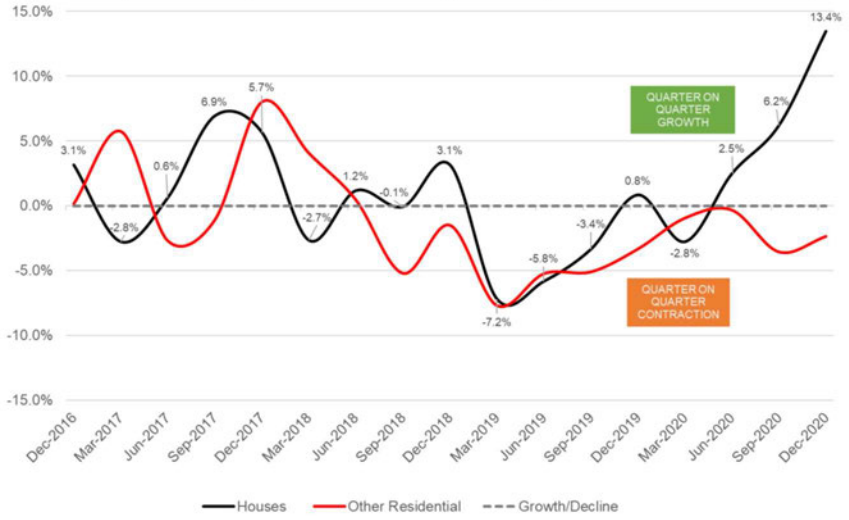
Australian Building Work Pipeline: JQ'03 – DQ'20 (AUDBn)



Source: ABS, derived and IndustryEdge

- The value of building work in the pipeline has never grown faster, has rarely grown for as long and has never been so focussed on one sector: houses.

Australian Building Work Pipeline: Quarterly Changes: DQ'16 – DQ'20 (AUDBn)



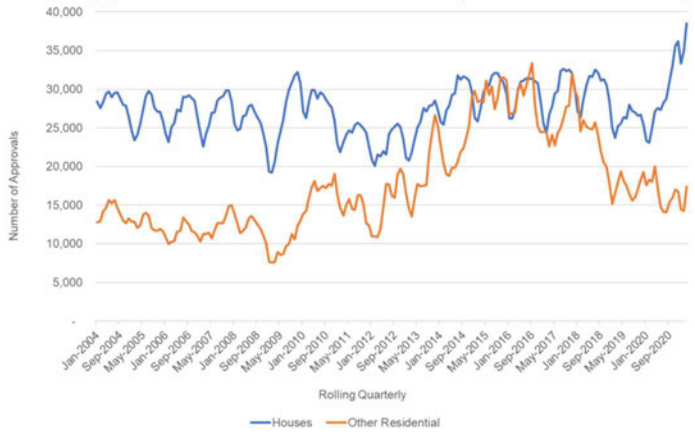
Source: ABS, derived and IndustryEdge

- Given record house approvals in March 2021, the building pipeline will be expected to grow when the March 2021 quarter data becomes available in August. In essence, the pipeline will not get smaller anytime soon, so the stress on the supply chain will continue.

Record House Approvals in March 2021

- In the first three months of 2021, Australia approved 55,895 separate dwellings, up 30 per cent on the same period in 2020. Annualised, that amounts to a little under 224,000 separate dwellings to be built.
- Of total approvals, a record 69 per cent (38,517) were free-standing houses, ahead of the previous record of 36,220 approvals in the December 2020 quarter.
- Pre-empting the close of the stimulus package, March 2021 saw 15,596 approvals of free-standing houses, beating the previous month's all-time high of 13,849 approvals.
- While future approvals are expected to soften a record pipeline of building work remains.

Housing v Other Approvals: Jan '04 – Mar '21 (Number – Rolling Quarterly)



Source: ABS, derived and IndustryEdge

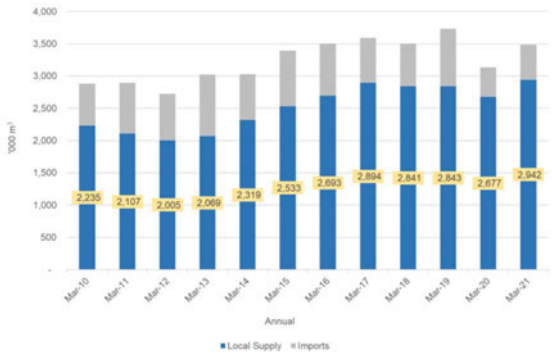
Global Supply Chains are Depleted

- The real question is how and when will this record pipeline of building work will be completed.
- Internationally, stimulus packages have created record demand for timber, leading to a global timber shortage. Australia is competing with larger markets for imported timber.
- The price of structural lumber has grown to USD1,050/Mbf, more than triple the historic average, up around 200 per cent in the past 18 months.
- While local spot prices have increased, this reflects prices for marginal volume, not core supply. As a result, the vast majority of sawn timber sold in Australia is significantly lower priced than elsewhere in the world.
- Home owners, builders, fabricators, processors and growers will need to accept that timber prices have to increase. Otherwise, wood will not be available whenever there is an alternative supply.

Local Timber Supply is at Record Levels

- Imported timber provides 'flex' in the market. However, the core volume is the domestic production of sawn timber.

Australian Sawn Softwood Consumption: YE Mar '10 – YE Mar '21 ('000 m3)



Source: ABS, derived and IndustryEdge

- The figures show that
  - Australian supplies of sawn softwood have never been higher
  - Local sawn timber supply is c.10 per cent higher year on year
  - The supply chain lacks spare capacity

- Australia's sawmills are operating at capacity. New plantations and sawmills take time, planning and investment to come online.
- With prices for sawn timber often significantly lower than in the US market, the driver for increased investment in domestic wood processing is limited. This is another driver for higher timber prices, across the supply chain.
- Sawn structural timber (softwood) is used in more than 75 per cent of new houses and townhouses. Demand-side pressure on sawn timber is greatest when there is a rapid expansion in the approval and building of houses, as is currently occurring.
- The total building supply chain is struggling to keep up as the pipeline of building work has exploded over the last year.

Source: https://ftmanews.com/ftma-housing-update-8/

The HIA reports in its *Housing Forecast Summer 2021*:

'Many leading indicators have reached record levels following the growth in demand for detached housing that followed the announcement of HomeBuilder in June 2020.
New Home Sales peaked in the December 2020 quarter to be almost 100 per cent higher than for the same period the year before. A record quarter of loan approvals was also observed in the December quarter of 2020.
Finally, building approvals are now starting to reflect this surge in demand for detached homes and will continue to increase in coming months as this exceptionally large flow of work enters the pipeline….
First home buyers have responded rapidly and account for 43 per cent of loans, the highest rate since the post-GFC stimulus measures. They not only accessed HomeBuilder grants, they also benefited from the National Housing Finance Investment Corporation guarantees, state government grants and a brief reprieve from house price growth.
Investor activity was very low in 2020 but they are starting to return as rapid rental price growth pulls them back to the market. Investors will be important for continuing demand for new homes once the HomeBuilder incentives end.
All this indicates a very strong level of new detached home construction through 2021 and into the first half of 2022.'

HIA New Home Sales Monthly Report, March 2021

'MARCH MADNESS SEES NEW HOME SALES SPIKE'

New Home Sales surged in March to reach the second strongest level since 2004, behind December 2020.

New Home Sales soared in March 2021 to be 90.3 per cent higher than February as the second – and final – phase of the HomeBuilder grant closed.

A surge in sales was observed following the announcement of HomeBuilder in June 2020. HomeBuilder, combined with low interest rates, changing population dynamics and improving market confidence, led to strong sales through to the end of 2020.

In December 2020, there was a near record volume of new home sales as households rushed to finalise contracts to build a new home before the end of the $25,000 grant. This same effect can be seen in March as households rushed to get access to the $15,000 grant.

While the number of sales in March did not reach the same heights as December, it was still the second strongest monthly result since 2004. Over the year to March 2021, sales increased by 42.6 per cent compared to the previous year, which was mostly prior to the impacts of COVID-19. This indicates a strong level of building activity will occur in 2021 and into 2022, providing employment to the construction sector and supporting the wider economy.

HomeBuilder brought forward demand for new homes. As a consequence, sales over the coming months are expected to cool from recent highs.
Since the onset of COVID-19 a significant shift has occurred in consumer preferences towards detached houses and regional locations.

Preliminary migration data shows more Australians left the capital cities in each of the first three quarters of 2020 than at any other time since records began in 2001. This involved an acceleration of retirement plans and fewer people moving to urban centres for work or education. Working from home arrangements have helped to facilitate this change in consumer preference.

This demographic shift in population will continue to drive demand for new detached homes. Recent strong house price growth has also sparked FOMO in buyers, which will continue to support the industry.

Sales in the March 2021 quarter increased across all the five largest jurisdictions compared to the same time the previous year. South Australia was up by 90.6 per cent, followed by Queensland (+54.9 per cent) and Victoria (+41.9 per cent). New South Wales increased by 24.7 per cent and Western Australia is up by 15.2 per cent over the same period.'

- As widely reported in media across Australia, there is a clear recognition that between dwindling supply and HomeBuilder boosted demand for housing, timber shortages are starting to bite. And, as per the Daily Telegraph article below, that 'there is no alternative'.

04 WEDNESDAY FEBRUARY 17 2021

Building sector to get nailed

Carpenters Spyros and Costa Theos, from Laconia Carpentry, at work in Randwick. Picture: Justin Lloyd

EXCLUSIVE
LACHLAN LEEMING AND KAITLYN BUDSON-O'FARRELL

THE state's housing construction industry is on the brink of disaster, with the twin strains of the Black Summer bushfires and soaring international demand for quality pine predicted to cause a major shortfall in timber used for house frames.

Industry bodies fear the state's supply of softwood pine could be exhausted as early as April — triggering rocketing construction costs and thousands of job losses.

Hyne Timber CEO Jen Kleinschmidt is now appealing for timber that would usually be exported to China to be freighted from interstate to NSW for processing, but said transportation costs meant the move wasn't viable without government subsidies.

"People ask me, what are the alternatives? I explain, there are no alternatives," Ms Kleinschmidt, who runs one of NSW's largest timber mills at Tumbarumba said.

"This sawmill ... needs logs to keep people in jobs and maintain the supply of Australian grown and manufactured timber for our construction sector."

However, with up to 40 per cent of NSW's timber stock razed in last year's fires, mills are facing a long-term shortage as local builders already begin to feel the bite.

According to Housing Industry Association chief economist Tim Reardon, the shortfall could force NSW into a costly international market.

"Less timber domestically means we're increasingly exposed to the global price of timber," Mr Reardon said.

Australian Forest Products Association deputy CEO Victor Violante said the high demand for homes — driven by the federal government's HomeBuilder incentives — was the biggest factor in NSW's shortfall, but added that overseas shortages had made it "much harder for imports to fill the gaps we are seeing".

Master Builders Association of NSW executive director Brian Seidler said members held "very large concerns" and were predicting the shortage could bite as soon as April.

"That's the last thing we need while the industry leads the rebuild of a post-COVID-19 economy," he said.

Federal and state governments have pumped more than $200m into the forestry industry since the fires, while it's understood NSW considered subsidising long-haul transport of timber, only for it to be deemed unviable due to the long-term supply challenge facing the industry.

And while some is predicted, the bite is already being felt at ground-level by builders as they grapple with a shortage of supplies for residential construction.

Laconia Carpentry business owner John Theos, of Castle Hill, said his suppliers were already struggling to source enough timber and were often late.

"It's hard to get the lengths you want, or the type of treated pine I normally use ... deliveries are often days late sometimes," Mr Theos, 55, said.

"I'm buying pallets of loose timber from my supplier just so we can make frames, and I'm shuffling my jobs around a bit because I can't complete them if I don't have the pine for it."

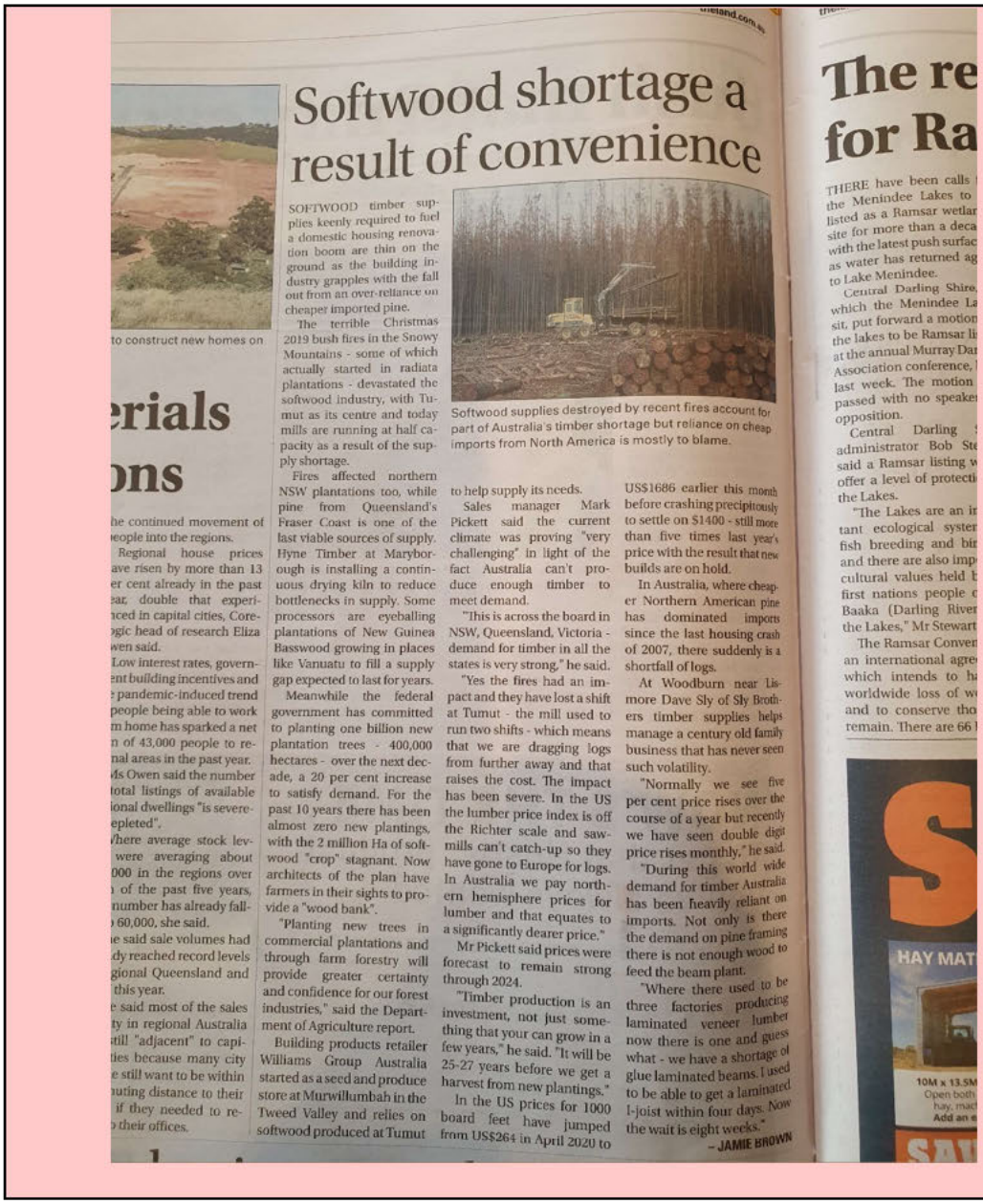
- On 23 March 2021, the Master Builders Association reported the results of a member survey about the extent of problems being caused by the extraordinary success of HomeBuilder in activating huge demand for home building consistently across the country in metropolitan and regional Australia.

'Pressure on building product supply'

Delays and cost increases in building product supplies is also having an impact. Timber engineered wood products – confusingly known as 'wood excluding timber', steel products, non-tile roofing materials and windows are the products most delayed according to the survey.

The proportion of businesses experiencing these delays ranges from 70% - 95%. The product most in short supply is timber which ranked in most short supply in all states except WA where they build in double brick.'

- A recent article from the Land (27 May) highlights that demand continues to outstrip supply.



to construct new homes on

erials ons

he continued movement of eople into the regions.

Regional house prices ave risen by more than 13 er cent already in the past ear, double that experi- nced in capital cities, Core- gic head of research Eliza wen said.

Low interest rates, govern- ent building incentives and pandemic-induced trend people being able to work m home has sparked a net n of 43,000 people to re- nal areas in the past year.

Ms Owen said the number otal listings of available ional dwellings "is severe- epleted".

Where average stock lev- were averaging about 000 in the regions over of the past five years, number has already fall- 60,000, she said.

e said sale volumes had dy reached record levels gional Queensland and this year.

e said most of the sales ty in regional Australia till "adjacent" to capi- ties because many city e still want to be within uting distance to their if they needed to re- their offices.

Softwood shortage a result of convenience

SOFTWOOD timber supplies keenly required to fuel a domestic housing renovation boom are thin on the ground as the building industry grapples with the fall out from an over-reliance on cheaper imported pine.

The terrible Christmas 2019 bush fires in the Snowy Mountains - some of which actually started in radiata plantations - devastated the softwood industry, with Tumut as its centre and today mills are running at half capacity as a result of the supply shortage.

Fires affected northern NSW plantations too, while pine from Queensland's Fraser Coast is one of the last viable sources of supply. Hyne Timber at Maryborough is installing a continuous drying kiln to reduce bottlenecks in supply. Some processors are eyeballing plantations of New Guinea Basswood growing in places like Vanuatu to fill a supply gap expected to last for years.

Meanwhile the federal government has committed to planting one billion new plantation trees - 400,000 hectares - over the next decade, a 20 per cent increase to satisfy demand. For the past 10 years there has been almost zero new plantings, with the 2 million Ha of softwood "crop" stagnant. Now architects of the plan have farmers in their sights to provide a "wood bank".

"Planting new trees in commercial plantations and through farm forestry will provide greater certainty and confidence for our forest industries," said the Department of Agriculture report.

Building products retailer Williams Group Australia started as a seed and produce store at Murwillumbah in the Tweed Valley and relies on softwood produced at Tumut to help supply its needs.

Softwood supplies destroyed by recent fires account for part of Australia's timber shortage but reliance on cheap imports from North America is mostly to blame.

Sales manager Mark Pickett said the current climate was proving "very challenging" in light of the fact Australia can't produce enough timber to meet demand.

"This is across the board in NSW, Queensland, Victoria - demand for timber in all the states is very strong," he said.

"Yes the fires had an impact and they have lost a shift at Tumut - the mill used to run two shifts - which means that we are dragging logs from further away and that raises the cost. The impact has been severe. In the US the lumber price index is off the Richter scale and sawmills can't catch-up so they have gone to Europe for logs. In Australia we pay northern hemisphere prices for lumber and that equates to a significantly dearer price."

Mr Pickett said prices were forecast to remain strong through 2024.

"Timber production is an investment, not just something that your can grow in a few years," he said. "It will be 25-27 years before we get a harvest from new plantings."

In the US prices for 1000 board feet have jumped from US$264 in April 2020 to US$1686 earlier this month before crashing precipitously to settle on $1400 - still more than five times last year's price with the result that new builds are on hold.

In Australia, where cheaper Northern American pine has dominated imports since the last housing crash of 2007, there suddenly is a shortfall of logs.

At Woodburn near Lismore Dave Sly of Sly Brothers timber supplies helps manage a century old family business that has never seen such volatility.

"Normally we see five per cent price rises over the course of a year but recently we have seen double digit price rises monthly," he said.

"During this world wide demand for timber Australia has been heavily reliant on imports. Not only is there the demand on pine framing there is not enough wood to feed the beam plant.

"Where there used to be three factories producing laminated veneer lumber now there is one and guess what - we have a shortage of glue laminated beams. I used to be able to get a laminated I-joist within four days. Now the wait is eight weeks."

– JAMIE BROWN

The re for Ra

THERE have been calls the Menindee Lakes to listed as a Ramsar wetlar site for more than a deca with the latest push surfac as water has returned ag to Lake Menindee.

Central Darling Shire, which the Menindee La sit, put forward a motion the lakes to be Ramsar li at the annual Murray Dar Association conference, last week. The motion passed with no speake opposition.

Central Darling administrator Bob Ste said a Ramsar listing w offer a level of protecti the Lakes.

"The Lakes are an in tant ecological syster fish breeding and bir and there are also imp cultural values held b first nations people o Baaka (Darling River the Lakes," Mr Stewart

The Ramsar Conven an international agre which intends to ha worldwide loss of w and to conserve tho remain. There are 66

FUTURE SUPPLY & DEMAND PROJECTIONS

The 30-year outlook for timber supply appears challenging. NSW faces major obstacles in sourcing sufficient timber to meet the growing needs of the economy at an affordable price.

The 2019-20 bushfires, COVID-19 and the emergence of a global timber shortage have together created a perfect storm which was not foreseeable 18 months ago.

The impact of the 2019-20 fires was to radically alter official projections of timber supply for both softwood and hardwood. As a consequence, there is currently no reliable supply projections available.

"Record level of demand for building materials, as well as the constraints placed due to COVID — restrictions on global freight and shipping containers and on demand globally for materials, particularly for timber — are placing constraints on the detached housing market in Australia...

'Typically, we would see a domestic home completed within seven months. This year, that's probably going to stretch out closer to nine months....

"Builders certainly need to be cautious in their business planning about what comes out over the course of the next couple of years, because it's certainly possible to overcommit in a market where there are constraints for the supply of land, labour and lumber."

Housing Industry Association chief economist Tim Reardon

Australia's timber supplies have been falling for several years, generating longer lead times on orders and threatening to affect the schedules and costs of building works over coming years. JOHN POWER reports for Hardware Journal [edited extract]

Timber is a raw commodity that also has a tendency to hit raw nerves.

Supply these days is a truly international enterprise, subject to complex fluctuations in global building and construction activity, a range of tight and loose regulatory and environmental protections in different countries, and all the predictable headaches attached to an industry that relies on a resource that takes several decades to mature.

In an economy that prioritises swift returns on investment, clear-cut governmental policy and linear scales of demand, no wonder landowners have turned their attention to alpacas rather than tree plantations.

A recent government report1 shows that only 1,400 hectares of new plantations were established in Australia in 2015-16, compared with more than 78,000 hectares 10 years earlier. Nevertheless, local demand for timber has grown steadily in response to solid building activity since the GFC, hence our growing dependence on imports.

And therein lies the problem: while global supplies to Australia were plentiful and relatively affordable immediately after the GFC, these global markets (particularly the US) have since recovered, raising prices and drawing down reserves filtering through to smaller markets like ours…

Certainly, there is great incentive for timber retailers and suppliers to refine their communications and achieve better outcomes for all. Competition from other sectors such as the steel industry serves as a perpetual reminder that the timber industry cannot be complacent.

"There is no denying that steel manufacturing is growing at a rapid rate in Australia, with some project builders even importing their own steel frames and trusses," Jacinta warns. "Our research tells us that steel accounts for approximately 18 percent nationally of all framing and is continuing to gain traction. Price rises in timber have not helped this fact, as F&T (Frame and Truss) plants are forced to lock in pricing with project builders for a minimum of six months and steel contract pricing can be held at times for three years."

Adaption on show

Another way of relieving some of the pressure on raw timber supplies is to use technology to widen the range of useful timber resources.

The Australian timber market, representing both locally grown and imported product, has always been quick to adapt to changing conditions.

Good examples of adaptation are apparent in the massive Engineered Wood Products (EWP) sector, where new manufacturing processes are creating high-quality products using discarded, undersized, non-traditional and/or juvenile timber resources. Markets are diverse, covering hardwood and softwood LVL (Laminated Veneer Lumber), CLT (Cross Laminated Timber) and Glulam (Glued Laminated Timber) products, plus other composite sections for structural components in building construction.

How big is the EWP sector in Australia?

Kevin Ezard, Director, Frame Australia Conference and Exhibition (www.frameaustralia.com), and an authority on EWP innovation, says the EWP market is substantial and on track for solid expansion in years to come.

"A Market Development and Marketing Plan that I prepared for FWPA (Forest & Wood Products Australia) in 2016 included a projection (over five years) for a 10 per cent market share for timber in

mid-rise construction, which would provide a market opportunity of $1.38 billion per year for the supply of prefabricated and/or manufactured structural timber and engineered wood products," he says.

"That equates to 552,000 cubic metres of timber framing, and 184,000 cubic metres of engineered/mass timber per year. At this stage I am confident these estimates are on track provided the supply chain can expand to meet these levels of supply volumes."

In relation to supply issues, Kevin agrees that local plantation resources need to expand to reduce our reliance on imports. In addition, he notes that some exported material might be better utilized at home for local EWP production.

"My understanding is that large quantities of lower-grade wood currently being exported to China and other Asian countries may be better utilised for manufacturing within Australia."

As for long-term trends, Kevin says he believes recent growth in the use of engineered wood is "the tip of an iceberg emerging", as timber construction is lower cost and faster compared to traditional materials…

Recommendations

- *The Role of Government is Key*: As outlined above, the NSW government is the state's predominant forest grower and as such has at its disposal all the key policy levers to alleviate the supply constraint.
- *Wholesale Reform*: The arrival of the tragic Black Summer 2019-20 wildfires and COVID-19 were a 'perfect storm', giving rise to a global timber supply crisis. This must now lead to wholesale industry reform which has been found wanting from the NSW government for many years.
- *Support Plantations*: For the plantations sector the Federal government is best placed to address the major looming shortfall. With more favourable policy settings, new investment in plantations will occur. It must be remembered, however, that the timber benefits from new plantations take several decades to be realised.
- *Public Native Forest Management*: To improve supply in the short and medium term, the most cost-effective opportunities reside within the native forest sector. At present, the NSW government has constrained supply more tightly than at any time in its 150-year history. The NSW government must loosen native timber supply constraints to allow opportunities for the timber industry, the construction industry and the NSW economy.
- There is opportunity for the NSW Government to reduce ideological conflict over access to public native forests by finding a more workable regulatory framework. The NSW EPA's approach to regulating Forestry Corporation has become obsessive and highly unbalanced. As part of a reform to NSW land management policies and practices, the NSW government must redirect the EPA's focus to eliminate its native forestry biases.
- With 88 per cent of public forested land reserved from native timber harvesting, operations have become concentrated in some local areas. This has opened the

government to criticism from local communities that it is supporting the intensification of harvesting. Allowing timber harvesting to have 'a lighter touch' across a larger area by integrating forestry with the management of forests more generally, along with clear communications campaigns, would address many genuine community concerns. Such an approach could also help protect the forests from future catastrophic bushfires. For this to occur the NSW government needs to discard its siloed approach to forest management and to embrace tenure neutral principles.

- *Boost PNF*: A natural resource which has been neglected for many decades is the native timber found on private land. At present less than a quarter of private native forest owners participate in private native forestry and the 7-million-hectare estate contributes less than a third of the State's native timber supply. For those that do engage in private native forestry there is currently minimal support or resources to assist them.
- The state of private native forests is generally poor due to a long history of 'high grading' and no attention to fire management. With the right policy incentives there is considerable potential to enhance the health and productivity of private native forests which in turn would enhance their contribution to domestic supply. With the right incentives and encouragement, thousands of private landholders who are currently disengaged could become suppliers of sustainable native timber.

APPENDIX:

CASE STUDIES – Notaras Sawmilling – Grafton 7th June 2021

Supply is our biggest battle. I can't see any opportunity for our business anymore.

Activists portray us as irresponsible and reckless. To a person, our team cares about forests and native animals. Everyone wants north coast forests to be sustainable and well managed. The forests are in our backyard and matter a lot to us. Many forest scientists and ecologists work in the forests here with Forestry Corporation where our wood comes from - they know their stuff.

NSW has created its own wood supply crisis. The hardwood timber shortage shows how things are out of proportion. Millions live in NSW - we do need timber supply.

Industry leaders warned this was coming for years. What is done to get back on the rails? Nothing. It is demoralising.

I'm Donna Layton and I manage the Notaras family's Grafton sawmill. I joined 43 years ago as a TAFE student and later, studying by correspondence, graduated from university in business. I've been involved with every change in wood supply since then. This is the worst I have seen.

The Notaras brothers ran this business until they passed away. Their strong values were about the good of the whole community and their employees. The next generation of the family lives in Sydney and this approach continues under their ownership.

Our business was built on relationships. Loyal customers going back decades. Employees are long term and loyal to the mill. We are an important business in this region and produce a wholesale range of high-quality timber flooring and do bespoke orders for special buildings.

Our flooring is in the Adelaide Art Gallery (red ironbark), Balmain's The London Hotel (turpentine), in Warringah Mall Surf Dive & Ski shop (blackbutt), Grafton showground main pavilion (Aussie beech). A lot of indoor stadiums are ours and our timber is in Parliament House, Canberra.

We employ 37 people presently – 31 permanent and 6 casuals. We pay well above award and look after our people.

During COVID JobKeeper was a lifesaver and we ran the mill four days a week not five. For 2021 we've gone back up to five. That is more than needed now, but last year we got by with fewer casuals and stretched the work across our generally older permanent workers. To avoid risk of injuries we lifted numbers, but the erratic supply is wearing everyone down.

My dilemma is if the business is to survive, we must retain our skilled workers. They are irreplaceable. We had hopes for a better 2021. Enquiry from customers is the highest ever. But this year wood supply to the end of May is only 70% of normal and getting worse. I'm turning so many potential customers away. I can't bring on a single new customer. I can't supply existing customers.

With next to no timber coming in we will have to shed people.

The workers know what's going on. They worry. They need an income and certainty. They are highly skilled manual workers. Mostly, skills are learnt on the job – and we have always dedicated time and effort on in-house training. This mill is a big part of their life, they thrive on it and they're brilliant. One employee had cancer and being able to work and keep active assisted with his recovery, pay for treatment and it helped his mental wellbeing.

Customers can't get why people are so against forestry. They know it's done properly in Australia and it makes no sense to them.

Today is Friday. This week we had a single load (of harvested logs) into the yard (from the state forests). A normal week is around fifteen. One week it was six. It doesn't get worse than this.

We've been operating hand to mouth for eighteen months. The bushfires affected supply for months in 2020. We had to use up timber stocks kept on site to fill orders. There's no inventory now – no buffer. I can't rebuild it either with such low supply.

We try and try to find out but there's no communication day to day from Forestry Corporation how much timber to expect into our yard. It's impossible to run a business like this. We are in the dark about what to expect or when trucks (if any) are arriving.

Our business can't survive without a business-like wood supply agreement. That is not a big ask. When Forestry Corporation locked in its wood supply contract with Boral, our supply disruption started and it's got worse. Spotted gum is a key species - we had invested early in a small log line to suit the size and produced just what our customers needed. It makes excellent durable flooring. Flooring needs to last generations whether it is residential or commercial or sports stadium for schools or councils – customers look for the most durable.

Boral has a contract five years longer than other northern sawmills to 2028. Our agreement ends in 2023. There is no certainty it will even be renewed. Boral was given priority access to the best species. Wood supply from mixed species forests was always shared between the mills – that's what is written in the agreements. We weren't advised. Overnight our spotted gum disappeared.

We were the first to invest in special machinery to process the smaller spotted gum logs very successfully. Last year not a single load was delivered to our mill, and thus, we lost several hundred thousand dollars of revenue.

Forestry Corporation sends more highlands (northern tablelands) species. It's gone from 6% to 30% of the total supply. It is softer and less durable than coastal hardwood, costs more to freight extra distance, gets pests and needs chemical treatment, has more shrinkage and isn't fire rated! It is inferior, costs extra, needs extra handling and sells for less.

I have some Hansard when Spiro Notaras died to help you understand what we are about. This company is important to the whole region. We are a customer buying supplies off other local businesses. What happens to one affects the other.

I admit I don't sleep very well at times. There have been tough times before but nothing like this. It's one battle after another.

Yes, our home and farm at Nymboida was hit by the fires. I can't go into what that was like. We made timber available from the mill wholesale for local people to afford to rebuild.

Legislative Assembly Hansard – 18 February 2016

TRIBUTE TO SPIRO NOTARAS, OAM

Mr CHRISTOPHER GULAPTIS (Clarence—Parliamentary Secretary) [5.28 p.m.]: It is with regret that I inform the House of the passing of a Clarence Valley legend. Spiro John Notaras passed away on 9 January after struggling to recover from a stroke he suffered in the middle of last year. Spiro was born on 3 December 1932, the son of Greek immigrants Jack and Muriel, who settled in the Clarence Valley and opened the Marble Bar Cafe with Spiro's uncle and his family. Fancy that: a Greek family running a cafe in regional Australia! It sounds like a novel concept. It starts off as a familiar story of Greek immigrants in this country, but there is much more to the story of Spiro Notaras.

In 1952 Spiro's father and uncle, Jack and Tony, bought a timber mill at Lawrence. That was the beginning of Spiro's involvement in the timber industry, an industry that he was so passionate about all his adult life, right up until the day he passed away. Spiro and his brother, Brinos, carried on their father's legacy. They turned J. Notaras and Sons into one of the major businesses in the Clarence Valley and one of the major timber industries on the North Coast. Brinos ran the office until he was tragically killed in a motor accident in Coffs Harbour in 2005. Spiro ran the yard. After the death of Brinos, Spiro had to juggle both the office and the outdoor work. He was fortunate to have a loyal workforce and a most capable manager in Donna Layton. Donna was

approached by Spiro when she was at TAFE—he had a good eye for talented people—and 38 years later Donna is still managing the sawmill. Most of the workers at the mill have been with Spiro for many years. A quarter of the staff have worked at the mill for more than 25 years.

Spiro reciprocated this loyalty. At 83 he did not need to run a timber mill, but he did so because he loved the industry and he wanted to ensure that his workers had jobs in the Clarence Valley. Spiro's love for the industry was galvanised when, during the last election campaign, Labor announced that, if elected, it would create a koala national park on the North Coast. Spiro was horrified when this announcement was made; he saw it as the final nail in the coffin for the hardwood timber industry on the North Coast. He was like the drover's dog, following the Labor candidate at every candidates meeting across the electorate questioning him on the merits of this policy and how Labor would save the industry and save jobs in regional New South Wales. He was relentless because of his concern for the industry that he loved so much.

Spiro often went to Germany to look at new machinery and innovative technology that would improve productivity and provide longevity to his mill. He was very much a forward thinker. Spiro's contribution to the Clarence Valley was not just in the timber industry and the people it employed but also in sport and the promotion of movie theatres in the Clarence Valley. Spiro excelled in every sport he participated in. He could well have been an Olympic athlete—he tied with Australian sprint champion Hec Hogan, clocking 9.8 seconds for the 100-yard dash. His speed made him a champion rugby league winger and he participated in other sports such as surf club races, rowing, swimming and rugby union. He loved his sport and he was a fierce competitor. He was very honoured to carry the Olympic torch into Grafton before the 1956 Melbourne Olympics.

Spiro's father and uncle built the Saraton movie theatre in Grafton in 1926. It served the community very well for decades until it fell into severe disrepair. Spiro and his cousin Angelo and other family members took it upon themselves in 2008 to restore the Saraton with the aid of a New South Wales Government grant. They literally spent millions of dollars on restoring it to the point where it was one of the best regional theatres in New South Wales if not Australia.

Mr Andrew Fraser: It still is.

Mr CHRISTOPHER GULAPTIS: I acknowledge the interjection of the member for Coffs Harbour; it is one of the best regional theatres in New South Wales. Spiro was an integral part of the social fabric of Grafton and the Clarence Valley. Whilst I am very pleased he was acknowledged with a Medal of the Order of Australia in the New Year's honours list this year I am saddened that he was not alive to be fully recognised by the Clarence Valley community. I am very proud to say that Spiro Notaris was a friend of mine, and I am enriched by his friendship. Rest in peace, Spiro, we will dearly miss you.

TRIBUTE TO SPIRO NOTARAS, OAM

Mr ANDREW FRASER (Coffs Harbour—The Assistant-Speaker) [5.44 p.m.]: I join my colleague the member for Clarence in noting the passing of Spiro Notaras. Spiro passed away peacefully on 9 January 2016 at the age of 83 following a stroke from which he never recovered. Spiro was born in Grafton in December 1932, one of three children of Jack and Muriel Notaras, who were Greek immigrants from the island of Kythera who had settled in Grafton in 1905. Spiro had three children, John, Paul and Suzanne, as well as grandchildren, who spoke at his funeral. Spiro excelled in every sport he took on: track and field, athletics, swimming, rugby union and rugby league, sailing, rowing and surf lifesaving. He represented Grafton High School in athletics and swimming, and was enthusiastically involved in rugby league and rowing, both in and out of school hours.

At Newington College in Sydney from 1941 Spiro joined his brother, Brinos, in excelling in school sports such as athletics, swimming and rugby union. He competed successfully in many Great Public Schools [GPS] sporting competitions, winning the school's highest sports award in 1950. History repeated itself when his son, Paul, won the same award in 1983. As a member of the Woolgoolga Surf Life Saving Club he competed in events ranging from surf racing to surf boat rowing. He also played rugby league for the United Rugby League Club. Spiro was the lifesaver chosen to represent Woolgoolga in the 1954 Royal Surf Carnival for the visit of Queen Elizabeth II to Australia at Bondi Beach in front of a crowd of 150,000. Spiro was chosen to carry the Olympic torch into Grafton before the 1956 Olympic Games. Brinos had carried it through the Bom Bom State Forest into town.

In 1951 Spiro returned to Grafton, where he worked as a projectionist in the local cinemas for a time. He and his brother, Brinos, with assistance from their father, bought the Lawrence Sawmill. The brothers also bought the TB Timms' Mill at South Grafton, and rebuilt and extended it. They supplemented their timber quotas with a licence for the small spotted gum logs from Glenugie and Bom Bom forests—a resource that was not wanted by the bigger mills—and developed processing technology and markets for hardwood flooring. The brothers reinvested every dollar they made into the business to better process small logs and improve drying and dressing operations for the production of high-value North Coast flooring. Spiro's technical knowledge was unsurpassed: His processing developments were decades ahead of all Australian research programs. His pursuit of improvement was the objective of everything he did. His shed is full of all sorts of ideas for product development;

some worked and some did not, but that never slowed him down. Researchers are only now coming up with some of Spiro's old ideas.

J Notaras and Sons led the industry in the processing of spotted gum for flooring, milling of small regrowth and thinnings logs, computer-managed drying systems, advanced dressing machines, high-value export markets for spotted gum, integrated product development and viable markets for by-products. The tragic death of Brinos in 2005 left Spiro to run the family business, which he did with the same commitment and dedication to excellence and community leadership that the company has maintained since its beginning. J Notaras and Sons is now recognised as the world's best producer of hardwood flooring, which is a notable feature of many Australian public buildings and structures. They all stand as memorials to Brinos and Spiro. Spiro most enjoyed using his flooring in buildings in and around Grafton.

Both Brinos and Spiro were committed to the development of the North Coast timber industry as very active members and leaders of the NSW Forest Products Association. They vigorously pursued a secure and reliable resource supply as the keystone of the industry, the foundation for ongoing investment and employment in towns such as Grafton, and a strong economic contributor to rural communities. There will never be a stronger or more vocal advocate for the timber industry in Grafton. Spiro never missed an opportunity to present to any local group, gathering or the media about forest industry issues. He was always seen at every political rally representing the importance of the timber industry to the local community. His knowledge was welcomed at every government inquiry—and there have been a lot of them. The New South Wales timber industry has lost the most important person it ever had as a leader, miller, researcher, developer and advocate.

In March 2008 Spiro, together with his cousin Angelo and two other members of the Notaras family, began restoration of the Saraton Theatre in Grafton, which was originally built by the family in 1926. "Saraton" is the family name spelled backwards. The restoration was completed in 2010 and the theatre is again screening films. Spiro Notaras represented the embodiment of an ideal Australian citizen. From humble beginnings, he rose to be a respected and valued member of his local community. He strived to uphold the ideals of good sportsmanship, team spirit and community obligation. He has maintained strong family ties but never at the expense of broader loyalties and commitment, and can claim a wide circle of friends and acquaintances. To have worked with Spiro in any aspect was to establish a strong and enduring friendship.

He contributed to the development of the timber industry in northern New South Wales, being at the forefront of innovation and technological advancement. His industrial achievements fostered a loyal workforce and a safe working environment for that workforce, while providing stable employment in the regional city of Grafton. He did not keep the benefits of success for himself and his family alone, but invested them in improving the heritage and enjoyment of his fellow citizens. He was proud of his city and his place in it. Above all, Spiro was a gentleman in the old-fashioned sense of the word. He was posthumously awarded a Medal of the Order of Australia—OAM—for his services to the timber industry and his community. I understand that he was advised of this honour prior to his passing. I thank Russell Ainley for initiating that nomination, which I supported. Vale, Spiro Notaras.

Timber NSW submission to the NSW Legislative Council Inquiry into the long-term sustainability and future of the timber and forest products industry

TERM OF REFERENCE 1(d): transparency and data reporting of timber supply

Transparency and data reporting of timber supply

The Forestry Corporation has considerable expertise and experience assessing standing timber, estimating future yield and capturing timber sales.

The regulatory environment in which the Forestry Corporation operates has however become extremely complex. Reporting of timber supply is therefore not as simple as it used to be. As such, there is much greater need for transparency.

The new Coastal IFOA contains literally thousands of operating rules. Since the 2019-20 bushfires, the situation has been complicated further, with the EPA developing additional site-specific operating conditions.

The effect of these rules on timber yield have been significant. The challenge however is how to quantify their effect.

The Forestry Corporation assesses its timber resources using inventory ground plots. The data from these plots is then fed into FRAMES, its Forest resource estimation model. Unfortunately, it is not practical for FRAMES to predict the effects of the IFOA simply by drawing upon plot scale data.

This is because decisions made about timber are not made at the same scale. In practice, decisions about what trees must be retained to comply with IFOA rules are made at a much larger scale (forest stand scale).

FRAMES as a model is also limited to strategic level assessment whose outputs are relatively crude, generating probable limits of error of +/ – 30 per cent. As such it is not easy to reconcile its outputs with those that occur at an operational level.

Despite these challenges it is critical that the effects of the IFOAs on timber supply are properly quantified and brought to account in a more transparent way. Transparency is needed not just on the effect on standing timber but also on the effect of the rules on the long-term productivity of the forest.

For example, the retention of a few additional trees per hectare, if applied across the entire estate, can have a major influence on growth rates, recruitment of new growing stock and yield over the longer term.

The need for greater transparency in timber supply extends to the native log species mix and the allocation of preferred species, viz. Coastal Blackbutt and Spotted Gum. On the NSW North Coast, Forestry Corporation entered into a wood supply agreement (WSA) with Boral Timber that offers preferred species and specific volume.

By doing so, it greatly increased the complexity of modelling and supplying timber. An important side effect of the Boral WSA has been a change in the species mix that non-Boral WSA holders now receive. In practice, non-Boral WSA holders now receive the species which are left over. Knowing about the availability of preferred species has become a critical issue.

Timber NSW is aware that the 2019-20 bushfires have also impacted on the availability of preferred species. The Forestry Corporation has not however been forthcoming about the magnitude of this impact. The decision to bring forward the harvesting on Blackbutt plantations (when over-harvest areas were suspended following the fires) has magnified the problem.

Greater transparency has become critical.

Timber NSW submission to the NSW Legislative Council Inquiry into the long term sustainability and future of the timber and forest products industry

TERM OF REFERENCE 1(e): opportunities for the timber and forest products industry and timber dependent communities and whether additional protections, legislation or regulation are required in New South Wales to better support the forestry products industry and timber-dependent communities, including opportunities for value adding

The Nature of Opportunities
This Inquiry into the long-term sustainability and future of the timber and forest products industry in NSW comes at a time of reckoning. In recent years NSW has been tested by catastrophic bushfires and a global pandemic that has weakened supply chain resilience and created a global timber shortage. NSW requires 21st century policy settings which take a holistic perspective of land management in NSW to deliver economic, social and environmental opportunities.

Realign with Montreal Process Obligations: In this context, Timber NSW submits that the biggest opportunity for NSW is to realign land management practices in accordance with the criteria and indicators for forest conservation and sustainable management agreed upon by Australia and the other members of the Working Group of the Montreal Process.

As detailed in this submission, the current land management policy settings in NSW are out of alignment with these obligations.

Manage Key Risks First: This lack of alignment has created the two biggest risks for the forest estate and the industry in NSW:

- sovereign risk radically reducing access to public forests for timber supply
- the risk of catastrophic bushfires and the loss of biodiversity, lives and livelihoods.

These key risks are a direct result of current NSW government policy settings, which fail to manage all NSW land tenures in an active and adaptive way.

How Current NSW Forest Policy Is Creating Key Forest Risks
Over the last 25 years the NSW government has compromised the forest estate and the NSW timber industry through reactive and misguided policies and practices which are neither scientifically based, nor in alignment with our global sustainable management obligations:

- The NSW government has more than halved access to NSW public native forests for sustainable timber production through tenure reallocation, exacerbating problems of domestic timber supply in the face of ongoing high demand from the construction industry
- The NSW government has progressively reduced the active management of all forest tenures by failing to maintain forest infrastructure and to remove fuel loads from the forest floor, enhancing the risk of catastrophic bushfires
- The NSW government persists in a preference for disaster management of catastrophic fires over best practice preventative forest management.
- We outline these in detail in our response to Terms 1(b),(f) & (g).

The reforms proposed throughout this submission recognize that the opportunities outlined below cannot be seized until the key risks to NSW's forests are addressed and managed.

The Opportunities in Proactive Timber Resource Management: With this more holistic land management perspective comes a recognition that a realignment of NSW's land management policies and practices offer exciting opportunities for NSW.

Through actively managing our timber resources, NSW can:

- *Sustainable Supply*: engineer sustainable domestic timber supply to meet growing demand over the long term and move towards timber self-sufficiency and supply chain resilience. (See our responses to Terms 1(a),(c)).
- *Enhanced Forest Productivity*: enhance forest productivity through the use of technology and regulation which actively facilitates sustainable supply through the range of tenures: public & private native forests, plantations and forests integrated with agricultural land use. (See our responses to Terms 1(a),(c)).
- *Better Timber Utilisation*: develop domestic timber manufacturing skills and create greater value right along the supply chain through enhanced utilization of wood products through innovative new timber technology
- *Manage Fire Risk/Utilise Forest Waste*: manage fire risk and embrace the circular economy through utilisation of secondary wood products - forest floor fuel loads and timber residues/waste - in new markets, such as bioenergy markets
- *Support Regional Jobs & Communities/Partner with Indigenous Communities*: a holistic approach to NSW land management will create and fund critical regional jobs in land management, timber manufacturing, secondary wood markets and fire prevention. It will harness ancient Aboriginal land management skills and practices to prevent loss of forest life and livelihoods through catastrophic fires.

Cost-effective Forest Monitoring with LiDAR Technology

The effective management of forests is dependent upon evolving information about the state of the forests. Forests provide numerous ecosystem services and extend across extremely large areas, so timely and accurate forest monitoring is an important aspect of sustainable forest management.

Therefore, a hierarchical monitoring structure is necessary, consisting of satellite imagery at the broadest level, then high-resolution remote sensing and finally field data. Satellite imagery can provide wall-to-wall coverage, but it is only suitable for certain monitoring

requirements. In contrast, field data can provide detailed measurements of numerous attributes, but only represents a small sample of a large population.

High resolution photography and light detection and ranging (LiDAR) technology are often used as an intermediate level between field data and satellite imagery, extending the value of both to enable a more complete picture of the state of the forests.

Recommendations

- LiDAR and aerial photography technology represent an extremely cost-effective solution to the long-standing problem of obtaining accurate, timely and reliable data about the state of NSW's forests.
- Timber NSW urges the NSW government to commission the acquisition of LiDAR and other relevant technology at a broader scale to enhance the low level forest monitoring R&D work currently being conducted.

Better Timber Utilisation through Innovation

Innovation in materials sciences is leading to what experts are calling the Age of Timber. Wood-derived products such as cellophane, rayon and ethanol are well known, however the potential from new products is enormous.

For example, carbon fibres derived from wood are now being used to make lightweight parts for motor vehicles and packaging for food and beverages.

For a few years now, the possibilities of cross-laminated and other types of 'mass timber' have been attracting media coverage. As the media coverage and case study below demonstrate, they are now beginning to be produced in Australia for the first time, heralding a design and construction revolution.

Rise of the Plyscrapers

An article published in the *Sydney Morning Herald* on 26 August 2016 'New wood: how it will change our skyline' profiled exciting new developments in super strong wood.

'…*Thanks to significant breakthroughs in super-strong engineered timber products over the past decade, making them as tough as structural steel or concrete, the stage is now set for the construction – for the first time in human history – of tall timber buildings*….

"*Mass timber" is the collective term used to describe this new suite of structural materials, which include cross-laminated timber or "CLT" (multiple layers of wood glued together at right angles under extreme pressure to form giant wall, ceiling and floor panels) and "glulam" (layers of wood jointed together along the same grain for beams and posts). And here's another nickname for these woody high-rises: plyscrapers*.

"*Just as steel, glass and concrete revolutionised super-tall construction in the 20th century, it's now likely that timber, which has been shown to be vastly kinder to the environment, faster to build with, with next-to-zero waste and far healthier to live with, will do the same as the new century marches on, leading to burgeoning new high-rise profiles in Europe, the US and parts of Asia. British architect Andrew*

Waugh, whose company Waugh Thistleton is building the largest timber housing development in the world in Hackney, London, goes as far as to call this "the beginning of the timber age".”

Then in 2017 tech magazine *WIRED* urged readers to *Get Ready for Skyscrapers Made of Wood. (Yes, Wood)*, calling wood ‘architecture's hottest new (old) material’.

International House in Sydney’s Barangaroo is just one example of the use of mass timber in high rise construction around the world. The potential to use new types of engineered timber for fast, affordable housing is too compelling to ignore.

CASE STUDY

On the cusp of an epic launch for hardwood CLTP

11 June 2021

CLTP Tasmania has officially launched the world’s first hardwood Cross Laminated Timber (CLT), along with its new brand – Cusp Building Solutions. The website www.cusp.com.au is now live ahead of a launch event, which is being held in Hobart on 29 June.

Cusp CLT is made from Tasmanian Plantation Oak (Eucalyptus Nitens) sourced from Responsible Wood certified sustainable plantations and grown in Tasmania. Using a resource that is currently exported as woodchips, the company has created a world-leading mass timber product for the Australian building industry.

Robert Morris-Nunn (AM), one of Tasmania’s most adventurous and respected architects will be officially launching the product and brand, with a keynote presentation about the future of the built environment. Originally scheduled for 2 June, the launch was postponed due to the Victorian Coronavirus outbreak.

“I’ve waited 20 years to see this type of innovation come to fruition in Tasmania,” he said. “I’m already working on incorporating Cusp CLT into several very exciting projects. It is definitely the future of construction in this state,” Mr Morris-Nunn said.

Cusp Chief Executive Officer, Chris Skeels-Piggins says the business was born from a fundamental belief that it’s an obligation to extract the best possible value from the resources entrusted to us.

"Cusp is about transformation, sustainability and a determination to drive change. Change that is in perpetual motion: improving the built environment while continuously protecting the natural one," Mr Skeels-Piggins said.

"The result is building solutions at the leading edge, with impeccable sustainability credentials. We discover better ways to create strikingly beautiful, effortlessly useful buildings and spaces. We also understand what matters in the wider world and how we can make a positive contribution to its future."

Cusp's products have achieved certification from the Engineered Wood Products Association of Australasia (EWPAA). They are the first CLT products in the world to do so. (https://www.timberbiz.com.au/on-the-cusp-of-an-epic-launch-for-hardwood-cltp/)

THE ROLE OF THE TIMBER INDUSTRY IN THE CIRCULAR ECONOMY

NSW will not reach its target of net-zero emissions by 2050 without a circular economy in action. Timber NSW submits that the NSW timber industry has a vital role to play in the creation of NSW's circular economy.

The circular economy represents a unique and significant economic opportunity: $210 billion to Australia's GDP by 2050[16].Timber NSW wants to work with the NSW Government and NSW Circular to incorporate NSW forests and the NSW timber industry in the important work of delivering a zero-carbon circular economy in NSW.

What is the Circular Economy?

NSW has rising waste volumes, plateauing resource recovery rates and some of the highest per capita emissions in the world – almost triple the global average.

A circular economy aims to redefine growth, focusing on positive society-wide benefits. Gradually decoupling economic activity from the consumption of finite resources, and designing waste out of the system, it is based on three principles:

1. Design out waste and pollution.
2. Keep products and materials in use.
3. Regenerate natural systems.

Source: https://www.nswcircular.org/about/

Timber is the ultimate renewable. Best practice forestry and timber manufacturing already incorporates many of the principles of the circular economy noted above, but key governmental support is required. The NSW Government and NSW Circular have an important role to play in championing the role of the timber industry in the circular economy, through both policy and advocacy.

The Circular Economy & Manufacturing

[16]) Centre for International Economics, Headline economic value for waste and materials efficiency in Australia, commissioned by the Department of Environment and Energy, Oct 2017

As detailed in this submission, Australia has long been a net importer of timber. Often, Australia exports logs, woodchips or pulp, only to import it back as manufactured timber products. This is consistent with a worrying trend across the Australian economy, as outlined below.

The Circular Economy Opportunity in NSW	***The NSW Timber Industry in the Circular Economy***
Boosting Timber Manufacturing	
Manufacturing makes up only 6% of Australia's economy compared to the OECD average of 16%. This is the second lowest rate in the OECD after Luxembourg. *Australia has the lowest manufacturing self sufficiency in the OECD, producing only two thirds as much manufactured output as it consumes. Australia uses $564 billion worth of manufactured products but produces only $380 billion each year.* *Less than a million people currently work in the manufacturing sector, accounting for 6.9% of jobs.*	*The timber industry is part of the manufacturing sector and a key input into Australia's construction sector.* *Yet Australia has run an annual $2B timber and forest products trade deficit for many years.* *In the context of a global timber shortage, NSW must now invest in timber self-sufficiency.* *The timber industry wants to work with the NSW government to create new manufacturing jobs in advanced timber manufacturing processes.* *There is an opportunity to develop the industry and create key regional manufacturing jobs across NSW.*
Renewable Bioenergy from Underutilised Forest Products	
Around 94% of the energy used in NSW comes from non-renewable sources such as oil, coal and gas, although use of renewable energy is growing rapidly.	*Australia lags behind other advanced economies in the utilization of forest waste to create bioenergy.* *The nascent bioenergy sector is fundamentally about better utilization of forest products that are currently seen as waste or by-products without ready markets.* *As detailed in this submission, with government support and facilitation the renewable bioenergy sector can provide renewable power and heating to homes and businesses across NSW.*
Land Use Planning for Sustainable Timber Supply	
A circular economy would reduce the negative effects of waste generation and its transportation through better land use planning and better industrial ecology mapping. Place-based	*The NSW timber industry is calling for careful land management oversight and planning of forest and plantation resources.*

planning approaches in particular are well suited to this.	*With appropriate land planning, local bioenergy can power local businesses and local plantations can meet the needs of the NSW construction industry with minimal transport.*
Regional Development & the Timber Industry	
A circular economy is also a regional development strategy. Regional economies are well suited to closed loop systems, with remote and decentralised industry, energy and water systems underscoring the benefits of local loops in materials and other resources. *Agricultural and mining communities, in particular, are under pressure to adapt to climate change, resources tipping points, and high production costs (e.g. purchasing and transportation costs of energy, water and inputs, and waste removal and management).* *Regional circular economy planning can map resource inputs and outputs in the region, to maximise synergies and establish local loops.*	*Regional NSW is heavily forested - it provides 15 per cent of Australia's forests.* *Timber NSW calls for a clear sighted Land Management Authority to provide a sustainable supply of timber for NSW homes and businesses and fire protection through active and adaptive forest management across all tenures.* *Through utilising forest waste for bioenergy and thus preventing catastrophic fires through active and adaptive forest management, NSW can fund new regional jobs in forest management, bioenergy and advanced timber manufacturing.*
Source: *The circular economy opportunity in NSW, November 2020, NSW Circular*	

Timber NSW Endorses NSW Circular's Analysis of the Federal Budget 2021-22

Australia's Federal Budget 2021-22 addressed the opportunity of a circular economy, recognizing both the international pressure mounting on Australia to commit to more substantial action on climate change and the once-in-a-generation social license granted by the COVID pandemic to spend strategically to 'build back better'.

Timber NSW submits that the role of forestry and the timber industry must be at the heart of Australia's circular economy. Timber NSW agrees with the Budget analysis by NSW Circular: in order to 'build back better', NSW needs the right policy environment to make our industries future-ready in a resources-constrained world.

However, we agree with NSW Circular: while Australia's Federal 2021-22 Budget makes an incremental step towards a circular economy and net zero emissions, there remain substantial opportunities for future work and investment, as detailed below.

Materials & recycling

- Timber – the ultimate renewable
- Improving Utilisation of Forest Products

- Recycling – Timber NSW applauds further support for Australia's recycling industry, including an additional $5.9 million over four years from 2021-22 for the National Product Stewardship Investment Fund and $5 million over three years from 2021-22 to help small businesses adopt the Australasian Recycling label.

Energy & Emissions Reduction

- Compared to our global counterparts like the UK and Canada, Australia's allocated spend on climate change action is small.
- While the Federal Government remains committed to a gas-fired recovery, the largest share of the $1.8 billion allocated to the energy sector has been directed towards emissions reduction. However, this funding focuses strongly on investment in technologies identified in the Technology Investment Roadmap which has been widely debated as not going far enough to create a pathway away from a future reliant on fossil fuels.
- Timber NSW submits that NSW's forests and the timber industry have a critical role to play in protecting and preserving the key role of forests in the carbon economy through active and adaptive forest management which reduces the risks and impacts of bushfires.
- Importantly, NSW's forests and the timber industry can also be harnessed to created bioenergy.

Supply Chain Resilience

- Like NSW Circular, Timber NSW welcomes the Federal Budget's focus on Supply Chain resilience and would like to see greater emphasis on building local jobs.
- As a net importer of timber, Australia has supply chain vulnerabilities which impact particularly on the construction industry. NSW has a once-in-a-generation opportunity to develop timber self-sufficiency over the long term and bolster not only forest management and timber industry jobs, but nation-building jobs in the construction industry.
- Timber NSW submits that the timber industry should be included within the Federal Supply Chain Resilience Initiative. The NSW Government has an opportunity to build NSW timber capabilities that address and identify critical supply chain vulnerability. This will ensure we have access to the critical product inputs needed to secure our supply chains and support Australian construction and manufacturing.
- Timber NSW wants to work with the Federal Office of Supply Chain Resilience and the NSW Government as custodian of NSW's forests to monitor vulnerabilities and coordinate whole-of-government responses to improve essential timber supplies over the long term.

Forestry & Agriculture

- Farm Forestry or Private Native Forestry has an important role to play alongside the agricultural sector. Timber NSW submits that, in many ways, food and fibre share many sustainability concerns.
- The circular economy has a significant role to play in reducing carbon emissions in food and fibre production and improving productivity.

- Like NSW Circular, Timber NSW would like to see greater government support for circular forestry practices to reduce waste, increase the utilization of forest products and generate local renewable energy.
- Optimising transport is an important element to achieving efficiencies and can be supported by utilizing bioenergy produced and consumed locally.

Climate Resilience

- Preventing catastrophic bushfires is critically important to climate resilience efforts. The timber industry wants to work with the Australian Climate Service and its NSW state counterparts to:
  - provide advice on risks from climate change
  - provide an environmental road map to inform planning for forest infrastructure and management
  - implement the recommendations of the numerous bushfire-related inquiries.
- Timber NSW would like to work with the NSW Government to contribute to the refreshed National Climate Resilience and Adaptation Strategy to provide an updated pathway for building the community and economic resilience to climate change.

Building the jobs and industries of the future

The jobs and industries of the future will be underpinned by circular, zero emissions technologies, infrastructure, products and services. These industries will leverage resources that can stay in the economy longer, extracting more value, growing jobs and investment.

Next-Generation Infrastructure

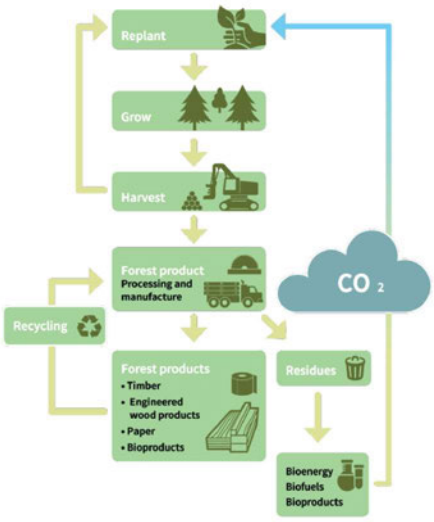
- In many ways the timber industry is already incorporating best practice circular economy methods into its supply chains.
- *Infrastructure procurement*: Timber NSW submits that to ensure NSW uses low carbon and recycled materials the NSW government should mandate use of NSW timber in its procurement specifications.
- *Infrastructure construction methods*: the NSW timber industry utilizes the full range of innovative techniques in providing sustainable building materials including prefabrication, modular design, low carbon products.

Manage Fire Risk/Utilise Forest Waste

Achieving net zero waste requires innovative, integrated solutions that optimise existing technologies and approaches, while rewarding innovation and sustainable business practices.

There is an important opportunity for NSW to create value by utilizing wood products that are currently seen as waste. Not only will such policies and practices be consistent with NSW's goal of moving towards a circular economy, they will play a critical role in reducing fire risk and lessening the devastating impact of bushfires.

Sustainable Biomass Lifecycle



Lower quality logs and residues (i.e. residual biomass) can be:

- by-products of forest management (due to ecological thinning)
- by-products of timber harvesting (when the 'non-merchantable' portion of the tree is left on the forest floor)
- by-products of sawmilling operations.

In the circular economy and from an industry perspective, residual biomass has value and should not be regarded as 'waste' material. Effective and efficient use of residual biomass is important not only for forest health and safety, but for increasing the economic returns from Australia's forests and forest product industries.

Forest Thinning: Residual Biomass

NSW has over a million hectares of even-aged regrowth forest, across a range of tenures. Even-aged regrowth arises where there has been a mass regeneration event. There are numerous things which give rise to mass regeneration, the most common being high intensity wildfire, destocking of cleared land, clearfell timber harvesting (no longer practiced in NSW), the loss of traditional Aboriginal burning practices and major flood events.

Many even-aged regrowth forests have very high stocking densities (stems per hectare) which make them particularly flammable in the event of a wildlife. In dense, highly stocked forests the growth and development of individual trees is often restricted.

Thinning is a form of selective timber harvesting where the principal aim is to reduce the stocking density (stems per hectare) of the forest. Thinning of dense regrowth benefits the health of the forest by providing more space and light for retained trees to grow and mature. Thinning of dense, even-aged regrowth can also promote biodiversity (NRC 2014).

From an industry perspective, these thinnings – or residual biomass - are not 'waste' material, as they are no different to the material that arises when trees die from natural events such as wildfires, droughts, temperature extremes and wind storms.

Unless there is a market which can utilise the 'thinnings', the work of thinning a forest is usually financially impractical. Furthermore, leaving thinnings on the forest floor is not desirable because it creates a fire risk to the surrounding forest.

Thinning generates a high proportion of small and low-quality log products, as it commonly targets the removal of smaller weaker trees which are often suppressed and poorly-formed.

Commercial thinning is therefore a highly cost-effective way of mitigating fire risk and promoting forest health and growth at the same time. Thinnings are often well-suited to commodity markets because their wood properties tend to be relatively uniform and consistent.

However, across regional NSW markets for residual biomass are uneven:

- *Western region*: thinning in Cypress forests has been aligned with markets for bioenergy. This is having a positive impact on forest biodiversity, the management of invasive native scrub and the creation of on-site renewable energy usage.
- *South-East region*: thinning of regrowth Silvertop ash has for many years helped promote forest health and productive forests, underpinning many regional jobs.
- *North coast/tableland forests*: the opportunity to realise the benefits of thinning remain largely untapped.

Improving Harvest Utilisation
Currently when trees are harvested the logs are separated from the smaller parts of the tree which are not currently merchantable.

While these are currently seen as waste products and are often left in the forest floor, improvements in timber utilization would allow this fibre to be sold into new markets, funding the removal of fuel load from the forest floor.

Sawmilling By-products & Residues
Log products are transported from the forest directly to primary wood processing mills where, depending on their grade, they are either sawn, peeled, sliced, treated, split or chipped.

The milling process generates a range of by-products, including sawn timber offcuts, woodchips, chip fines, residual bark, shavings and sawdust. By-products supply a broad suite of downstream markets that include secondary wood processors, bioenergy generators, domestic heating, landscape and garden industry, horticultural industry, equine industry and the poultry industry.

Market demand for sawmilling by-products fluctuates over time and varies from site to site. Primary wood processing mills can vary their prices to optimise use.

Creating Markets for Lower Quality Logs & Residues
Given the strength of demand for domestic timber and the critical need for active and adaptive land management across all tenures to manage catastrophic fire risk, the impact

of increased forest productivity, better timber utilization and preventative fire measures will be to increase the supply of lower quality logs and residues.

The creation of markets for this timber has the potential to further both economic and ecological aims. Yet it is a resource for which there is currently very limited domestic demand. Some harvesting residues are already used to maintain forest ecological health or mill site productivity, while others can be used in the manufacture of other forest products or for production of heat or electricity.

Currently, markets for lower quality logs and residues are limited and include:

- pulp, paper: green chips
- panel products: dry chips and sawdust
- animal bedding: dry chips and shavings
- wood pellets for domestic fuel: dry chips and shavings
- boiler-fuel for process heat and co-generation of heat and electricity: green and dry chips and sawdust
- landscaping products: green sawdust and bark

As below, future markets might also include high-value biofuels, bioenergy and chemical products.

Bioenergy

The International Context[17]

Under the Kyoto Protocol, bioenergy is regarded as CO2 neutral. The CO2 released by the combustion of the renewable wood waste is captured by new plants as they regrow in a sustainable cycle. The United Nations Framework Convention on Climate Change also defines bioenergy as renewable, if it is produced from biomass that is sustainably managed, as Australia's commercial forestry operations are.

The 4th assessment report of the International Panel on Climate Change (IPCC) stated:

A sustainable forest management strategy aimed at maintaining or increasing forest carbon stocks, while producing an annual sustained yield of timber, fibre or energy from the forest, will generate the largest sustained mitigation benefit.

Given the right policy settings, the forest industry has the capacity to play a strong role in the future of the Australian bioeconomy.

However currently Australia is a laggard on the global scene when it comes to the uptake of bioenergy. It is in the bottom quartile of OECD countries with respect to bioenergy as a proportion of total energy supply. In Australia, biomass for energy purposes makes up around four per cent of total energy consumption. This stands in contrast to the European Union, where 10 per cent of energy consumption is derived from biomass[18].

Despite having the highest area of forest per capita of the developed nations, in comparison to many other countries Australia has a relatively miniscule percentage of bioenergy in our total national energy supply.

[17] Much of this section is drawn from the Executive Summary of the AFPA Submission to the ARENA Bioenergy Roadmap Consultation Process dated 10 June 2020.

[18] KPMG Bioenergy State of the Nation Report (https://cdn.revolutionise.com.au/news/vabsvwo5pa8jnsgs.pdf)

Percentage of Bioenergy in Total Primary Energy Supply, 2016
(International Energy Agency)

Country	Percentage
Australia	3%
South Africa	9%
Austria	18%
Denmark	22%
Sweden	22%
Finland	24%
Brazil	30%

NSW forest products manufacturers continue to face increasing electricity and gas energy costs, threatening regional jobs and economic activity. Bioenergy provides renewable and dispatchable energy which complements existing power generation and intermittent renewables like wind and solar. Energy from biomass, such as forestry, industry and agriculture residues, is a unique renewable that can be used across all three energy sectors (transport, heat and electricity).

New bioenergy and renewable heat projects can support the forest industries to make the shift from fossil fuel dependence to affordable, secure renewable energy investments that reduce greenhouse emissions. In doing so these projects will also help sustain manufacturing operations, providing much needed investment and regional jobs.

Debunking a Myth: Native Forests will be Burned for Energy

- *Bioenergy Only Uses Wood Residues*: When a tree is harvested, the most sensible approach is to minimise waste by recovering and utilising as much of its wood as is practicable. So, while the native timber industry produces and processes sawlog as a primary product, having markets for the sections of a tree that cannot be converted to high value timber products ('residues') is both economically and environmentally responsible.

- *Bioenergy is Renewable Energy*: When we consider renewable energy, we tend to think about manufactured technologies like solar panels and wind turbines. However, bioenergy is another natural form of renewable energy, one that has been around for thousands of years. Before coal and the industrial revolution, woody biomass was the world's principal energy source. Bioenergy is the energy stored in 'biomass' or organic matter and is generally produced through the process known as photosynthesis. The simplest form of bioenergy is firewood, which is used for heating and cooking. Today there are many different bioenergy applications including ethanol, biodiesel biogas, biochar, green electricity and jet fuel.

- *Burning Wood is Carbon Neutral*: Despite the fact that it gives off so much carbon dioxide, wood is a carbon-neutral energy source. It may seem counter-intuitive but in fact the logic is pretty simple. Through its life-cycle the tree will absorb a significant amount of carbon dioxide and when the wood is burned the absorbed carbon is released back into the atmosphere. This amount of absorbed CO2 during the lifetime of the tree is balanced by

the overall amount of CO2 released when the wood is burned. Therefore, the carbon dioxide actually added to the atmosphere is effectively zero.

- *Meeting Our Renewable Energy Target*: Australia's renewable energy target scheme has created some demand for mill wood residues that would otherwise be wasted or sold for a low value. The timber and forest products industry seeks support to strengthen the bioenergy market for its woody residues and waste. Where feasible, the industry would like to see woody biomass waste and residues being value-added into products like biofuel to support jobs and regional investment.

Unlike many alternative renewables, bioenergy can deliver baseload power 24 hours a day, seven days a week. Forest residues are usually seen as high-quality biomass and available all year round, unlike many agricultural residues. Additionally, forest residues can be used to raise the quality of feedstock to a biomass facility and make other residues viable.

Based on the successful operation of small to medium combined heat and power plants using biomass in the northern hemisphere, particularly Germany, Sweden and Finland, there are significant opportunities to apply that technology to suitable communities in Australia.

These overseas communities have a reliable supply of biomass from nearby forests and plantations, are in cool climates needing a source of heat, are not connected to a gas pipeline and are not near any coal supplies.

International Bioenergy Case Studies
Globally, bioenergy accounts for around 50 per cent of renewable energy and 70 per cent of direct renewable heat in 2017 (iea.org/renewables2018). There are many initiatives from across the globe that have supported the uptake of the industrial use of bioenergy and renewable heat.

Japan
Biomass is being increasingly used in power plants in Japan as a source of fuel, particularly after the tragic accident at Fukushima nuclear power plant in 2011, with most bioenergy power plants having been built since 2015.

Biomass sources for these bioenergy power plants include wood pellets (some of which are imported from Australia) as well as palm kernel shells. Japan will aim at increasing power generated by renewables up to 22- 24% by 2030, with biomass accounting for a portion of this. Japan's feed-in tariff policy uses an incentive structure to create a virtuous cycle of investment, innovation, and cost reductions.

France
The Fonds Chaleur (Heat Funds) programme, set up in 2009, provides support for renewable and waste heat installations in the commercial and industrial sectors, as well as district heating projects. It is administered by ADEME, the French environment and energy agency, and includes subsidies for both project support (40-80%) and for project execution (25-80% of costs).

The total annual budget is USD 243 million (EUR 220 million). Between 2009 and 2015, the programme supported 3600 projects, with an average cost of USD 4.4 (EUR 4)/MWhth. In 2015, biomass projects accounted for 44% of funds distributed and around 27% went to district heating projects.

United Kingdom
The centrepiece of the United Kingdom's bioenergy approach has been the introduction of a long-term support programme for renewable heat, the Renewable Heat Incentive (RHI), 8 with payments based on heat generated. The RHI was initially introduced for commercial and industrial applicants in 2011 and then extended to the domestic sector (homes) in 2014.

The aim of the RHI is to incentivise the uptake of renewable heating technologies by providing an attractive rate of return to compensate for the higher investment costs of some renewable technologies, as well as other non-economic barriers. Payments under the non-domestic RHI are based on heat meter readings, while in the domestic sector heat output is estimated.

An example of the potential created by these policies is the Drax Power station, which is the biggest renewable generator in the UK and the largest decarbonisation project in Europe. Located near Selby, North Yorkshire, it is connected directly to the national electricity transmission grid. It has a capacity of 3,906 megawatts (MW) and produces around 18 terawatt-hours of power a year, 75% using compressed wood pellets, a form of sustainably sourced biomass. Drax Power Station supplies 12% of the UK's renewable power.

Netherlands
Netherlands provides accelerated depreciation and investment deductions for energy efficiency assets including renewable industrial heat machinery in order to incentivise the uptake of industrial uses of bioenergy.

Norway
Norway has two 100% owned Governmental companies that can support new energy projects; "ENOVA" and "Innovation Norway". ENOVA supports energy efficiency projects with grants between 30- 50% of the total investment, while Innovation Norway is supporting projects that develop companies and enhance innovation.

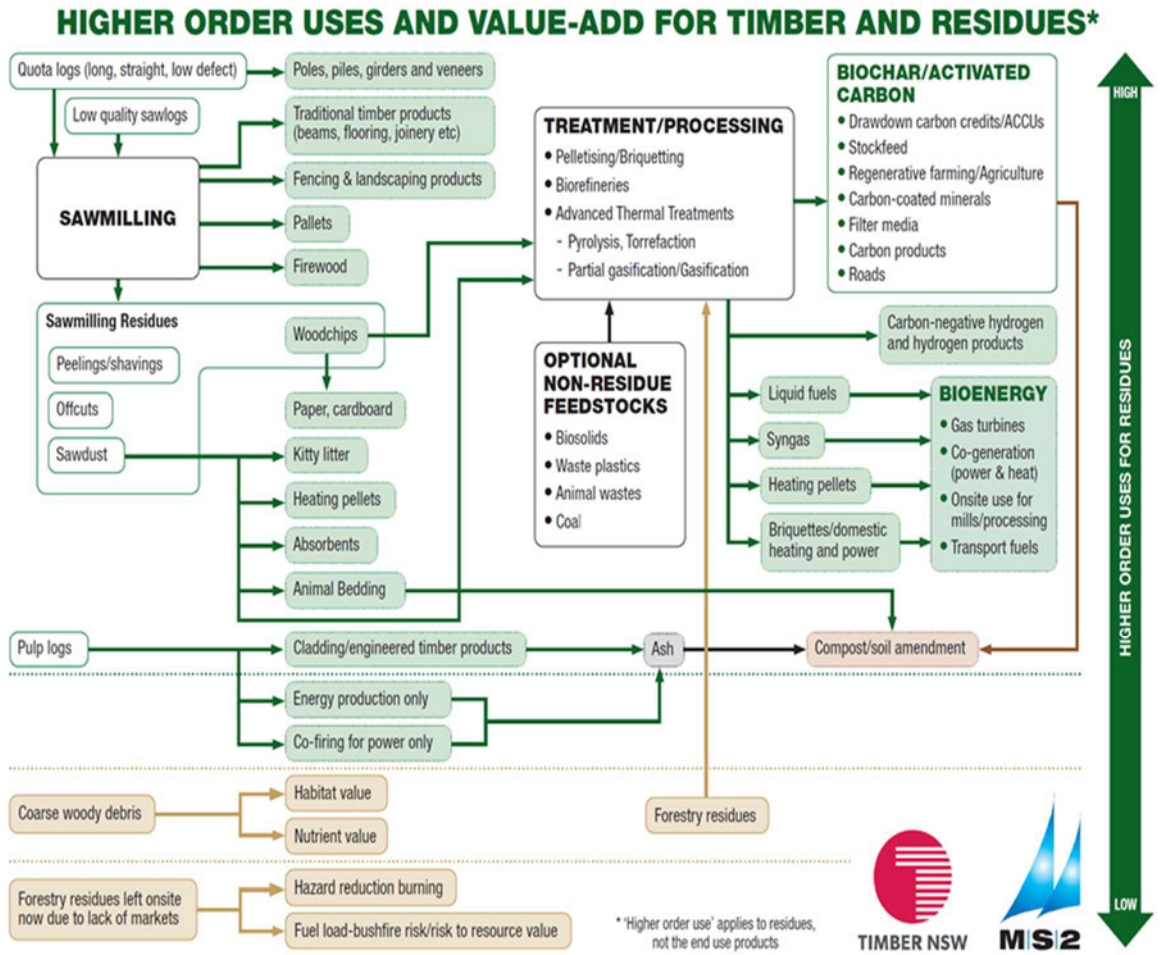
Beyond bioenergy and renewable heat, there are an array of other opportunities that will play an important part in the future of the bioeconomy. Bio-chemicals, textiles, solvents, plastics, lubricants, fragrances are potential outputs from new 'bio-refineries'.

New bio-fibre based products and services are being developed across the world, replacing petrochemicals and other fossil-fuel-based product. As the forest industry is highly integrated, it is important to recognise the full range of these opportunities within the Bioenergy Roadmap.

Leaving coarse woody debris (CWD) such as bark on the forest floor following harvesting provides nutrient value and habitat value. The optimal amount of CWD to leave on the forest floor varies by the type of forest and local conditions. Beyond that base amount,

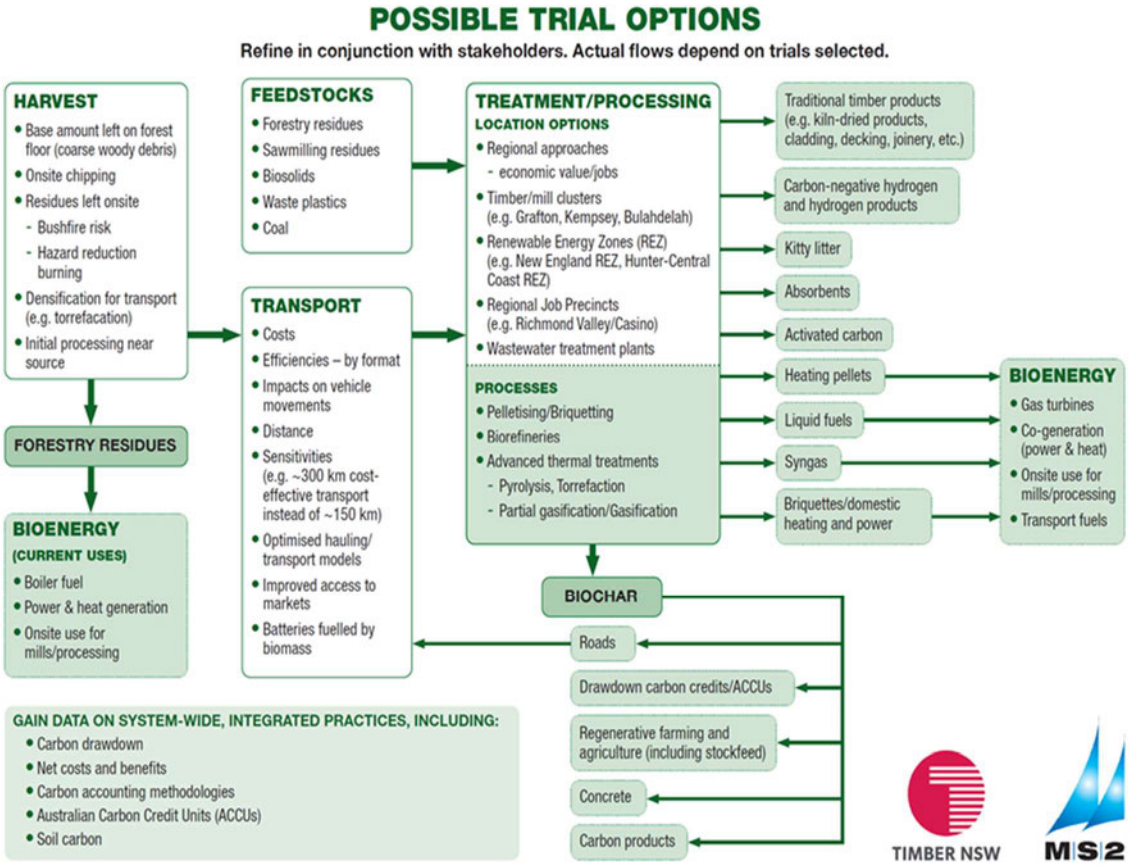
forestry residues that lack end use markets are either burned in hazard reduction burns, or become fuel load which poses bushfire risk and potential risk to timber resource value.

Expanding and creating end use markets for forestry residues creates value for not only the forestry sector but other interrelated sectors. Similarly, sawmilling also generates residues for which market development adds commercial value. The diverse range of practices, processes and products examined for timber and residues is shown in the first diagram below.



Forestry and existing end use markets for forestry and sawmilling residues are affected by a broad range of factors, from environmental policies and practices and cost-effectiveness of transport to social license to operate. Most of these factors are ultimately affected by perceptions of communities and decision-makers around their sustainability, however there are significant gaps in knowledge and understanding that need to be addressed.

Significant opportunities exist for forestry and sawmilling residues to go into bioenergy projects and carbon-negative processes that generate biochar, power, heat and other products that already have commercial value. While some sustainability aspects are increasingly understood for specific components or products, the system-wide benefits of integrated or circular processes such as those shown in the second diagram below are not sufficiently understood.



CASE STUDY: WESTERN REGION (2014)
Creating a Market: On-site Renewable Energy

The emergence of a bioenergy market in the Western Region has created demand for the woody component of invasive native scrub, along with Cypress forest thinnings too small or too irregularly shaped to be processed into higher value products.

The NSW Department of Industry (Resources and Energy) website stated the support of the NSW Government for investors exploring renewable energy technologies that include invasive native scrub.

In March 2014, the NSW Government announced changes to Protection of the Environment Operations (General) Regulations. The media release from the Minister for Resources and Energy stated that the additional biomaterials to be used for bioenergy are “invasive native species and the tree heads and offcuts of trees cut for sawlogs and trees that might otherwise be made in pulp for paper production”.

In 2014 the NSW Natural Resources Commission (NRC) undertook a detailed assessment of the regrowth White Cypress in the Brigalow-Nandewar State Conservation Area.

- The Commission found that 15 per cent of the assessment area (30,000 ha) contained stands of high-density cypress and bulloak where ecological thinning would result in enhanced biodiversity.
- Rather than burning or leaving thinnings as a fuel load on the forest floor, they can be removed and sold into bioenergy markets.

The development of bioenergy markets has also been recognised as a critical tool for enabling more cost-effective management of invasive native scrub.

- Vast areas of the rangelands of western NSW are suffering from increasing invasive native scrub (NSW DPI, 2009). In the central west and western regions of NSW, invasive native scrub can have a serious adverse impact on habitats, wider landscape health, communities and farming operations (LLS website, 2016).
- The removal of invasive scrub for bioenergy markets can help defray the cost of forest management.

Seven years later, this opportunity remains unrealized due to NSW government inaction.

CASE STUDY: BIOMASS WORKSHOPS (2016)

In November 2016, the NSW Department of Industry convened a series of biomass workshops in Grafton, Kempsey and Maitland to present information on woody biomass resource availability on the NSW North Coast.

The workshops brought together biomass producers, technology providers, end users, financiers and other interested parties to facilitate their discussions and explore opportunities to use residues for bioenergy.

A consensus view was that a range of additional bioenergy projects are on the cusp of being commercially viable.

There are now a number of successful bioenergy projects operating across NSW:

- Big River Group plywood and flooring manufacturing plant in Grafton has been using biomass as boiler fuel for over 50 years. Big River has also installed an industry-leading co-generation electricity plant, where manufacturing wood waste is used to create renewable energy on-site.
- Along with the Visy Pulp and Paper plant in Tumut, this power plant is officially registered with the Office of Renewable Energy and qualifies for Renewable Energy Certificates.
- Weathertex in Heatherbrae has been using a blend of chipped reject hardboard and coal as boiler fuel for engineered timber products since 1974.

We attach Transforming Wood Residues to Energy: A Step by Step Guide (2016). Published by Timber NSW, this Guide contains a range of case studies of bioenergy initiatives occurring in NSW.

In November 2017, a technical report was published by the DPI entitled ‘Forestry Residues on the North Coast: availability and sustainability of extraction. This North Coast Residues project was undertaken as part of the 2023 North Coast Forestry Project.

CASE STUDY: *Forestry Residues on the North Coast: Availability & Sustainability of Extraction*

The main purpose of the project was to determine the potential availability of forestry residues for bioenergy generation and other applications on the North Coast of NSW, for three main regional hubs, Bulahdelah, Kempsey and Grafton, so that potential investors can have greater confidence in the residue availability for each of the hubs.

The provision of field-based information on residue availability and any potential impacts of extraction supports the long-term sustainability of the native forest industry on the NSW north coast. The total annual estimated volumes for the North Coast are close to one million tonnes.

Current markets for some of the green residues vary depending on location; the power/heat market is stronger further up North, whereas landscaping markets are strong for processors within 150km of Bulahdelah, especially those closer to Sydney.

The forestry biomass available is significant and certainly enough to support the development of large and small scale bioenergy generation systems. This would include for example at least six average-sized pellet production facilities (producing 100,000 tonnes of pellets / year), with enough combined electricity generation potential to supply annual electricity needs of over 200,000 homes in NSW.

The greenhouse gas balance carried out here clearly shows that, from a climate perspective, using biomass that would have otherwise been left in the forest to burn and/or decay for bioenergy generation results in positive outcomes, especially if biomass is used to produce electricity displacing the use of coal.

This is true even when the carbon dioxide emissions from burning the biomass to generate energy are included in the calculations. In practice, the CO2 released will be reabsorbed by the growing trees in a sustainable harvest system, eventually negating the impact of such emissions.

The analytical framework now in place allows the derivation of potential available volumes in the vicinity of any major regional town of interest in the North Coast. Further work is required to determine residue availability in other important native forest wood-producing areas of the State, such as the south coast and western region, to continue supporting the creation of new markets for forestry biomass from sustainably managed forests.

Details:

- The dramatic reduction in the demand for pulp logs in the region since 2013 has increased wastage and operational challenges (e.g. increased fuel loads); limited forest management options (by reducing thinning opportunities), and reduced profit margins.
- Available biomass was estimated from residues generated from integrated harvest operations which target the production of high-value logs (e.g. sawlogs, poles). For plantations, “pulp logs”, as well as “total residues” (option of in-field chipping) were considered. For sawmills, all “green” residues were considered potentially available for bioenergy generation.
- Harvest residues from public native forests were highest around Bulahdelah and Kempsey (100 km radius), whereas private native forest residues were highest around Grafton. Volumes of hardwood plantation harvest residues were especially high for Grafton.
- Sawmill residues (green) were estimated to range between 46,000 tonnes for around Bulahdelah to 118,000 tonnes/year for facilities around Kempsey (100 km radius). Green offcuts represented approximately 68% of the total volume of green residues produced.
- Additional important sources of biomass include residues from:
  -agricultural crops (45,000 -78,000 tonnes/year)
  -waste currently disposed of in landfills (c. 700,000 tonnes/year).
- The use of biomass to produce heat in smaller scale generation systems (e.g. boilers for heating public pools) is also an option – a typical sized system of 600 kW capacity requires approximately 600 tonnes of woodchips for six months.
- There is growing interest worldwide in the potential for bio-chemical production from tree biomass. Preliminary chemical profiling work revealed the presence in tallowwood and flooded gum of significant quantities of gallic acid and catechin, which are chemicals with potential industrial and therapeutic applications. We estimate that approximately 2 – 3.5 kg

of these compounds would be available in the logs meeting pulp specification for an average mature tallowwood or flooded gum tree.

- One of the common concerns raised in utilising native forest biomass for bioenergy generation, is the impact on sustainability, including concerns over nutrient depletion, biodiversity and climate implications. Removal of additional biomass for bioenergy from native forests will result in increased loss of nutrients (typically greater for nitrogen); however the nitrogen lost is largely expected to be replenished naturally during the longer native forest harvest cycles.
- Retention and management of bark on site, retention of leaves and minimising post-harvest regeneration burns are identified as key actions to minimise any impacts on nutrient availability due to extraction of biomass.
- The biodiversity component of the research confirmed expectations that managed native forests on the north coast typically support higher volumes (~ 2 x) of Coarse Woody Debris than unmanaged forests, mostly resulting from more pieces of smaller material.

CASE STUDY

Biomass Heating Australia Pty Limited (BHA) is a family-run, Sydney-based company developing the production and distribution of 'the world's best wood pellet', an authentically all-natural Australian biomass product. BHA is developing a business model to work with locally owned, rural hardwood sawmills to convert their wood waste into environmentally friendly wood pellets.

What's the Opportunity?
BHA could add tremendous value for the Australian timber industry and national economy by partnering directly with sawmills of varying scale to enhance their business model by utilizing waste generated from processing timber. This wood waste has typically been disposed of in its raw waste form as sawdust or wood chip at minimal returns and no energy gain. There is a recognized market overseas and a developing market in Australia for the wood pellets, which have the capacity to supply everything from the smallest domestic pellet heaters and barbecue grills to the newest bioenergy plants.

What's the Product?
BHA's new Coolabah wood pellets are distinctly black in color, signifying superior wood density and higher BTUs than traditional wood pellets. Coolabah is a proudly unique Australian product, sourced from hardwood timber waste and by product. This product reduces the cost of heating for many Australians, while also providing an excellent natural, smoke-reduced source of energy for smokers and outdoor grills across the country. It is a superior alternative to charcoal and log burning.

At a cost comparable to natural gas, wood pellets vastly outperform less earth-friendly energy alternatives such as oil, coal, charcoal and wood-burning stoves. Wood pellets produce very little ash by-product and create a "carbon neutral" product cycle. In fact, wood pellets are considered the only viable and plentiful

hard material replacement for traditional fossil fuels. Many energy plants across the world have converted from coal burning to wood pellet burning. The secret is to reduce the moisture in the wood to less than 10 per cent, thereby eliminating the harmful smoke and particulates released from traditional wood fires.

What's the Process?
BHA designs an appropriately scaled wood pelletisation solution, based on each sawmill's waste output. BHA then purchases, installs and commissions each pellet plant to convert this sustainably sourced material into a stored energy product that is sold at much higher unit pricing than is generally currently received for the sawdust or woodchip. Producing the pellets onsite at the sawmill reduces the traditional energy and resources required to transport these materials to a centralized plant.

A Successful Trial on the NSW Midcoast
Recently, BHA partnered with a sawmill in the NSW Midcoast Local Government Area to successfully commission and trial a pilot plant. The project has now progressed, installing a 5 tonne/hour pellet plant, which will generate significant employment opportunities during construction and an additional four FTE and inject much needed financial stimulus in the town. The sawmilling company will benefit from the options of better pricing for its waste material and sharing in the value-add pricing of the finished wood pellet product.

Creating a Local Market for Wood Waste
Following the successful commissioning of this plant, BHA has already sourced three additional sawmills who have strong interest in having BHA's onsite pellet plant. This process can continue across the industry, building a strong market for waste material through the value-add process and can extend further into utilizing the waste from harvesting processes in forestry.

Tapping into International Markets
BHA sees NSW sawmills as a tremendous partner in helping Australia to be an integral part of this fast-growing global industry. An immediate US market has been sourced for the product once the NSW pelletisation plants are operating. Wood pellet consumption is growing tremendously on a global basis. Industrial demand for pellets is growing approximately nine per cent annually, while consumers are buying more than one million heaters and backyard grills each year.

Startup Seed Funding Required
This project was submitted to the Bushfire Recovery Fund yet despite its ready potential, it failed to receive support. With start-up seed funding, this model could be established at most sawmills and lead to the employment of an additional four to six people per mill, depending on scale.

CASE STUDY: *2020 Bioenergy Stakeholder Engagement Working Group*
In NSW, forestry, agriculture and other sectors are building upon the NSW DPI's *Bioenergy Stakeholder Engagement Working Group* initiative that seeks to identify key barriers and opportunities for bioenergy, including regulatory and information constraints in addition to stakeholder perceptions.

This project is part of a wider project around opportunities for bioenergy generation, for electricity in particular, in NSW and is funded through the Climate Change Fund. The project includes a range of partners, especially NSW universities and the CSIRO and

focuses on improving biomass usage in NSW from a bioenergy perspective. Total funding for the wider project is $4 million overall.

An intergovernmental group including the NSW EPA has been tasked with trying to separate policy development from the regulatory aspect of bioenergy and seeking a better ability to engage. This project will develop specific policy recommendations[19] to the NSW government based on this project's case studies, background research and the facilitated results from both Stage 1 and Stage 2 discussions.

Key issues include:

- *Current regulatory approvals process for bioenergy projects within NSW*
    - The current regulatory approvals process for bioenergy projects in NSW has been the dominant topic throughout Working Group discussions and a significant barrier to bioenergy project development. While stakeholder experience varied somewhat, stakeholders were strongly united and vocal in calling for fundamental reform of regulatory approvals and in drawing from other jurisdictions.
    - The use of forestry and sawmilling residues and uncontaminated wood waste, in commercial scale bioenergy generation requires both:
    - development consent from Local Government formal approval from the NSW Environment Protection Authority (NSW EPA).
    - In addition to the whole of supply chain practices that are in place to help ensure that biomass feedstocks remain clean and uncontaminated, the NSW native timber industry has a long history of bioenergy usage under local government development consents.
    - Queensland has a whole of Government approach where it is clear from the top down that bioenergy is a priority, which reduces interagency issues.
    - Participants overwhelmingly reinforced the need for political leadership on bioenergy and a complete rethink around the regulatory approvals process for bioenergy in NSW, in particular how 'waste' is viewed and classified and how the NSW EPA views the risks of bioenergy projects compared to fossil fuel-based projects.
- *Feedstocks*
    - Bioenergy feedstocks consistency, reliability and seasonality define virtually all aspects of bioenergy project development and approvals.
    - Security of feedstock is crucial. Project developers are often looking 10-20 years of feedstock certainty, but the reality is they often struggle to get 5-10 years.
- *Community engagement / Social licence to operate*
    - The variability of bioenergy feedstocks and technologies can result in a broader range of issues and opportunities compared to other renewable energies, but this variability can cause uncertainty and complicate education and understanding by regulators and the broader community.
    - There is a public perception problem with burning forests for fuel production, especially on the North Coast of NSW. A community engagement piece is needed.

[19] Specific policy recommendations of this project will be submitted to the Inquiry at the end of June 2021.

  - Community engagement needs more work in raising awareness about what bioenergy actually is. It is unclear who is responsible for bioenergy education to the community.
  - For the bioenergy roadmap, Bioenergy Australia has asked that government take the lead in educating the public on key outcomes of the roadmap so there can be more understanding and trust and confidence to move forward with whatever focus areas are identified.
- *Performance measures*
  - The variability of bioenergy parameters, feedstocks in particular, can make measuring and comparing programs difficult and further complicate regulatory approvals.
  - Having a nationally consistent approach will hopefully bring in a layer of trust and hopefully accountability for operators and project developers for ensuring that they are going to be meeting certain standards.

In summary, by creating demand for lower value wood products, bioenergy markets:

  - **Promote biodiversity**
  - **Fund/Facilitate management of invasive native scrub**
  - **Reduce wildfire risk by funding reduction of fuel load**
  - **Contribute to the circular economy by minimising waste**
  - **Create value through improved timber asset utilization.**

Recommendations

Timber NSW wants to work with the NSW government to realise the opportunities presented by residual biomass and bioenergy:

- Government at all levels needs to recognise the full range of climate change mitigation benefits provided by the forest industry, by including incentives for carbon credits for the storage of carbon in production trees, and emissions reduced from bioenergy projects.

- *SUPPLY Regulation which facilitates ecological thinning across tenures*: to best utilize this resource and to manage fire risk, the NSW government needs to work with industry to ensure that ecological thinning across a range of tenures is facilitated and regulated such that this market can be fully served by the NSW timber industry.

- *DEMAND Policy Support for New Markets*: enhanced policy and regulatory support for the creation/strengthening of markets for residual biomass (and bioenergy in particular) to fund the collection of residual biomass, thus creating value, jobs and managing fire risks. This includes a greater recognition of the value of export woodchip markets supplied with residual biomass, but largely not utilized domestically.
- Policy development needs to be flexible to support a potentially broad range of bioenergy-based opportunities (electricity, heat, and fuel) from small co-generation facilities located in small regional areas to large facilities located in cities and other industrial centres.

- NSW Government policy support should incentivise multiple benefits from bioenergy projects i.e. economic development, social and environmental outcomes.
- NSW Government policy should support the inclusion of harvesting and processing residues from sustainably managed operations as renewable energy sources which must be provided the same opportunity as hydro, wind and solar for renewable energy credits (or any other policy instrument).
- Encourage changes in the Renewable Energy Target (or any other relevant policy instrument) to allow the participation of renewable heat projects. Any Australian energy policy target that is adopted should require 10 per cent of energy projects to be sourced from bioenergy (including renewable heat). Adjust economic incentives over time, as bioenergy moves towards competitiveness with fossil counterparts.

- RESEARCH & DEVELOPMENT Expand international R&D collaboration, making the best use of Australia's national competencies in bioenergy.
- Seek research funding from a consortium of public and private sector interests. The aim will be to better identify, trial and develop cross-sectoral opportunities to increase sustainability and reduce carbon emissions while adding economic activity and increasing resilience for regional areas, consistent with the proposed trial framework in the second diagram above.
- Advocate to have bioenergy and other bioproducts included in the development of the Federal Government's Technology Investment Roadmap.

Job Opportunities for Regional & Indigenous Communities
The NSW timber and forest products industry currently contributes millions each year to the state economy and is a major employer in rural and regional NSW. More than 3,300 people are employed in NSW forestry and logging, timber wholesaling support services and 18,946 people are employed in NSW paper and wood product manufacturing sectors. 42% of these jobs are based in regional NSW.

As below, there are many exciting regional job-creation opportunities in the timber industry, including for indigenous communities, and there is potential to meet the NSW Forestry Industry Roadmap target of 150,000 new timber industry jobs. Moreover, young Australians want to work in the industry.

Pre-COVID-19, forestry and demographic data sources showed significant declines in timber-related employment across Australia, both in the industry and more widely in sector R&D. However it must be recognized that since COVID-19, supporting the creation of jobs in the NSW timber industry has become even more critical in the wake of national policy interventions such as HomeBuilder, strained domestic supply chains and global timber supply shortages.

The demand for timber has never been higher and delivering timber supply demands government facilitation to realise the potential of the timber industry as a major employer across regional NSW.

However, meeting this potential firstly depends on certainty of timber supply and active measurement and monitoring of social and economic forest values.

Land Conversion Took a Heavy Toll on Regional Communities
The timber industry is critically linked to jobs and growth in many parts of regional NSW. Yet in the past two decades, NSW government policy leading to falling timber supply from conversion of State Forests to National Parks has taken a heavy toll on regional communities.

This was clear from the findings of the Parliamentary Inquiry into the Management of Public Land in NSW, handed down in May 2013.

The Report states: "*The rapid expansion and current management of national parks highlights the growing tension between achieving conservation outcomes and meeting the economic and social needs of communities across the State, particularly those in regional New South Wales*."

Inquiry participants raised particular concerns about the process of converting Crown land, State Forest and agricultural land to national park estate. The Report stated that "*While reservation sought to protect areas of the highest conservation value, it is unclear whether economic and social values were equally considered in this process, with livelihoods and futures disregarded…The Committee is particularly concerned about the public perception that the conversion process has been politicised*".

The Inquiry found that the impacts of conversion of timber-producing State Forests to National Park estate "*have proven significant and long-lasting. There was overwhelming concern about the economic and social impacts that have ensued from conversion...Important industries, such as the timber industry, suffered, communities are now struggling and calls are being made to reconsider the reservation of land as national park estate…The Committee believes that national parks have not always provided the best conservation outcomes for an area. The Committee … believes that some reserved areas should indeed be released to provide enough wood supply to sustain the timber industry and provide the industry with some certainty for the future*".

The Report makes clear that the future of the NSW timber industry is at stake in the following recommendation (emphasis ours):

Recommendation 10
That the NSW Government immediately identify appropriate reserved areas for release to meet the levels of wood supply needed to sustain the timber industry, and that the NSW Government take priority action to release these areas, if necessary by a 'tenure swap' between national park estate and State forests. In particular, urgent action is required for the timber industry in the Pilliga region.

Another recommendation makes clear the importance of land management to local indigenous communities.

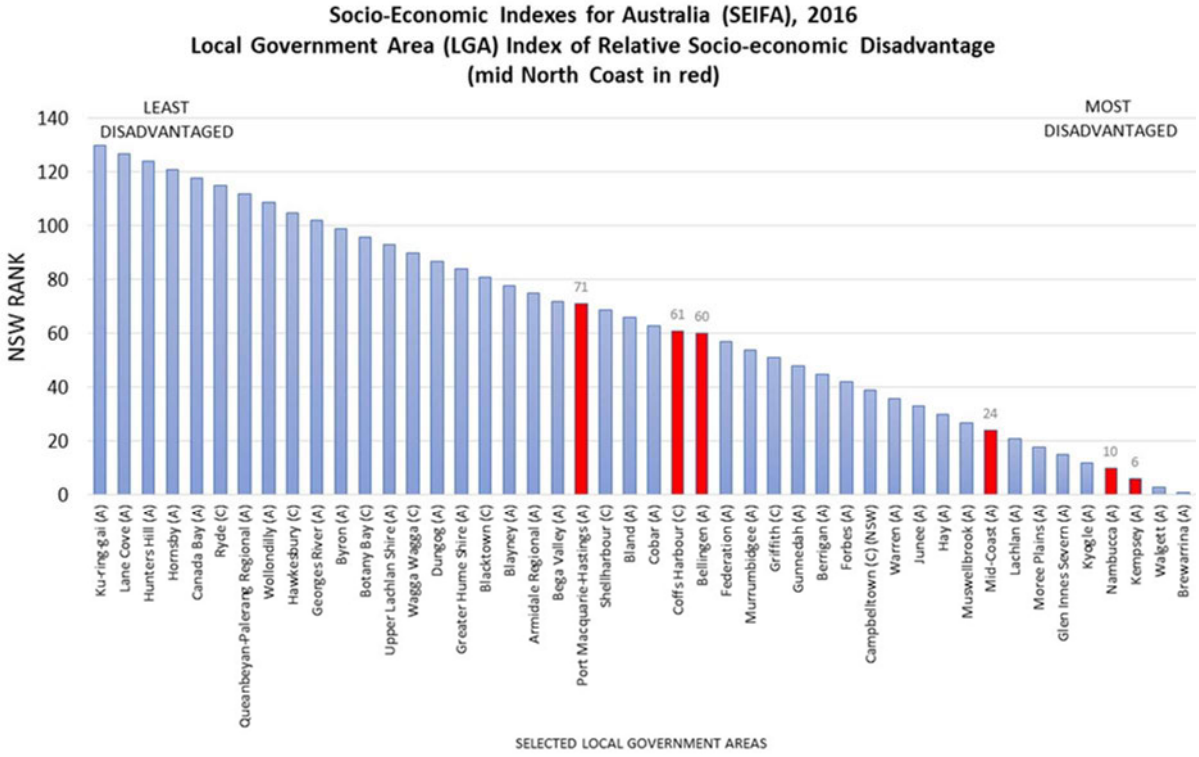
Recommendation 12

That the NSW Government improve engagement with Indigenous communities to explore opportunities for the management of public land, including the acceleration and expansion of joint management arrangements and the priority development of sole management opportunities.

Yet in the eight years since the Report was published, there has effectively been no action on the Inquiry findings from the NSW Coalition government.

In the eight years following the 2013 Land Management Inquiry, the position of regional timber communities has deteriorated.

In 2020 the NSW National Parks Association proposed the creation of a Great Koala National Park on the mid-North coast of NSW. Data from the 2016 Census shows that the Local Government Areas impacted most by the proposal are all communities classified as relatively disadvantaged, according to the SEIFA Index.



A Failure to Measure & Monitor Socio-Economic Issues

The evidence presented to the Parliamentary Inquiry into the Management of Public Land in NSW shows a failure to take social and economic factors into account in decisions regarding forest management in NSW.

The reason for this is that although the RFAs reflect the international sustainability principles adopted by Australia and the international community, in practice the NSW government agencies tasked with management of NSW forests, the NRC and EPA, only monitor and measure environmental matters that relate to timber harvesting.

The Employment Picture Pre-COVID Stimulus Packages

A stark picture of the socio-economic disadvantage suffered by declining timber industries is provided by the State of the Forests 2018 Report and the 2016 National Census.

Australia's State of the Forests Report 2018

Direct Employment

- Across Australia, two per cent+ of the population is employed in sector
- In the decade from 2006–2016, the total number of Australians employed in the sector declined 31 per cent from 80,000 to 55,000
- 30 Local Government Areas (LGAs) are dependent on forest and wood products industry
- Employment in forest and wood products industries declined in 21 of these 30 LGAs over the period 2011–16
- The average annual wage was $41,538in the forestry and logging subsector and $53,233 in the wood product manufacturing subsector.
- Nationally, 28 per cent of forest sector worker households had weekly incomes below $800.
- In 2016 the forest and wood products industries directly employed 1,099 Indigenous people across Australia, with an estimated 337 employed in conservation/park operation. This employment draws on traditional activities and knowledge delivers both cultural and economic benefits.

Indirect Employment

The forestry and wood products sector also creates employment indirectly, in activities that support or depend on this sector. The construction industry is particularly reliant on timber supply.

Timber Industry Research & Development

- Surveys show that:
  - expenditure on research and development in forestry and forest products has declined over time, with associated capacity.
  - the number of people involved in R&D in forestry and forest products has also continued to decline.
- Total expenditure on research and development reported by businesses in the forest and wood products sector declined by 40 per cent, from $144 million to $86 million (ABS data 2007–08 to 2013–14).
- A separate series of surveys of the forest and forest products sector, using a different definition of the sector, reported that R&D expenditure on forestry and forest products decreased by 46 per cent, from $88 million in 2007–08, to $48 million in 2012–13.
- In parallel, the estimated number of researchers and technicians involved in R&D in forestry and forest products declined by 63 per cent, from 733 in 2008 to 276 in 2013. This suggests the workforce decline has occurred across the public and private sectors, including government agencies and universities.

Post-COVID: The Current Status of NSW Timber Industry Employment

In the wake of COVID-19, the demand for timber has never been higher and the constraints of the supply of NSW timber have never been greater.

COVID-19 has ushered in a new era of employment opportunities relating to forests, both direct and indirect. The diverse range of employment opportunities for regional and rural communities listed below can be realized through appropriate policy settings.

POLICY SETTINGS	JOB OPPORTUNITIES
Timber Self-Sufficiency	
Certainty of timber supply through increased resource security	Protects & creates direct timber industry jobs and regional job ecosystems
Supply chain resilience through timely, reliable domestic timber supply	Protects indirect construction industry jobs
Protecting Forest Values	
Active and adaptive cross-tenure land management	Jobs in: • wildfire prevention • management of pests and weeds • indigenous land management • forest monitoring
Facilitate & enhance forest productivity	Jobs in establishing and maintaining: • new plantations • private native forestry
Facilitate & promote multiple use of public forests	Jobs in forest recreation and tourism
Seizing 21st Century Opportunities	
Upskilling to enable domestic production of a greater range of value-added timber products	New jobs in value-added timber manufacturing
Timber manufacturing innovation	New jobs in advanced timber manufacturing e.g. CLT
Circular economy initiatives improving utilization of lower quality logs and wood residues	New jobs in: • circular economy timber • forest management • harvest & haulage • bioenergy development • production of woodchips, pulp and paper products
NSW Timber Industry Roadmap	150,000 new timber industry jobs

Indirect Timber Jobs: The Construction Industry
Construction is the third largest industry in Australia for the number of people it employs as well as its share in the GDP of the country, with construction employment typically accounting for a little under 10 per cent of total employment across the Australian economy.

In May 2021 the Australian Construction Industry Forum reported that sector growth is exceeding expectations, based on Australia's ability to bring the spread of COVID-19 under control and the deployment of a comprehensive range of policy measures

designed provide a strong stimulus and a rapid recovery. The new forecasts project sector growth of 2.7 per cent, bringing the level of building and construction work up to $243 billion in 2021.

Although 2020 saw construction employment fall by 2.6 per cent to 1,152,000 jobs (ABS employment statistics), the strong rebound in residential building and growth in engineering construction activity is already driving a recovery in employment which is expected to push job numbers up to 1.2 million in 2021. The continued uplift in infrastructure spending will sustain growth in job numbers into 2023.

People Want Careers in the Timber Industry

Research undertaken for Forest & Wood Products Australia (FWPA) shows that careers in the forest and wood products industry are viewed positively in terms of both career opportunities and career progression. More than 30 per cent of respondents feel that the industry would be a desirable sector in which to work, more so than other construction sectors and the most desirable of all the major primary industries.

A real issue has been the rapid decline in the provision of formal education and skills and training delivery for the forest and wood products sectors. Twenty years ago, Australia had three universities offering a range of tertiary education opportunities in forest management and wood product technologies. There were also a large number of regional institutions offering a wide range of certificate level qualifications throughout the value chain, from silviculture to saw-doctoring. That has nearly disappeared.

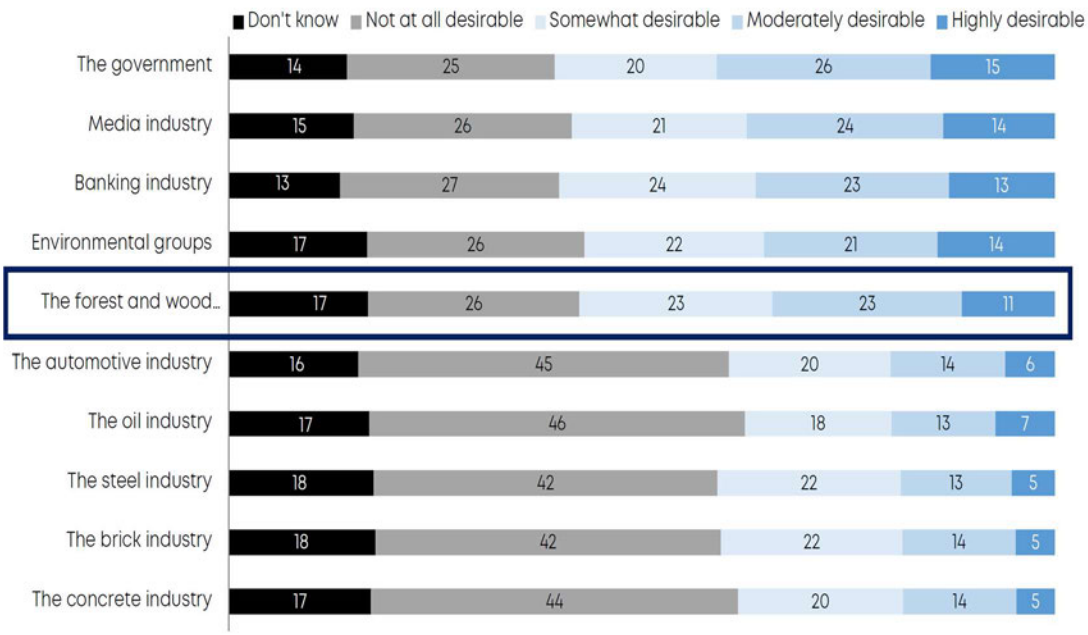


Figure 10: Employment desirability by sector (Source: Pollinate)

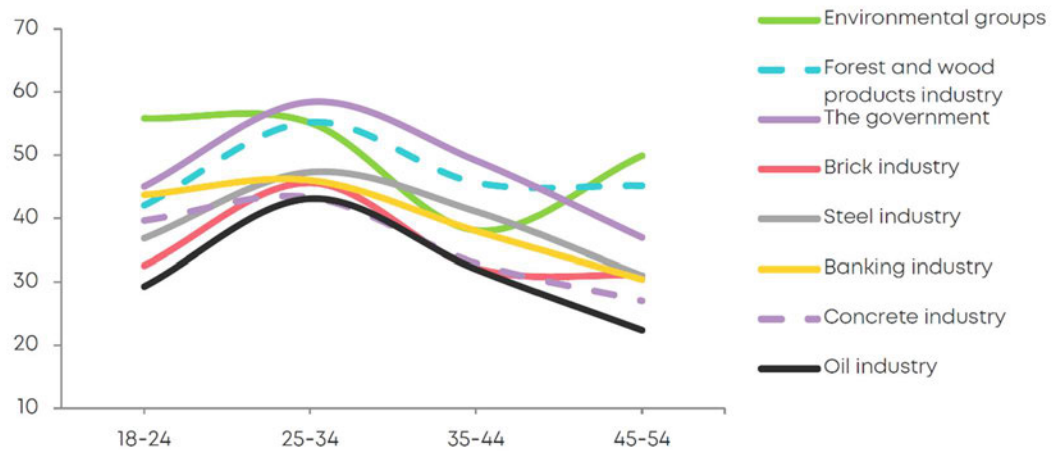


Figure 11: Desirability of employment by sector by age group (Source: Pollinate)

Recommendations

- Provide the underlying policy support for the industry – as noted above – on which the diverse range of career opportunities rests.
- Commission an independent economic report scoping the socio-economic effect of the timber industry on regional jobs and the multiplier effect of the timber industry as it impacts on the supply chain.
- There is an important role for government in facilitating jobs and skills, ensuring the approach is sensitive to specific regional challenges and needs. There is currently no centralised approach to resolving the problems of skills and employment shortages, compounding these problems rather than solving them. In particular, accessibility to training and skills development is a key issue for regionally-based employers.

APPENDIX:

CASE STUDY - Weathertex, Raymond Terrace. 7th June 2021

There is no other product like Weathertex in the world. Made entirely of reconstituted Australian hardwood, we use pulpwood which is a by-product of the timber supply chain.

We are a family-owned Australian business, making high-quality timber cladding, weatherboard and architectural panels all with a better than zero carbon footprint.

Plain old Masonite was revolutionised by Weathertex almost 60 years ago into a strong and attractive timber cladding for both interior and exterior use. We still make a little Masonite used under flooring.

We're proud to be at the forefront of sustainable building materials. Architects like the green credentials of Weathertex. We're the preferred cladding manufacturer for many builders, architects and designers here and in other parts of the world.

100% natural Australian wood pulp is pressed with 3% natural wax to make our eco-friendly timber products. These are completely natural with no chemical additives. We validate and prove

our green credentials because we see the greenwashing that goes on. We're proud that our Natural Range was the world's first manufactured product to achieve Platinum Global GreenTag certification. We also received Gold certification for all our primed flat panels and weatherboards. By not only achieving the GreenTag PhD certification but also being the first to do so, Weathertex is leading the way in sustainable building practices in Australia and around the world.

For fire prone areas our product is deemed to comply with construction fire ratings up to BAL19, due to its high density. That's a combination of nature's inherent characteristics within indigenous NSW coastal hardwood tree species; and sophisticated manufacturing.

Our business is growing and that means people want timber in their homes. That is a good news story because we believe it's the greenest material on earth.

The timber supply for our factory at Raymond Terrace, north of Sydney, is pulpwood from the forest harvest sites. It's timber that is first quality but isn't straight enough to be processed through a sawmill for conversion to higher value products like poles, decking or floorboards.

Once a builder uses it, they understand the benefits of Weathertex products. Both our timber fibre boards which are like traditional weatherboard and wider architectural panels are made to precise specifications. These are healthy choices for building owners to live and work in. Timber is a natural fibre and research confirms the positive biophilic effect of interior timber surroundings on human well-being. Another positive aspect is for carpenters working with our products – they avoid exposure to chronic health risks like long-term exposure to silica in fibre-cement.

The biggest single cost of our timber raw material is freight to get it to the factory. Raymond Terrace is located close to Sydney where construction demand for our products is high. It used to be accessible to our raw materials too – from multiple-use state forests within a reasonable 100km freight haul. But the state forests to our south are mostly National Park now. In 2021 our state forest supply is up to 200 km away. A lot more dollars go out the door with higher freight costs and trucks are burning up more fuel, pumping out more emissions to get raw materials to our factory.

We've invested to reduce waste and utilise every gram of pulpwood possible. We employ highly skilled people and can run the factory around the clock. Our team includes mechanical and manufacturing process engineers and electrical engineers. We've recruited and invested in people to build up in-house intellectual horsepower. The commitment of highly skilled people to improve processes is critical to our success.

We have 130 employees. Nearly all are located at Raymond Terrace. 102 people work in operations, 8 in management and the sales team of 12 is located across NSW, Queensland and Victoria including 6 with our call centre.

We also use more than 200 regular contractors and service providers including log truck drivers, mechanical, electrical, catering, cleaning, outward delivery drivers and auditing contractors.

We spend about $18 million every year on supplies for the business and we are a customer of several other NSW businesses. Businesses have an ecosystem with interlinkages. If areas designated for native forestry harvesting keep being reduced, there's no question that well paid jobs will go everywhere.

Australian policy is to lower carbon emissions. NSW government policy is to lower carbon emissions. Our locally grown and made timber fits that like a glove. We're one of many positive examples in the timber supply chain.

We need to utilise more timber in NSW construction and get construction carbon emissions down. Our market is growing. Demand grows as people become better informed.

NSW needs green building materials and manufacturers more than ever before in history. We are at a critical fork in the road. NSW leaders need to make wise decisions and make sure there's a strong, modern timber products industry for the good of our state. The alternative is frankly frightening.

Expert forestry production scientists confirm its possible to manage NSW timber production forests to harvest and regenerate trees for timber in a sustainable way. We must not cut off our nose to spite our face and turn more state forest into National Park. Australians need more, rather than less access to homegrown, renewable construction materials.

The regulatory mish mash in NSW needs fixing. Disruption to our regular supply of paperbark under Coastal SEPP regulation has no sign of resolution. We need more supply from private landholders. But even with an approved private native forestry property vegetation plan, with authorised parameters for future timber harvest, it's deemed as 'land clearing' which is a prohibited activity under other NSW environmental regulations.

A state government has a duty to make sure there's access to timber supply for future housing and construction needs. NSW is going backwards. By law every native tree that is harvested in NSW state forests must be replanted or regenerated, and a new tree grown. This is a rotating cycle - not deforestation. There is no excuse for locally grown timber to be scarce.

I've not meet one person in the timber industry who wants forests to be poorly managed. Modern timber people really understand our life is dependent on the forests being looked after. We all want healthy forests – that's a no brainer.

Timber NSW submission to the NSW Legislative Council Inquiry into the long term sustainability and future of the timber and forest products industry

TERM OF REFERENCE 1(f): the role of the government in addressing key economic, environmental and social challenges to the industry, including funding and support to encourage improvements in forestry practices, training, innovation and automation, workplace health and safety, industry and employee support, land use management and forestry projects

THE ROLES OF GOVERNMENT

The NSW government plays three critical roles with respect to the timber and forest products industry:

- Legislative Role: creation of the regulatory regimes that impact the industry
- Executive Role: the administration of the regulatory regimes
- Commercial Role: the commercial relationship for the supply of the timber resource.

In all its roles, the NSW native timber industry's expectation of the NSW Government and its agencies and public servants is that government will act:

- in compliance with stated policy objectives
- with full and proper application of the science of forestry as it applies to native forestry
- with even handedness between industry participants
- with no bias or ideology, whether explicit or implicit.

High Levels of Sovereign Risk

Sovereign risk is the risk of doing business with Government or of Government interrupting a business model within a specific legal jurisdiction and/or political environment.

For the NSW native timber industry, sovereign risk is the highest business risk faced by companies and employees.

LEGISLATIVE ROLE

Native Forestry operations in NSW are governed by several NSW Acts.

- *Forestry Act 2012:* key regulatory instrument for the Crown operated part of the native forestry industry
- *Local Land Services Act:* regulation in Part 5B of the Private Native Forestry (PNF) industry
- *Plantations Act:* regulates NSW hardwood and softwood plantations
- *Local Government Act 1993:* PNF related only
- *Environmental Planning and Assessment Act 1979:* PNF related only

Native Forestry operations in NSW are also governed in some circumstances by Commonwealth Acts:

- *Environmental Protection and Biodiversity Conservation Act (EPBC Act) (Cwlth)*
- *Regional Forests Agreement Act (RFA Act) ((Cwlth)*
- *Exports Control Act 182 (Cwlth)*

Other NSW instruments

- *Commonwealth – NSW State Governments Bi-Lateral Agreement*
- *Environmental Planning Instruments* (EPIs)
- *Integrated Forestry Operations Approval* (IFOA)

Forestry Act 2012

- Establishes the Forestry Corporation (Part 2)
- Classifies Crown Land for State Forest purposes, flora reserves and special management zones (Part 3)
- Taking of timber, forest products and forest materials , amongst other provisions authorises licensing schemes. (Part 4)
- Integrated forestry operations approvals (Part 5B)

For sawmillers the Forestry Act establishes the licence to deal with forest products (timber licence defined section 3 and authorized Part 4).

The Forestry Corporation NSW, a NSW government corporation, supplies these forest products. The Act establishes this entity. It authorises it to conduct forestry operations (defined section 3) through the integrated forest operations approval (defined section 3.). This leads into the commercial operations of the role of government.

Recommendations

Recommendations for amendment to the Forestry Act concerning the role of Government in its commercial role will be set out below.

One further recommendation for legislation which might be placed into the Forestry Act will be set out in the Executive Role of Government.

Local Land Services Act

Private Native Forestry operations are governed by Part 5B of this Act.

PNF is governed by a Private Native Forestry Code of Practice pursuant to provisors of this Act.

This Act provides that the Local Land Services Agency is responsible for the preparation of the Code. Their Minister is required to consult with Ministers responsible for Biodiversity and Fisheries, usually different Ministers. The Biodiversity Agency will mean that the Environment Protection Authority is sitting the policy. Under

the Act EPA monitors compliance with PNF. This raises a real governance issue. Pursuant to S.60ZZZB(3) the EPA can recommend to LLS the termination or alteration of a PNF plan.

LLS Act makes clear that liability remains under variety of other Acts eg. Biodiversity, Fisheries etc.

Whilst the Private Native Forestry Code of Practice has such thorough input the Local Government Authorities and the Department of Planning through EPIs can override the consent given to hold a PNF Licence. This is a system pf dual consent and the consent givers can be and are in opposition to each other.

Private Native Forestry (PNF)

Part 5B of the Local land Services Act sets out provisions for the operations of a private land owner within NSW to engage in harvesting of native trees on their land.

Any PNF Plan must be conducted in accordance with:

- the principles of ecologically sustainable forest management.
- the protection of biodiversity and water quality
- the objective to carry out the forestry operation in a sustainable manner
- the assurance that differences between PNF and native forest operations in State forests are recognized, including in the application of protocols, codes, standards and other instruments.

These objectives are provided through the PNF Code. The Code is made by the Minister for Forestry with the concurrence of the Minister(s) for administering the Biodiversity Conservation Act 2016 and the Fisheries Management Act 1994.

A PNF Plan is made on application by the land owner and approved by the Local Land Services using the PNF Code.

The EPA has enforcement functions on compliance with the PNF Code by the landowner(s).

A PNF Plan does not give the right to ‘clear land’. It is selective harvesting.

Private native forestry is not land clearing despite often being portrayed as such. Genuine land clearing results in land-use change. Private native forestry does not change the use of the land. Private native forestry results in partial and temporary canopy removal. After harvesting occurs, the forest regenerates, which is codified and enforceable.

Private native forestry operations are typically small-scale and low intensity, as demonstrated by the NSW Government’s Department of Environment’s own monitoring of the causes of forest canopy change. The monitoring differentiates between permanent clearing and temporary canopy changes [as a % of the NSW forest estate]:

Permanent clearing:

- Agriculture (grassland, cropping, horticulture, farm infrastructure) [0.07%],
- Infrastructure (residential, commercial, mining, public infrastructure) [0.03%]

Temporary canopy removal:

- Fire [0.13%]
- Forestry (native and plantation harvesting, establishment, thinning, forestry infrastructure:
    - public native forestry [0.06%]
    - private native forestry [0.02%]

The monitoring reveals that private native forestry annually removes just 3,690 hectares of forest canopy on average[20] or just 0.02% of the NSW's 20-million-hectare native forest estate[21] (Figure 4).

Private native forestry is only allowed to occur in regrowth forests, harvesting is selective and there is no clear-felling. All private native forestry operations must be planned and abide by a Code of Practice.

Under the Code, all sensitive and significant environmental features, including riparian zones, old growth, steep slopes, rainforest, rocky outcrops, wetlands and heath are protected. Protection is also provided for individual trees and plants that are important for wildlife, such as hollow-bearing trees and feed trees. For plants and animals, such as koalas, which are classified as vulnerable or threatened, there are special prescriptions that ensure the protection of key habitat features. After harvesting is completed, the forests must be allowed to regenerate. Operating in accordance with the Code ensures that private native forestry is a sustainable land-use.

[20] EES (2018) Results Woody Vegetation Change Statewide (SLATS) 2018. Website https://www.environment.nsw.gov.au/topics/animals-and-plants/native-vegetation/landcover-monitoring-and-reporting

[21] Department of Ag (2018) https://www.agriculture.gov.au/abares/forestsaustralia/sofr/sofr-2018/criterion1

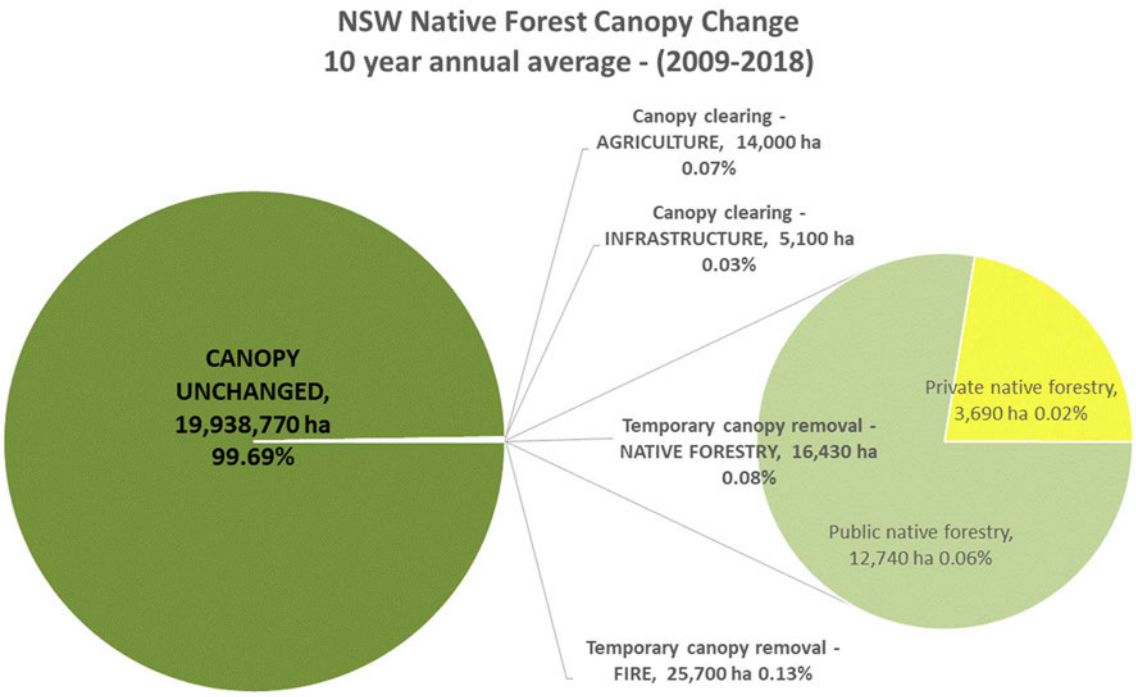


Figure 4 – Size and scale of land-use activities that result in temporary and permanent canopy change in NSW native forest (2009-2018 annual average) (data source: EES (2018) Results Woody Vegetation Change Statewide (SLATS) 2018.)

Dual Consent Required of State Government and Local Governments

Part 5B of the Local Land Services Act 2013 (LLS Act) and the Standard Instrument – Principal Local Environment Plan (2006 EPI 155A) (Standard Template) and its application to a local council's Local Environment Plan (LEP) will require dual consent to be obtained. The first will be obtained under Part 5B of the LLS Act and the second pursuant to a LEP where 'forestry operations' are proposed and will require a development application to be lodged with the Council.

For private native forestry, there is a need to remove dual consent and the unnecessary involvement of Councils who have no expertise or specialist knowledge in forest science. Under the current governance arrangements, the process is far from satisfactory. On the north coast alone, there are 35 individual Councils each taking a different approach to the treatment of private native forestry.

For private landholders who are required to obtain development approval, the process is akin to a lottery. Removing the involvement of Councils will remove this uncertainty without eliminating the LLS regulatory framework which provides environmental protection.

This a duplication of process for the landowner and establishes a disincentive that negates the public policy of encouraging private native forestry operations. This public policy has operated for some time and across several governments of differing political character. PNF operations have been viewed as an important source of harvested native

timbers to replace the supply from Crown lands that have been gazetted as NSW national parks.

Policy considerations that are also present with dual consent is that a Council will not operate to any instrument that equates to the PNF Code established by the LLS Act. Each Council will have its own approach to consideration of the development application, even though this process has legislative requirements that must be met and are contained within the *Environment Planning and Assessment Act 1979.* This amounts to a dual consent system independent of each other.

In turn, this gives rise to a legal principle around any possible repugnancy between the two laws currently requiring dual consent. It is arguable that the dual consent has one set of legislation working against the other. The issue of repugnancy will certainly be present if a Council refuses consent to a development application of a PNF operation when the landowner has a LLS PNF Plan approval.

A larger policy issue emerges from this outcome. In litigation to challenge a Council refusal for a DA to conduct an approved private native forestry operation, if a Court upholds the refusal of that development application for a PNF operation, then a major principle in law is challenged. A PNF operation that has approval from the Local Land Service agency pursuant to Part 5B of the LLS Act, results in an Environmental Planning Instrument (EPI) overturning an Act of Parliament.

The removal of dual consent removes this tension and ensures Parliament's intent in the Local Land Services Act is preserved.

Removal of Impact of EPIs and the Environment Planning and Assessment Act 1979

The same tension outlined above sits with EPIs and the Local Land Services Act.

Part 5B of the Local land Services Act sets out provisions for the operation of a private land owner within NSW to engage in harvesting of native trees on their land.

EPIs

Part 3 'Planning Instruments' of the Environmental Planning and Assessment Act 1979 established the regime of an 'environmental planning instrument'. An example is an LEP that a local government council issues for the zoning of land within the local government area for which it is responsible. A State Environmental Planning Policy (SEPP) is another. A further example is the *State Environmental Planning Policy (Koala Habitat Protection) 2019*) gazetted on 20 December 2019 and rescinded on 30 November 2020.

An EPI is created by various means depending on whether it is a SEPP or an LEP, but importantly the instrument never comes before Parliament or becomes a Parliamentary sanctioned instrument. Parliament delegated the creation of these instruments, removing itself from the approval. It is finally made law by the Governor in Executive Council, similar to a bill enacted by Parliament, which means the Minister has carriage of the instrument during the delegated process.

This potentially creates a conflict between an Act of the Parliament and an instrument created under delegated authority of Parliament. This conflict will occur when there is a real inconsistency or repugnancy between the two 'instruments'.

The legal principle involved

Where there are two statutes from the same Parliament and the application of a provision of one statute is repugnant to the provisions of the other, then this tension needs to be resolved as the presumption is that the Parliament would have intended both pieces of legislation to work in harmony.

Where repugnancy is found to exist then the usual remedy is that the latest instrument in time, prevails.

Where a PNF Plan approval has been granted pursuant to the provisions of the LLS Act and the provisions of an LEP, as delegated legislation to the Environment Planning and Assessment Act 1979 (EPA Act), is inconsistent and repugnant to the LLS Act, then the LLS Act will prevail. It will prevail because it is the superior instrument, as the LEP is an instrument of delegation to an Act earlier in time.

The situation is further clouded where the delegated legislation produces an instrument that is the later in time.

The matter can only be resolved with certainty of the legal principle that Parliament would have intended the two Acts to work in harmony. The EPI (and another delegated legislation as such as a regulation) might be later in time but it has not been legislated by the Parliament but under delegated authority. Such a situation l returns to the actions of the parliament being in harmony, so the later legislation of Parliament must prevail to restore the 'harmony' in light of the repugnancy.

All of this is, arguable, but it is difficult to see how an instrument made under delegation, and not Parliament, would be superior to an instrument enacted by Parliament later in time than the Act, giving rise to the delegated instrument.

However, no matter how contestable the issue might be, a government would not wish to see it being determined by a Court that would establish a precedent across many potential exercises of delegated authority. It would be prudent to deal with the one-off circumstance. It would appear that this is what the Executive decided to do and what the Government in Parliament elected to do. Those concerned about the administration of the environment in NSW and its direction might also consider these issues with care.

Local Land Services - section 60ZZ (1) LLS Act.

Currently a PNF plan cannot exceed 15 years – section 60ZZ (1) LLS Act.

A provision that extends the approval period of a PNF Plan from 15 to 30 years is another important measure. The additional time will provide landholders with the confidence they need to invest in their forests' future, potentially encourages them to seek forest certification and reduces the need to maximise timber revenue in single harvesting events. This measure will be enhancing the health of the forest and improving the environment.

Forestry operations are not a single generational matter but several generations due to timber growth cycles and reafforestation programs. A 15 year period is not even half the period of a normal hardwood timber growth cycle.

Wider Consultation in developing a Private Native Forestry Code of Practice

Given the issue of the EPA being required to consult on the development of the PNF Code of Practice and being the regulator, it is sensible policy development to widen consultation to require the Minister for Agriculture and Western New South Wales to consult with the Minister administering Part 7A of the *Fisheries Management Act 1994* and the Minister administering the *Forestry Act 2012* before making a Private Native Forestry code of practice.

Enforcement Penalties Local Land Services Act 2013section 60ZZA

In 2018 the Forestry Legislation Amendment Bill 2018 amending the LLS Act which introduced the enforcement penalties provisions, the NSW government through its relevant Minister gave an assurance to the native forest industry that these fines would be amended to bring them back into line with other comparable measures such as the Biodiversity Conservation Act 2016.

In particular the 'other offences' are remarkably high for minor and unintended offences.

Under the NSW Forestry Industry Roadmap the NSW Government has given a commitment that sustainable harvesting of native forest timber will no longer be treated as a form of land-use change such as clearing. This position was supported by the Independent Biodiversity Legislation Review Panel.

Under section 60N of the Local Land Services Act 2013 a failure to comply with a private native forestry code is treated as a land clearing offence. This was introduced by the Forestry Legislation Amendment Act 2016. Selective harvesting is not land clearing.

Yet the penalty regime in the Local Land Services Act 2013, section 60ZZa carries the same penalty in the event that a private native forestry plan or a private forestry code of practice is breached.

The maximum penalties for land clearing offences under *the Local Land Services Act 2013* are $5 million for a corporation and $1 million for an individual. These penalties well exceed the maximum penalties which apply for offences under the *Biodiversity Act 2016* which range from a maximum of $22,000 for a Tier 5 offence up to $1,650,000 for a Tier 1 offence. (See Table below) Similarly, under the *Fisheries Management Act 1994* the maximum penalty is 2,000 penalty units which equates to about $240,000. The legislative tiers show that there is an escalating scale of penalties based on the type and seriousness of an offence.

Under the legislative framework land clearing is treated as the most serious of all the offences. This is because land-clearing typically results in permanent land-use change and when undertaken on a large scale that can cause significant environmental impacts. In this context it is very difficult to understand why the Parliament has allowed a 'contravention of a timber harvesting plan or code' to be treated as a land clearing offence.

The following are suggested amendments put forwarded by Timber NSW, NSW Farmers, Australia Forest Growers, Institute of Foresters of Australia, Boral Timbers, Timber Communities, Allied Natural Wood Exports, Australian Forest Contractors Association and Hurford Hardwood in May 2018.

The following amendments to the Bill are recommended to address the issues raised above:

60N Unauthorised clearing of native vegetation in regulated rural areas—offence

Delete the following subsection:

- ~~(e) that the clearing is the carrying out of a forestry operation authorised under Part 5B (Private native forestry).~~

Comment

On numerous occasions and in submissions since 2015, industry raised the need for alternative provisions to redefine timber harvesting so that it is not categorised as a land clearing activity.

60ZR Objects of Part

Insert the following subsections:

- (c) to recognise and accept differences between private and publicly owned native forestry in relation to land-use priorities; land-use emphasis; protocols; codes; and standards.
- (d) to regulate native forestry as an ecologically sustainable land-use
- (e) to ensure the rights to carry out mixed-use primary production on private land remains unfettered.

60ZT Responsibility for preparation and making of codes

Delete the following subsections:

- ~~(5) A private native forestry code of practice may apply or adopt protocols, codes, standards or other instruments that are publicly available and in force from time to time.~~
- ~~(6) Without limiting subsection (5), any such protocols may include those prepared by the Environment Protection Authority.~~

Insert the following replacement subsections:

- (5) A private native forestry code of practice is not obliged to apply or adopt protocols, codes, standards or other instruments that are in force on public land.
- (6) A private native forestry code of practice is to encourage private landholders to actively manage their native forests and paddock trees to optimise their productivity, health and value.

Renumber subsection (7) as subsection (8)

Renumber subsection (8) as subsection (9)

Insert as subsection (7)

- (7) A private native forestry code of practice is to encourage the management of private native forestry for long term generation timber supply and income generation.

At the very least the enforcement provisions in section 60ZZA of the Local Land Services Act need to reflect that private native forest is not land clearing. That there should be a tiered system of enforcement penalties as set out in the Biodiversity Conservation Act section 13.1.

If the Committee does not consider this to be an appropriate move to consistency of legislative approach, then most certainly matters of enforcement under section 60ZZa should be referred to the recommended Tribunal in this submission

Comparison of Fines Biodiversity Conservation Act 2016 s 13.1 and Forestry Legislation Amendment Act 2016 (Local Land Services Act 2013 s 60ZZA))

Entity	Biodiversity Conservation Act 2016	Forestry Management Amendment Act 2016 (Local Land Services Act 2016 s 60ZZA))
Corporation Likely to cause harm to the environment		Maximum $5M
Individual Likely to cause harm to the environment		Maximum $1M
Corporation For other offence		Maximum $2M
Individual For other offence		Maximum $500,000
Corporation Tier 1 Act make provided further offence on a daily rate	Maximum $1.650M,	
Individual Tier 1 Act make provided further offence on a daily rate	Maximum $330,000	
Corporation Tier 2 Act make provided further offence on a daily rate	Maximum $660,000	
Individual Tier 2 Act make provided further offence on a daily rate	Maximum $132,000	
Corporation Tier 3 Act make provided further offence on a daily rate	Maximum $440,000	
Individual Tier 3		

Act make provided further offence on a daily rate	Maximum $88,000,	
Corporation Tier 4 Act make provided further offence on a daily rate	Maximum $110,000	
Individual Tier 4 Act make provided further offence on a daily rate	Maximum $22,000,	
Corporation and Individual	Maximum $22,000	

Recommendations for Private Native Forestry

- to remove requirements imposed by other legislation, including the requirement for development consent under the *Environmental Planning and Assessment Act 1979*, in relation to carrying out private native forestry that is authorised by a private native forestry plan under Part 5B of the Act
- to remove the application of EPIs pursuant to land to which Parts 5A and 5B of the Local Land Services Act 2013,
- to extend the maximum duration of private native forestry plans made under Part 5B of the Act to 30 years
- to require the Minister for Agriculture and Western New South Wales to consult with the Minister administering Part 7A of the *Fisheries Management Act 1994* and the Minister administering the *Forestry Act 2012* before making a private native forestry code of practice,
- amended section 60ZZA as submitted to the government.

***Integrated Forestry Operations Approval* (IFOA)**

Coastal IFOA – Integrated Forestry operations approval

The Coastal IFOA conditions set mandatory actions and controls for protecting threatened plants, animals, habitats, soils and water. They contain 125 conditions and 40 protocols.

The NSW Government has remade the IFOAs for the Upper North East, Lower North East, Southern and Eden regions into one Coastal IFOA, which is efficient, effective and enforceable, and reflects modern best-practice regulation. The Coastal IFOA commenced on 16 November 2018.

The Coastal IFOA conditions can only be amended by the Minister for the Environment and the Minister for Industry and Trade.

However:

- These IFOA requirements are prescriptive
- They fail to reflect the condition and state of functioning of native forestry

- They contain no conditions or protocol for the event of bushfires, despite fire being the major disturbance to native forest flora and fauna and health of the native forest known since European settlement.

They contain no reflection of the extraordinary impact of introduced fauna species to the native forests within NSW (eg. Lantana and blackberries)

Forestry and forest science have essential principles for good forestry operations. Only certain trees can be harvested, no clear felling in a native forest (different to a plantation – softwood or hardwood), the principle of a working forest to be followed, which means harvest to encourage growth, do not create events that will cause soil erosion on the topography and pollution of waterways, and this includes access ways. Take considerable care and protection of the fauna of the area.

Yet the EPA IFOA regulatory forestry measures are highly prescriptive. The EPA has turned these simple principles into 125 conditions and 40 protocols and these are 358 plus pages with 39 of these, definitional terms. A statutory duty of care of a few lines after careful contemplation would suffice.

Recommendations

As it is unlikely the NSW EPA will give up its IFOA regulatory document, another mechanism to find a sensible solution to their policy role and regulator will be put forward in the Executive section of the Role of Government submission.

- *Environmental Protection and Biodiversity Conservation Act (EPBC Act) (Cwlth)*
- *Regional Forests Agreement Act (RFA Act) ((Cwlth)*
- *Exports Control Act 182 (Cwlth)*

Other NSW instruments

- *Commonwealth – NSW State Governments Bi-Lateral Agreement*

The Agreements:

- are for the purpose of providing long-term stability of forests and forest industries
- provide for the ecologically sustainable management and use of forested areas in the regions
- identify areas in the region or regions that the Parties believe are required for the purposes of a Comprehensive, Adequate and Representative Reserve System, and provide for the conservation of those areas
- have regard to studies and projects carried out in relation to all of the following matters that are relevant to the regions:
    - environmental values, including Old Growth, Wilderness, endangered species, National Estate Values and World Heritage Values;
    - Indigenous heritage values;

- economic values of forested areas and forest industries;
- social values (including community needs); and
- principles of Ecologically Sustainable Forest Management.

However, NSW State Government policy and administration fail in respect of the obligations to provide for the long term stability of the forests and forest industries and to take into account economic, social values and the principles of Ecologically Sustainable Forest Management (ESFM).

The EPA, as a policy maker, simply does not consider these issues. The Natural Resources Commission (NRC) which has an oversight/adjudication role on behalf of the government, generally takes a similar position to the Department of Environment, EPA and what formerly was the Office of Environment and Heritage(OEH) and is now Environment, Energy and Science (EES). This needs to be remedied for NSW compliance with its obligations under the Bi-Lateral Agreement.

Additionally, the criteria for the measurement of policy outcomes are easily comprehended and attained.

Background

It is important to understand the background to and rationale for, the creation of the Regional Forest Agreements (RFAs). The RFAs are agreements between the Australian government with the NSW government. The RFA requirements are designed to ensure that forestry conducted in NSW aligns with the best practice international principles with which the Australian government has agreed to comply.

Australia is a voluntary member of the Working Group to The Montréal Process.
The Montréal Process is an initiative which arose from a resolution at the 1992 Earth Summit calling for sustainable management of forests. It was further developed at a 1993 conference on temperate and boreal forests in Montréal, Canada.

The Working Group on Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests ("Montréal Process") was subsequently formed in Geneva in June 1994. Its purpose was to advance the development of internationally agreed criteria and indicators for the conservation and sustainable management of temperate and boreal forests at the national level.

In February 1995 in Santiago, Chile, the members of the Working Group endorsed a comprehensive set of criteria and indicators for forest conservation and sustainable management for use by their respective policy-makers. The statement of endorsement is known as the Santiago Declaration.

Membership in the Working Group is voluntary and currently includes countries from both hemispheres, covering a wide range of natural and social conditions. The member countries (Argentina, Australia, Canada, Chile, China, Japan, Republic of Korea, Mexico, New Zealand, Russian Federation, United States of America and Uruguay) represent about 90 per cent of the world's temperate and boreal forests, amounting to 60 per cent

of all of the forests of the world.

The primary aim of sustainable forest management is to maintain a broad, specified range of forest values in perpetuity. Assessing progress towards this goal can be difficult. Criteria and indicators are used to simplify the task by characterising the essential components of sustainable forest management and providing a common understanding and a common framework for describing progress towards sustainability at a national level.

The Montréal Process, via its members, regularly reports on forest health [how often?]. In Australia, the RFA Act was passed in 2002 and the following year the Australian government published the first *Australian State of Forest Report* on Australia's sustainable forest management.

The RFAs are therefore designed to put in place measures to aid and abet the improvement of forest health.

> *'The establishment of Australia's Montréal Process Implementation Group, with members from all States and Territories representing forest conservation, production, public and private forest management, provides a strong regional ownership and guidance of the framework. The adoption of the framework by State government agencies, involved in both production and conservation forests, for reporting sustainable forest management demonstrates the framework's relevance at national and sub-national levels.*' [Extract Abstract CI Howell, AD Wilson, SM Davey, MM Eddington, Sustainable Forest management Reporting in Australia.]

Therefore, we see an alignment between the bets practice forest management criteria in the RFA Act and the Montréal Process Criteria and Indicators. As per the Table below, there is a commonality and similarity between the meaning of the words in both columns - even if one is a set of measures is more generally for the state of forests and the other is more specifically for the management of forests through forestry operations based on 'ecological sustainable forest management'.

Comparative Table of the definition of a Regional Forest Agreement and the Montréal Process Criterion and Indicators.

RFA (s.4 *RFA Act*)	Montréal Process
environmental values, including old growth, wilderness, endangered species, national estate values and world heritage values;	Conservation of biological diversity (9 indicators)
indigenous heritage values;	Maintenance of productive capacity of forest ecosystems (5 indicators)
economic values of forested areas and forest industries;	Maintenance of forest ecosystems health and vitality (2 indicators)
social values (including community needs);	Conservation and maintenance of soil and water resources (5 Indicators)
principles of ecologically sustainable management	Maintenance of forest contribution to global carbon cycles (3 indicators)

the agreement provides for a comprehensive, adequate and representative reserve system;	Maintenance and enhancement of long term multiple socio-economic benefits to meet the needs of society (20 indicators)
the agreement provides for the ecologically sustainable management and use of forested areas in the region or regions	Legal, institutional and economic framework for forest conservation and sustainability and management (10 indicators)
the agreement is expressed to be for the purpose of providing long-term stability of forests and forest industries;	

Recommendation

The NSW State Government Report annually as to the outcomes for both the RFA criteria and the criteria for the Montreal Process to the NSW Timber industry, the NSW State Parliament and the local communities where the industry operates.

EXECUTIVE ROLE

Regarding forestry & the timber industry, this role is found in several agencies:

- The EPA
- The Natural Resources Commission (NRC)
- Forestry Corporation
- Department of Primary Industries (DPI)
- Department of Planning Industry and Environment, (DPIE)
- Local Land Services (LLS)

Local Land Services (LLS), part of Department of Regional NSW, carryies out an environmental and land management mandate within Government Policy but facilitative to the external clients it serves. It has a specialist forestry division staffed by professionally qualified forestry and land management staff with high level skills and expertise. LLS is under-resourced compared with other agencies within the NSW government yet delivers more than those other agencies.

The **Natural Resources Commission (NRC)** is defined as an independent agency that is frequently requested by government to review and adjudicate issues that cannot be solved within existing agencies and departments. It was for many years located within the Department of Premier and Cabinet and sought to use that powerful position to its benefit. Since 2019 (post state elections) a major reshuffle and design of departments saw it move to Dept of Planning Industry and Environment.

When examining the wide variety of forestry and land management issues previously reviewed and reported, it becomes clear that it is subject to political pressure and is far more closely aligned with the Environment portfolios than primary industry or land management portfolios.

It is a bureaucratic political player. An example of its influence is the allocation of just over $9M in the Forest Industry Roadmap to undertake cross tenure forest monitoring

based on the pilot trials undertaken successfully by the Forest Science group in Department of Primary Industries (DPI). I

n a master stroke, the NRC managed to not only have allocated just over $2M for remapping of the Old Growth Forest on the North Coast which was subsequently dropped as a project on the direction of the Minister for Environment in 2019 but publicly reported as a consequence of the 2019/20 bushfires. The balance of that project money was then allocated to the larger program of forest monitoring,

Those successful trials and the allocation of $7.2M to the DPI Forest Science Group from the Forest Industry Roadmap to undertake cross tenure monitoring was suddenly allocated to the NRC cloaked in “a direction from the Premier” and with the obvious ideology often demonstrated by the NRC, repurposed to focus on the state forests and the IFOA conditions and very little on monitoring the National Park estate. Timber NSW in July 2019 wrote to the NRC with the following quote

“The NRC has appointed four ‘Independent Experts’. It is very concerning that their expertise only covers a narrow field of interest and this leaves many areas of the Program without adequate representation. For example, none of appointed experts has expertise in sustainable wood production. We are doubtful of the alleged independence of three of the appointed experts that are from, or affiliated with, the ANU Fenner School of Environment and Society. The Fenner School of Environment and Society replaced the Forestry School at ANU and has been a staunch vocal and public critic of multiple-use forestry and RFAs “.

To date significant money has been spent on bureaucratic processes often criticized by many at workshops and consultation sessions when had the Forest Science Group continued with their project, NSW would have already had early reporting and initial results from the monitoring. The NRC is an expert at obfuscation to suit their particular strategy and support the other agencies they perceive to have sympatico.

The latest project is to monitor the RFA outcomes. Something the NSW government through the EPA has supposed to have been undertaking since signing three regions between 1999 and 2001. There is a history of serious concerns about their scope, reporting and independence

It appears that there is total reluctance to effectively monitor the National Park estate.

Forestry Corporation NSW will also be considered under the commercial section of this part of the submission. However, it must be stated that it fails in its management of the native forest under its control as the NSW Government has given it a ‘profit’ first agenda by making it a State-Owned Corporation. Previously when it was NSW State Forests and the Forestry Commission, it was a good manager of the native forest, however this has been reduced because of the loss of trained staff and a focus on the benefits of the high-volume softwood plantation sector. Historically, from the commercial history the hardwood division of State Forests established and paid for the softwood plantation estate out of income of the selective harvesting of hardwood from native forests. What

was long term planning using the Crown resource has become a very short profit and loss statement with no long-term strategy.

Department of Primary Industries houses the State Government's policy division and has a role in the operation and strategy for native forestry and softwood plantations within NSW. There is no public evidence of this occurring other than a feted Forest Industry Road Map released in 2016. The Road Map will undoubtedly be reported on as achieving great results, however the loss of the cross-tenure forest monitoring program to the NRC, a largely bureaucratic roadmap that reflects departmental business as usual combined with a lacklustre performance and lack of consultation with industry has led to complete disillusionment with the department. The role of DPI should be a strong voice for sustainable forestry backed by well researched policy and science.

An example is the only field research into koala habitat. Research undertaken by a division of the DPI. Research that is peer accessed and recognised as world class. Australian Rural & Regional News carries a story written by Gordon Wilson entitled: '*The new form of science or just bad government*'.

It states that on the NSW Department of Planning, Industry and Environment (DPIE) website, there is a reference that leads to two zip files (20-1158, 1/05/2020) that show this Department trashed the work of DPI to make up their own predictability model to win over Minster Kean on the need for a new Great Koala National Park on the North Coast.

If the DPI was approached on the preparation of the report, which the material disclosed does not show, then the DPI did not support their own research or have input to the final report to the Minister. This suggests that the old euphemism 'missing in action' on the evidence is an apt description of DPI on this occasion.

To be fair to DPI it may be the case that the absence of any emails between the DPIE officer and officers of the DPI is because the DPIE elected not to involve DPI. This is an indictment on DPIE and the clear failure of the Government's cross departmental structure, through super ministries, to avoid 'silo' reports to Government. This extends to the Government's administration of its failure to oversee its own policy objectives.

Department of Planning Industry and Environment

The commentary above relating to DPI equally applies to DPIE. A further example of their failure to consult on many occasions and the open display an ideological bias that suggests no impartially operates in the relevant sections of this Department towards the forestry industry.

In March 2020 when the NSW Government was set to issue a new Koala SEPP the forestry industry along with one other major agricultural industry group learned in late January 2020 what was about to occur. No draft had been provided for industry consultation. However, prior to the Christmas break, after a Cabinet subcommittee signed off on the SEPP on 9 December 2019 all the environmental NGOs that had made submissions before on the old Koala SEPP, displaying a similar focus, had been briefed on the full details of the new SEPP. At a meeting held at the end of February 2020, days

before the commencement date, industry groups were not provided with a copy of the SEPP just a commentary in a brief meeting.

The Department acts inconsistently with its own data. It seeks to shut down forestry as if it is the destroyer of flora and fauna in NSW. The figures of canopy disturbance speak for themselves. This Department's actions are disproportionate to this level of disturbance. It is telling that the Department does nothing to address 'cross tenure' matters that impact on native forest and forestry, ranging from exotic flora and fauna and lack of land management that now without doubt leads to devastating wild fire, and not just bushfires,

The DPIE has also failed in its obligations under the RFA Bi-Lateral Agreement with the Commonwealth. NSW Government does the reporting on the criteria contained in the Regional Forest Agreement Act 2002 (Cwlth). Three of the criteria are:

- economic values of forested areas and forest industries;
- social values (including community needs);
- the agreement is expressed to be for the purpose of providing long-term stability of forests and forest industries;

It is apparent these measures are ignored until reporting time.

The reporting criteria given the only attention is:

- the agreement provides for the ecologically sustainable management and use of forested areas in the region or regions,

but the intent of the Commonwealth and State arrangement is that this reporting objective or measure works with the other seven criteria for action and reporting.

NSW Environmental Protection Authority

The EPA has statutory roles in the forest industry of setting policy and ensuring compliance through a regulatory role. It does this with a mindset that NSW native forestry should be closed down. There is an ideological bent that is supported by increasing evidence. This internal held view has been evident for over a decade.

There is little or no formal or informal consultation. It is as if the forestry industry does not exist or, in the alternative, it is not recognised because the agency is on a pathway to ensure it is closed down. Logically, there is no other explanation.

Yet the informal views from the EPA do not equate with real data and evidence. The native forestry industry is the most highly regulated forestry industry in the world, and not just Australia. The land mass on which forestry operates as stated, and it is repeated:

> Private native forestry operations are typically small-scale and low intensity, as demonstrated by the NSW Government's Department of Environment's own monitoring of the causes of forest canopy change. The monitoring differentiates between permanent clearing and temporary canopy changes [as a % of the NSW forest estate]:

Permanent clearing:

- Agriculture (grassland, cropping, horticulture, farm infrastructure) [0.07%],
- Infrastructure (residential, commercial, mining, public infrastructure) [0.03%]

Temporary canopy removal:

- Fire [0.13%]
- Forestry (native and plantation harvesting, establishment, thinning, forestry infrastructure:
    - public native forestry [0.06%]
    - private native forestry [0.02%]

In respect of compliance the EPA send out often inexperienced officers into a forestry operation or a site where there has been a forestry operation. This leads to some quiet extraordinary compliance actions by the EPA. Where a lack of knowledge leads to enforcement matters that take considerable time to unravel. Little or no information will be placed before this Committee with evidence because people who are involved or have observed questionable conduct will not come forward as they are fearful of the EPA and its officers. There is no trust and there is no good will. This stems from the EPA's view on the future of forestry.

Secondly, there is no attempt by the EPA to facilitate compliance. The Authority's only role is to establish regulations, monitoring and enforcement. In the past the NSW Government has operated an extension service aimed at education, clarification of rules and understanding to assist good environmental practice. Instead, there are constant examples of the EPA audit staff arriving at forestry operational sites, and not always concurrently with operations and displaying overreach. There appears to be no incentive for the EPA to improve this side of its operations despite many complaints. It would appear they have no accountability for their actions and behaviour.

EPA has investigatory power found in Chapter 7 of the Protection of the Environment Operations Act 1997. The EPA's capacity to institute criminal proceedings is found in Chapter 8 of the same Act. There is no legislative capacity to provide an educational and facilitative role to any industry. This is even more significant when it comes to matters concerning forestry operations. There are two very different forms of scientific endeavour: one is forestry science and silviculture and the other environmental science. The latter is a general form of science at a high level looking at the environment. The former is a very specific land management and locality-based tree science that looks to the health and management of specific forests. There are no forestry scientists of any seniority or influence in the EPA.

Recommendations

Timber NSW submits that the regulation of PNF should include the following:

- Local Land Services should be resourced to provide an extension service for the PNF industry, including land owners and harvesting contractors to ensure compliance and provide feedback.
- Forestry Corporation of NSW should provide a well-resourced extension service to contractors with whom it contracts to ensure compliance with the IFOA.
- A Tribunal should be created as a means of appeal to any enforcement process initiated by the EPA, regardless of the level of enforcement, for both PNF and parties with Crown Land harvesting.

    - The Tribunal would be a third party placed to make recommendations to the EPA, in its role of statutory policy maker and regulator. It would make their role far more transparent. The EPA would need to publish reasons as to why a recommendation was not accepted and acted upon.
    - As a statutory independent body, the Tribunal's role is to conduct hearings and make determinations with respect to appeals that are lodged by aggrieved parties
    - Any person who disputes any EPA enforcement measure can approach the Tribunal.
    - An aggrieved party would be anyone who is a recipient of a breach of subsection 38(1) of the EPBC Act, namely that a forestry operation has not been conducted in accordance with an RFA.
    - An appeal from a Tribunal decision would only be a judicial review.
    - Members of the tribunal are appointed by the Governor in accordance with the usual practice of statutory independent bodies.
        - Members could be as follows:
            - barristers or legal practitioners who have practiced for at least five years.
            - persons with a sound and practical knowledge of forestry, road construction in forests, and harvesting of timber.
            - persons with tertiary qualifications and substantial practical experience in the sciences appropriate to land and forest management.
            - persons with a sound knowledge of, and at least five years practical experience in, agriculture and forestry.
            - persons with a sound knowledge of, and at least five years practical experience in, conservation science.
        - The Head of the Tribunal to be a Queens Counsel or Senior Counsel (barrister).
        - Apart from the chairman, all members to be part-time members paid on a per Diem basis.

COMMERCIAL ROLE

Forestry Corporation NSW is the commercial face and role of the NSW Government in forestry. Forestry Corporation, or its predecessor, the Forestry Commission, contracts with stakeholders in the hardwood/ native forest industry.

These contracts fall into three broad areas: contract harvesters, haulage contractors and hardwood timber sawmillers. Subject to what the arrangement might be with a timber saw miller, all three, two or one of these contractual arrangements may be with the one entity.

The common form of the wood supply agreements (WSAs) is a document that has been developed over a period of time. They are reflective of how a quantity of timber to be supplied is delivered over a period of time and assessed to contract specifications standards along with the working conditions and climatic conditions that run with a working forest that will impact performance under a contract. For a working contractual form, they are satisfactory, with the exception of two issues, which involve recent implementation of contractual terms.

Originally, when the NSW State commenced licensing sawmillers, there was never a contractual or licence condition on the species of timber required to be delivered. When quotas were introduced, it was only a quantum (volume) of timber.

Licenses were for twelve months. However, when contracts were introduced they ran for a period of five years and 20 years with Ministerial approval.

In 2004 the Carr Labor Government entered into a single contract with one company that gave that company percentage preferential species of the allocated quantum of timber supply in the contract. No other WSAs holders were offered such an arrangement. Not only was a preferred species percentage granted, a percentage of diameter range of the timber to be supplied was also granted by the NSW Government. Those details of the contract were, like all WSAs, kept confidential.

In 2004 the Carr Labor Government, with Ministerial consent, introduced 20 year duration WSAs to encourage investment in the industry. None of the long term contracts agreed with the remainder of the industry had the preferred species clauses given to the ‘favoured’ company.

Then in 2014 the same company received from the current Coalition Government a further contractual variation that was very advantageous to the company:

- For the receipt of $8.55M this company gave up some quota but received an extension of contract time to 2028. That extension alone was worth more than $8M.
- But significantly, the Government gave this company minimum 85% of the North Coast supply of blackbutt or minimum of cubic metres of blackbutt.
- In addition, guaranteed minimum of 49% of the North Coast supply of spotted gum, brush box, tallowwood and Sydney Blue Gum.
- Maximum annual supply of non-preferred New England Hardwood species.

The impact of the first contract in 2004 but certainly the contract given in 2014 is as follows:

The WSAs holders who had timber mills configurated for a certain flow of timber which averaged a certain amount of preferred species, noticed a material change in the volume of preferred species being received. New England hardwood species is a timber that was rarely seen on the North Coast mills as timber harvested stayed in the region it was cut. This altered.

However, the model of supply the current Government initiated is extremely harmful to the long-term well-being of native forest. Whereas timber would be harvested and it was shared around equitably, now with the preferred species and on fixed percentages of a given volume, it meant that harvesting was detrimentally distorted with medium term impacts on the native forest as preferred species HAD to be delivered to one Forestry Corporation client.

It also moved an equal commercial risk of what timber was supplied from all timber sawmillers to a heightened commercial risk for all sawmillers except one who had their commercial risk greatly reduced.

Conceptually and in modelling, as timber supply falls, two contractual terms in the Coalition Government's 'favoured' company operate to the detriment of the native forest timber industry. These two terms are a percentage of all North Coast preferred timber and a floor quantity of cubic meter of preferred species from the North Coast that MUST be provided. The fixed percentages of the contract on annual volumes means that only 15 per cent of the preferred species is available to the balance and majority of the sawmillers. This will operate without detriment to other WSA holders if timber supply is constant or rising.

However, when the harvested volume of the preferred species falls below the specified minimum quantity then no other company will receive ANY preferred species. Under the traditional model, any interruptions to timber supply or falling timber supply was a risk all had to share. Not any more, under the Coalition Government, this has been altered to benefit one 'company.

The Coalition Cabinet in 2014 approved the payment of $8.55M to the 'favoured' company. What is unclear is just how much the relevant Ministers knew at the time of the contract variation The Coalition Government Ministers have been made aware of the impact of the 2014 contract variation on the other WSA holders.

It would appear that since this issue was raised in 2014, and the NRC was asked to review it and make recommendations, the NSW Cabinet opted for a solution that has disadvantaged the rest of the sawmilling industry. Following that, the new Minister then commissioned GHD to review the Wood Supply Agreements and still nothing has been done.

We could speculate that the government sees this as a cheaper option in allowing all contracts bar one to terminate in 2023, costing the government nothing. If this is so, then the NSW government is encouraging a monopoly operating on the North Coast in the native hardwood industry. The loss of jobs will be significant and in areas where there is no other employer.

Due to the impasse between the NSW EPA and Forestry Corporation on harvesting post wildfires 2019/20 redundancies are occurring due to a lack of supply. It is important to remember in this context that the 2014 Cabinet decision came from a pre-election 2011 Coalition promise. The Forestry Act was enacted in 2012. Then the 2014 decision followed. The 2011 election promise was to enhance and build a native forest industry to support all the small businesses and families living on the North Coast, South Coast, Eden Region and the Cypress and Red Gum.

It is vital to remember that three of the criteria under the Commonwealth-State Bi-Lateral Agreements involve forestry and forestry communities. These appear to be ignored. In 2018 the current Premier signed off on the RFA Agreements. The Treasurer in 2014 presumably signed off on the payment to the preferred 'company. The Treasurer and the Finance Minister are the statutory shareholders of Forestry Corporation. The Treasurer in 2014 was Hon Andrew Constance. Finance Minister was Hon Damien Tudehope.

As Forestry Corporation has been struggling to meet its contractual commitments of the WSAs and particularly the preferred species for the major contract, harvesting and haulage has been impacted, timber from Bulahdelah can travel to Herons Creek, south of Wauchope, or further north to Lismore.

These haulage distances have previously not occurred. The haulage cost is part of the WSAs and as a consequence the cost of the native forest resource has increased greatly. Forestry Corporation would argue that their costs are much higher than recovery. Timber NSW submits that this is primarily the outcome of bad contracting for a preferred company.

If the preferred species contract is not cancelled, long term damage will occur to working native forests on the North Coast.

Subject to an agreement on complete confidentiality, a industry case study has been prepared on this issue.

Contract Management

Copies of Type A WSAs are on the website of Forestry Corporation NSW. There are four types of WSAs. Type A, Type B (these are for good quality saw logs), Type C and Type D. Type D is for pulpwood, firewood, fencing posts and timber residues.

The contract management of Forestry Corporation appears to be discretionary in its practice. If an entity is one of the larger operators, then the principle of contract management works well albeit with various tensions. However, if an operator is a small or sole operator, then it is another style of treatment. After a number of years of correspondence on behalf of a small operator asserting that contracts were in place that

required adherence, recently after a request to produce copies of the purported additional contracts, Forestry Corporation in writing has admitted to only holding unsigned drafts or verbal contracts. For a wholly owned state government Corporation to utilize verbal contracts or unsigned draft contracts is unacceptable. This was not the practice under the Forestry Commission,

The charter to the Crown's timber supplier must surely be that no timber is wasted that is harvested. (This needs to be supported by the EPA.) So that the concept of the hierarchy of timber value of a harvested tree is fully applied. From the prime blackbutt logs to the residue that is used for firewood, pulpwood or bioenergy, none of the resource is wasted and that each of the contractors that assist this utilization is as important as the top preferred timber users.

Bushfire proposed Reduction due to Decrease in wood supply

A recent report has suggested that WSAs on the North Coast should be reduced by 4% in volume. Forestry Corporation has taken the initial position that the volume only WSAs should have to reduce their volumes with the incentive of extending their contracts to 2028.

The Corporation logic is that this would require a partially new contract thus the reduction in volume. However, the preferred company is to remain on the same volume and species specific terms.

This is reflective of the position the Coaliton Government took in 2014.

Recommendation

The Forestry Act (Part 4) be amended to contain words such as:

> The Corporation when contracting for the supply of timber will only contract in volume and timber specifications which have not any mention of preferred tree species, non-preferred species or tree species generally.
>
> The supply of harvested logs will be carried out in a manner that ensures that each contractor receives an equitable portion of the timber harvested in the category of their contract.
>
> Any reduction of timber volumes to be supplied under contract must be borne equally by all members of the native forestry timber industry.

APPENDIX

Case Study: Caban's Rural Fencing Pty Ltd

This case study highlights the attitude of FCNSW towards very small operators and their contract administration.

Caban Rural Fencing Pty Ltd is a sole practitioner business operated by Peter Caban that primarily supplies fencing to owners and operators of rural properties. The business does not normally supply firewood.

When fencing timber is available, Peter works in the bush for days. Peter is a qualified carpenter and cabinet maker and log grader and contractor. Caban's Rural Fencing used to employ people when fencing supplies were regular and reliable.

In order to survive, Peter has had to accept some firewood supply on occasions so that he has cash flow in the absence of fencing timber. The business secures most of its timber from Forestry Corporation NSW (FCNSW).

Despite holding a Type D contract which has been extended regularly, Peter has received only two loads of timber since November 2020. Forestry Corporation issued letters claiming a "Force Majeure" (FM) event due to the fires of 2019/20, however if a FM is declared all contracts cease, yet FCNSW has continued to supply its customers even at lower volumes.

In more recent times Caban Fencing has had to accept firewood from FCNSW on a very small basis. He does so when the price of the firewood is low enough that he can sell it as a sideline in his business. When FCNSW adds haulage and freight charges to firewood from New England region to Cessnock the commodity is priced out of its own market.

What is at issue here is that Peter is not in the firewood business, but FCNSW has been pressuring him to take firewood for over six years. When he refuses the offer, he finds that his supply of fencing rounds and splits stops. It was the case that Peter would submit a monthly order based on the work he had on order and FCNSW would deliver.

FCNSW has advised that "*the loads delivered have been mixed with firewood due to the small quantities of fencing timber available and the economic efficiency of making a full load for transport*".

FCNSW needs to sell firewood to remove the poorer grades of timber it accumulates in a harvesting operation. Caban Fencing is not in the firewood business and does not want a contractual commitment to receive monthly amounts of firewood that the business cannot sell. Over the past few months FC NSW has been applying heavy pressure to take firewood otherwise my fencing timbers cannot be supplied.

Peter regularly see loads of timber on trucks being delivered to his closest competitor who does take firewood in addition to fencing materials. When challenging FCNSW on supply of fencing splits and rounds, Peter is continually pressured to sign another firewood agreement.

In a recent letter from FCNSW in response to a complaint about the lack of supply and continued pressure to take firewood, FCNSW stated that Caban Rural Fencing had two previous firewood agreement cover the last few years.

Peter was unaware of those contracts/agreements and asked for copies of them. He was informed that they were probably “verbal” or on the FCNSW system. FCNSW has only been able to produce a draft unsigned copy of an agreement/contract that Caban Rural Fencing has never seen.

How can a government owned corporation not have a proper contract/agreement system in place and even suggest that there is a verbal agreement? How does a business survive on two loads of fencing timber since November 2020? If something doesn’t change soon Peter’s business will close.

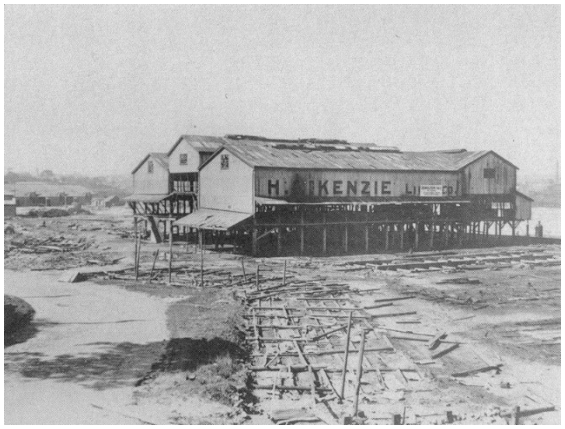
Timber NSW submission to the NSW Legislative Council Inquiry into the long-term sustainability and future of the timber and forest products industry

TERM OF REFERENCE 1(g): the environmental impact and sustainability of native forest logging, including following the 2019/20 bushfire season

The Evolution of Native Forest Harvesting in NSW
In NSW native timber harvesting has been occurring for over 200 years.

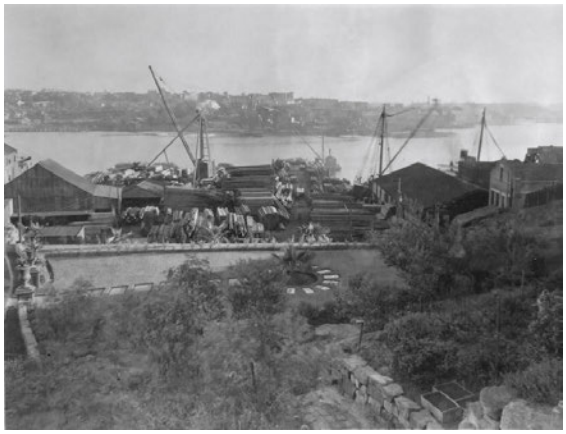
A perusal of historic records and photos of Sydney Harbour foreshore reveal just how significant and important the native timber trade has been. For nearly 100 years the harvesting of NSW native timbers was a mainstay of the NSW economy.

> Timber mills were very substantial. Goodlet & Smith opened a saw mill, wharf and moulding works at Murray Street in about 1872. In 1885 the mill moved to water frontage on Elizabeth Macarthur Bay. The main building had five storeys, housing an immense engine (double-cylinder horizontal) driving processes throughout the building. There were three other pairs of engines and a 5-ton traveller ran into the building. This complex operated until 1927. 17 other timber yards or sawmills are recorded in the peninsula between the 1850s and the 1940s, most on waterfront sites. When CSR occupied the northern shore from the 1870s, timber yards and sawmills mainly moved to Blackwattle Bay. In the 1880s the Blackwattle Bay waterfront hosted Robert Mays’s timber wharf and storage ground, next to another owned by P. Davies (with an engine and circular saws which cut paving blocks), then a shipbuilding works and (the oldest on this frontage) the timber yard belonging to Francis Guy.
>
> pyrmonthistory.net.au/timber



McKenzie sawmill Blackwattle Bay 1899

Hudson's Timber Yards at Blackwattle Bay, Glebe 1923 (State Records of NSW)



Timber wharves Blackwattle Bay, Glebe 1938

Formal recognition of the importance of sustainable timber supply occurred in 1916 with the dedication of the first State forests under the *Forestry Act*. On private land the supply of native timber was mainly driven by land clearing for agricultural development. This activity didn't meet the definition of sustainable forestry.

The arrival of bulldozers and chainsaws in the 1960s replaced hand tools, bullocks, and draft horses and gave rise to the term 'industrial logging' which became the catalyst for anti-forestry sentiment.

The late 1970s and early 1980s gave rise to environmental movements which voiced concern that environmental values were not being appropriately protected. To a large degree, campaigns to 'save the forest' were a response to the over clearing and environmental degradation that was occurring more broadly, rather than to timber production activities. However, the then Forestry Commission, being a single public-owned entity, proved to be an easy target.

It took several decades of ongoing environmental protests before the government acted. When it did, it did so in a comprehensive way.

The Montreal Process & Australia's National Forest Policy Statement (1992)
In the early 1990s, Australia became a signatory to an internationally agreed set of Protocols which arose from the Montreal Process (see below). The Protocols were slightly modified to become Australia's Sustainable Forest Management Framework of Criteria and Indicators (seven criteria and forty-four indicators).

These formed the basis upon which the management of all Australian forests (not just those subject to timber harvesting) were to be assessed in terms of their ecological sustainability. Since 1998 the criteria and indicators have also underpinned Australia's *State of the Forests Report* which is published every five years.

The Montréal Process

Criteria and Indicators for the Conservation and Management of Temperate and Boreal Forests

The seven criteria and 54 indicators of the Montreal Process provide a common framework for member countries to describe, monitor, assess, and report on national forest trends and progress toward sustainable forest management. They also provide a common understanding within and across countries of what is meant by sustainable forest management and may be understood to constitute an implicit definition of sustainable forest management at the country level provide has become a key tool for defining, measuring, tracking and reporting on national progress toward sustainable forest management.

www.montrealprocess.org/The_Montreal_Process/Criteria_and_Indicators/index.shtml

Accordingly, in 1992 the Commonwealth and the States signed a National Forest Policy Statement (NFPS) which introduced the concept of ecologically sustainable forest management (ESFM).

According to ESFM, timber production levels and operating conditions were reviewed in accordance with the principle that they should avoid any serious or irreversible damage to the environment or to ecological processes.

To help guide this objective the NFPS applied the Precautionary Principle.

What is The Precautionary Principle?

The precautionary principle expressed in the National Forest Policy Statement (NFPS) is defined as:

'*where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:*

- *careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment; and*
- *an assessment of the risk-weighted consequences of various options.*'

The NFPS also explicitly recognised that forests have multiple values which were broadly classified as either environmental, economic, or social. Generating economic and social benefits from timber production (and other forest uses) was supported as a primary objective but, as below, had to be balanced against the needs of the environment.

Extract from the National Forest Policy Statement regarding Wood Production

4.2 Wood production and industry development

Sustainable economic use of native forests and plantations is one of the principal objectives of this Statement.

Wood production is a major commercial use of Australia's forests. It can be integrated with a range of other commercial and non-commercial uses, among them nature conservation, recreation, tourism and water catchment protection. Ecologically sustainable management of native forests for wood production involves maintaining a permanent native forest estate while balancing these uses.

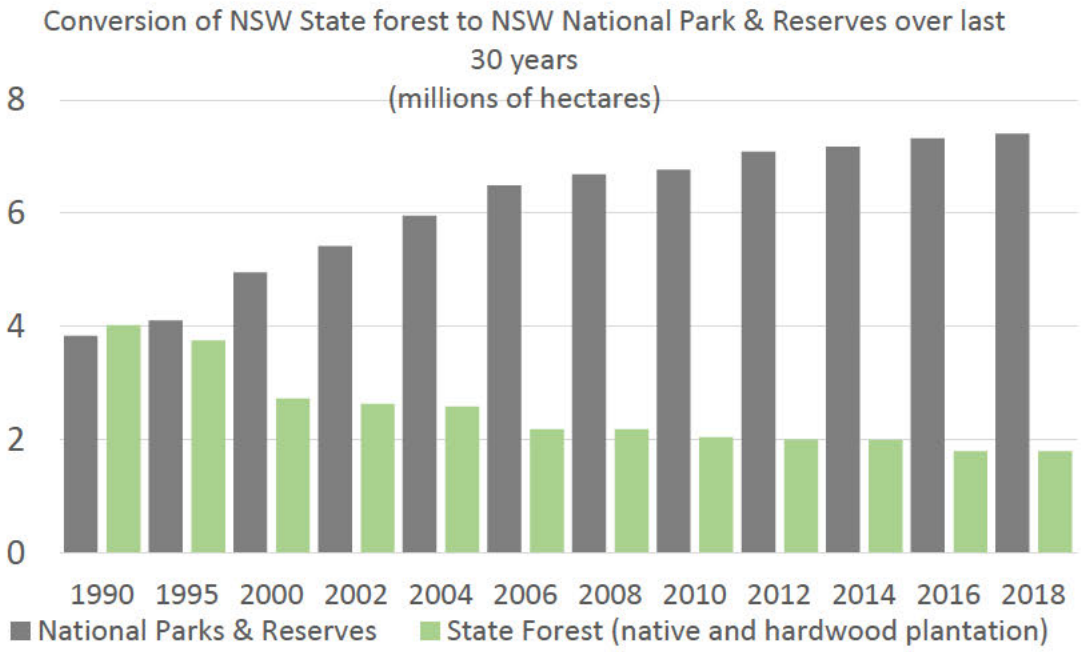
To better identify and quantify multiple forest values, so that they might be better tracked and managed, the Commonwealth committed tens of millions of dollars for Comprehensive Regional Assessments (CRAs). In recognition of the diversity of these values, the assessments were undertaken on a regional scale.

By the late 1990's the CRAs had been completed and a lengthy process began to decide how best to balance the many forest values. The CRA process revealed that not all forest values were in harmony: favouring one value could mean compromises for another. Important questions included how best to preserve and protect biodiversity, which land was allocated and available for timber production and the regulatory conditions under which native timber was harvested.

Striking a balance with so many competing interests was difficult and politically charged. The then Carr Labor government made a decision to emphasise environmental forest values to the detriment of economic and social values.

The Creation of a Comprehensive, Adequate and Representative Reserve System
In each of the four NSW forest regions (Eden, Southern NSW, Upper North-East and Lower North-East) a comprehensive, adequate and representative reserve system was created, to set aside forests specifically for biodiversity conservation.

To create the new reserve, 1.3 million hectares of dedicated State forest tenure was revoked and transferred to National Park. This decision meant that the area of land available for native forest harvesting was more than halved. It led to a halving of the sustainable sawlog yield in most regions of NSW.



The aim of the decision was to prioritise environmental values at the expense of social and economic values. The new National Parkland expanded NSW's conservation reserve network to an environmental protection level that became recognised as world class, with all targets met or exceeded.

Notably, the reserve levels are exceeded in areas offering valuable hardwood timber resources, which means that despite the growing demand for timber and NSW's net timber import deficit, the value able to be derived from sustainable forestry in NSW is deliberately foregone.

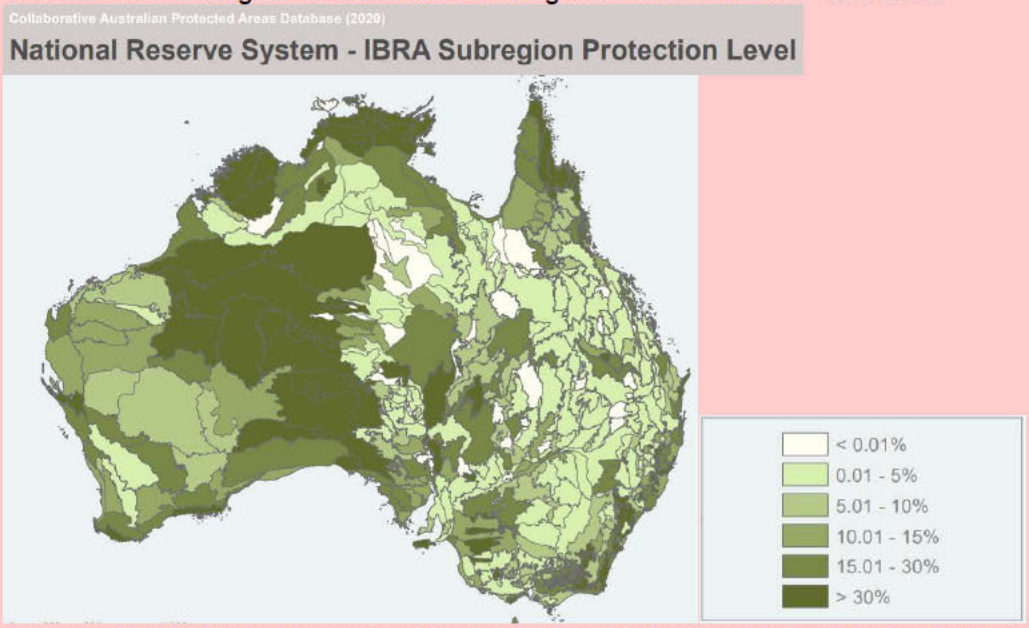
Australia's Bioregions (IBRA)

The national and regional planning framework for the systematic development of a comprehensive, adequate and representative 'CAR' National Reserve System is provided by the Interim Biogeographic Regionalisation for Australia (IBRA).

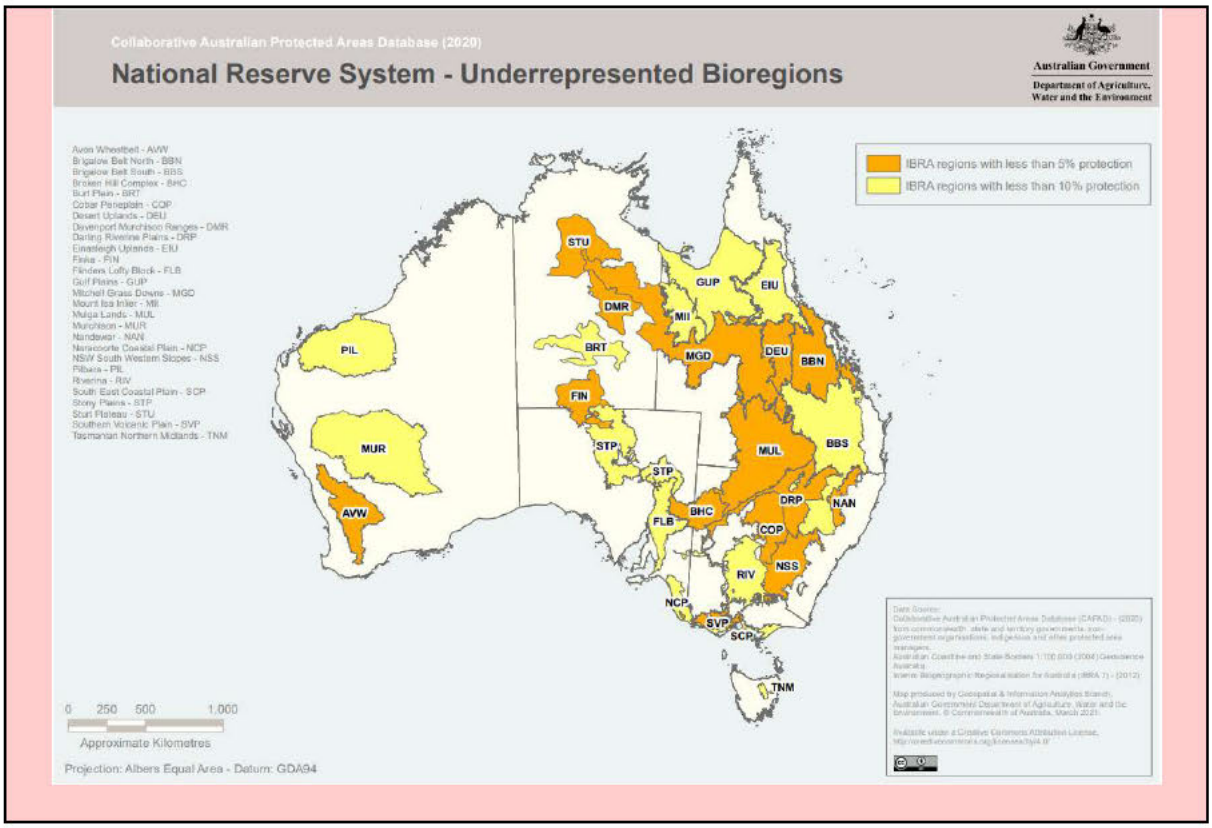
IBRA was developed in 1993-94 and is endorsed by all levels of government as a key tool for identifying land for conservation under ***Australia's Strategy for the National Reserve System 2009-2030****. The nationally agreed regionalisation was published in Thackway and Cresswell 1995, An Interim Biogeographic Regionalisation for Australia: a framework for establishing the national system of reserves.*

*Under the Convention of Biological Diversity Australia has worked towards a target of 17 per cent of our continent to be protected as part of the National Reserve System. In building the National Reserve System, priority is given to under-represented bioregions that have less than 10 per cent of their remaining area protected in reserves. (*https://www.environment.gov.au/land/nrs/science/ibra)

Within NSW RFA regions all of the reserve targets have been met or exceeded.



All of the NSW bioregions which are underrepresented in the national reserve system are located within the Murray Darling Basin in subregions where no or very little forestry occurs.



The Regional Forest Agreements (RFAs)

Between 1998 and 2000 the outcome of the forest reform process and how it would be implemented was formalised through Regional Forest Agreements (RFAs).

RFAs are bilateral agreements between the Federal Government and four state governments and are given statutory effect under the *Commonwealth Regional Forest Agreements Act 2002 (RFA Act)*. They are long-term agreements that provide for the sustainable management and conservation of Australia's native forests.

The initial RFAs had a term of 20 years and recently all were extended for a further 20 years, along with a renewed commitment to the NFPS.

In each RFA region native forest harvesting is only allowed to occur in regrowth forests which are neither rare nor threatened. Clear-felling is prohibited in NSW and selective harvesting is undertaken as the only method of native forest harvesting. At the harvesting site, comprehensive environmental protection measures are applied to ensure the impacts of tree removal on the environment are temporary and minor.

All native forestry operations must be planned and abide by Integrated Forestry Operations Approvals (IFOAs) on public land and Codes of Practice on private land. Under these operating rules sensitive and significant environmental features including riparian zones, old growth, steep slopes, rainforest, rocky outcrops, wetlands and heath are all protected.

Protection is also provided for individual trees and plants that are important for wildlife such as hollow-bearing trees and feed trees. For plants and animals, such as koalas, which are classified as vulnerable or threatened there are special prescriptions to ensure the protection of key habitat features. After harvesting is completed, the forests must be

allowed to regenerate. **Operating in accordance with these rules ensures that native forestry is ecologically sustainable.**

Additional detail about the Coastal Integrated Forestry Operations Approvals is provided below.

The Coastal Integrated Forestry Operations Approval Environmental Protection Measures?

The CIFOA is designed to ensure that timber harvesting operations in NSW State forests are planned and managed in a manner that does not lead to significant increased threats to biodiversity values under normal conditions.

The CIFOA is a complex and robust regulatory tool that contains requirements to manage environmental values at a range of spatial and temporal scales in the landscape including:

- Limits on annual harvesting extent in each management zone to ensure operations occur across the landscape
- Permanent retention of significant areas such as old growth, rainforest, wetlands, stream network and habitat corridors, which total nearly half of the State forest estate
- Limits on harvest intensity at the local landscape scale
- Targeted survey requirements for some species
- Broad area search requirements for general habitat identification and to determine species presence and protections
- Soil and water protection measures to maintain stability, minimise erosion and protect water quality
- Selective harvesting applied at most sites with strict basal area retention limits on harvesting at the site scale
- Protection of 10 per cent of the net harvest area in wildlife habitat and tree retention clumps focused on the best available habitat in each area
- Individual tree protections for various categories of trees with habitat value.

Regulation & Auditing of Native Forest Harvesting

In NSW native forest harvesting operations are regulated and audited by the NSW EPA. This is a problem for the timber and forest products industry because:

- The role of the EPA is to protect the environment in NSW. It has no role or expertise regarding social and economic factors.
- In practice, the EPA focuses on protecting and supporting environmental values only in those areas of State Forests which are actively subject to timber harvesting.
- This is to the detriment of other forests, including National Parks and remaining State and Private Forests, because the EPA does not actively protect their environmental values in these areas.

The problem is that there is no agency overseeing NSW land management as a whole, to balance forest values and ensure forests are managed in accordance with the Montreal Process obligations, as reflected in the RFAs.

The extent of native forestry timber harvesting activity is one of the indicators which is monitored. The NSW Government monitors forest disturbance using remotely sensed satellite data:

https://www.environment.nsw.gov.au/topics/animals-and-plants/native-vegetation/landcover-monitoring-and-reporting/pre-2018-landcover-reporting-stats.

This monitoring can differentiate between the disturbance caused by the following activities:

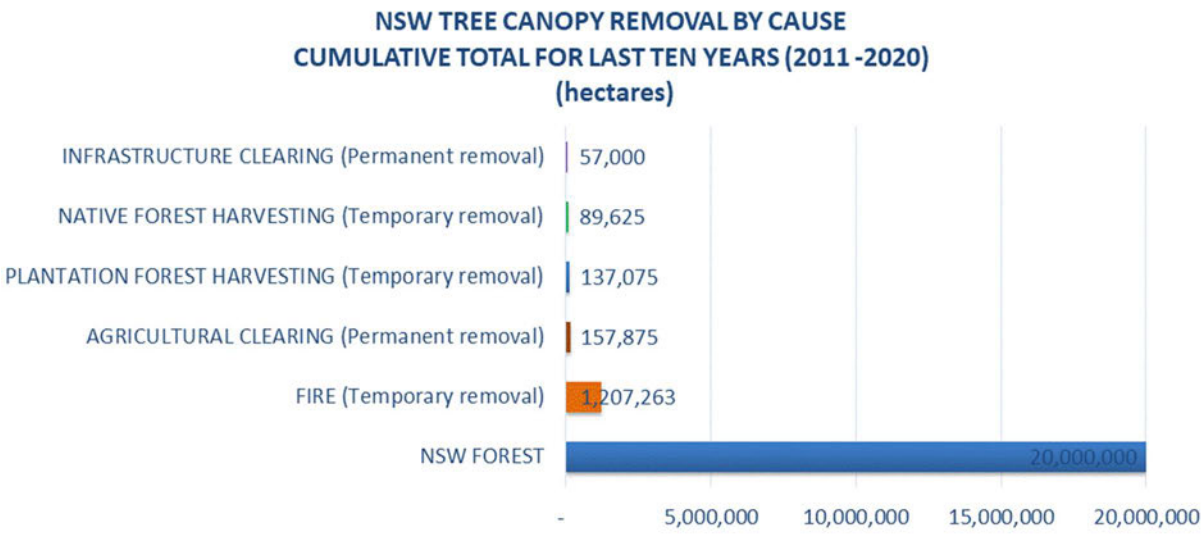
- Agriculture (grassland, cropping, horticulture, farm infrastructure),
- Infrastructure (residential, commercial, mining, public infrastructure)
- Forestry (native and plantation harvesting, establishment, thinning, forestry infrastructure
- Fire

The Impact of Native Timber Harvesting vs Impact of Fire
Wildfire has much greater effect on the landscape than native timber harvesting.

Monitoring reveals that, relative to other natural and anthropogenic disturbances to the landscape, native forestry is small scale and low intensity. On average, native forest harvesting removes less than 9,000 hectares of forest canopy per year across the whole of NSW.

The disturbance caused by native forest harvesting is temporary, as the harvested forest regenerate and regrow. Over NSW's 20-million-hectare native forest estate this equates to just 0.05 per cent annually or 89,625 hectares (0.5%) over a ten-year period.

In contrast, the effect of fire on the canopy is nine times greater. In 2019-20 fire fully removed over a million hectares of forest canopy (EES 2020). The graph below shows cumulative disturbance by activity over the last ten years.



Despite the science, care and attention which is now being given to ensuring that practices are ecologically sustainable, the business of native forest harvesting continues to be portrayed in a poor light. It also attracts a disproportionate amount of adverse media.

A Lack of Cross-Tenure Scientific Forest Monitoring
Another major challenge for the forest industry is that despite having an internationally agreed framework for monitoring, evaluating and reporting upon the sustainability of forest management embedded within all RFAs, tfor the past 20 years there was been very little funding or activity expended in actually monitoring, evaluating and reporting on forest values under the RFAs.

In 2018 the NSW Government's poor record on forest monitoring was highlighted by Dr Ewan Waller, who prepared an independent report tabled in the Federal Parliament (25 June 2018). The report states that:

- RFA monitoring looked at State forest but not other tenures
- There is no evidence to support the claim that ESFM had been achieved across the entire landscape
- RFA monitoring reports were released so late as to effectively constitute a breach of the RFA contract
- Since the RFAs were signed, substantial amounts of land were transferred from State forest tenure to the conservation reserve system without identification of sustainable sources of replacement timber.

Key recommendations relevant to sustainability are reproduced below.

Dr Ewan Waller (2018) Independent review of the report on progress with the implementation of the New South Wales Regional Forest Agreements for the second and third five-yearly reviews 2004 – 2014

- The Report focuses on data addressing the sustainability indicators of State forest but does not provide the equivalent data for other land tenures (such as conservation reserves). Submitters in general believe there is no evidence to support the claim that ecologically sustainable forest management (ESFM) has been achieved across the landscape. For example, submitters claim the Report contains inadequate data on population numbers of threatened species across all land tenures to be conclusive about their current status.
- The RFAs had a five-year reporting framework but the reports were released around 9 and 4 years late, without adequate explanation. Submitters believed this to be a fundamental breach of the original RFA contract.
- Since the commencement of the RFAs, substantial land area has been transferred from State forest to the conservation reserve system, without identification of sustainable sources of replacement timber. Combined with the effect of exclusion areas (due to environmental controls), logging rotations have subsequently been reduced (from 100-year rotation to 45-year rotation in some places).

The Tragedy of the Forest Management & Improvement Program

In 2019 the NSW Government reacted to the criticism regarding the lack of forest monitoring by funding the establishment of a forest management and improvement program (FMIP). The announcement was much applauded by forest scientists and the timber industry, which had been calling for such a program for over two decades.

The vision and intent of the FMIP was to develop a monitoring system for all forests which considered environmental, social and economic values in a balanced way. Monitoring the performance of NSW's National Parks and Reserves was seen as being just as important as understanding what was occurring on State forests.

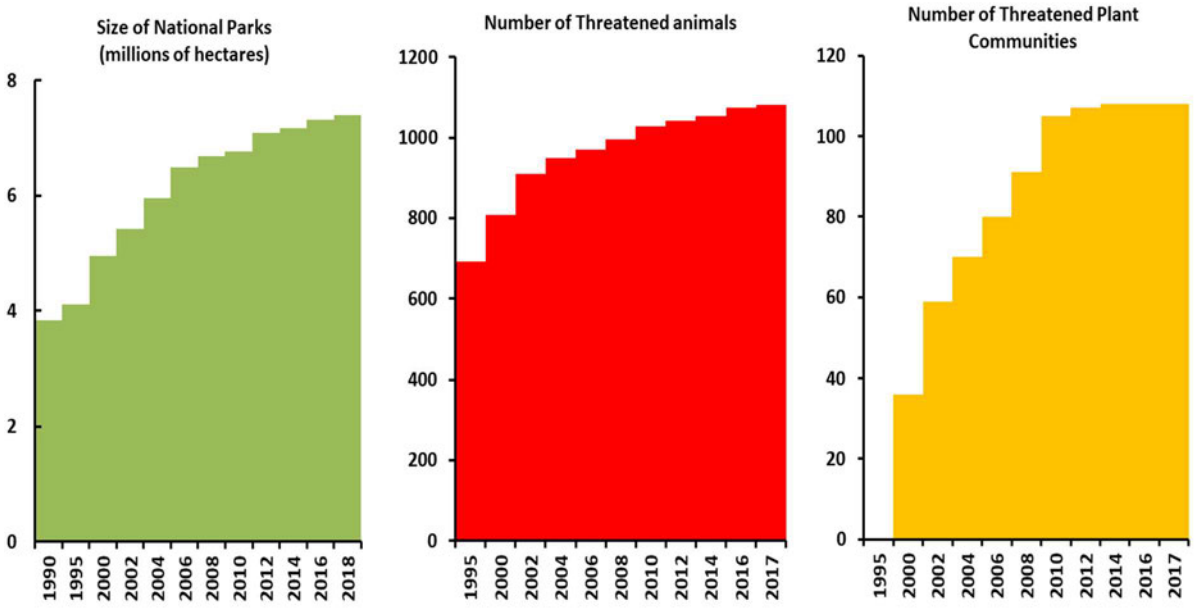
The NSW Natural Resources Commission (NRC) was tasked with running the FMIP. The NRC repeatedly claims that it is independent. In fact it is highly politicised, with a culture and history of secrecy. The decision to allow NRC policy staff rather than forest scientists to design and run the FMIP has led to perverse consequences.

Unlike scientists, policy staff are selective in the data they collect. The way they collect data also lacks scientific rigour and objectivity and is rarely transparent. After two years the FMIP has achieved very little, beyond the production of large numbers of reports. Almost all its focus has been on the development of a system for monitoring the environmental effects of native timber harvesting on State forests, with only tokenistic consideration of socio-economic values.

The Forest for the Trees: EPA Regulation of Native Forest Harvesting
In NSW the regulation of native forest harvesting is led by the EPA, in addition to its other environmental responsibilities.

The EPA has focused on scrutinising native forestry operations on the small amount of forest (less than one per cent annually) designated for native forest harvesting in NSW, while forest health and other forest values in the other 99 per cent of NSW forests have been completely neglected.

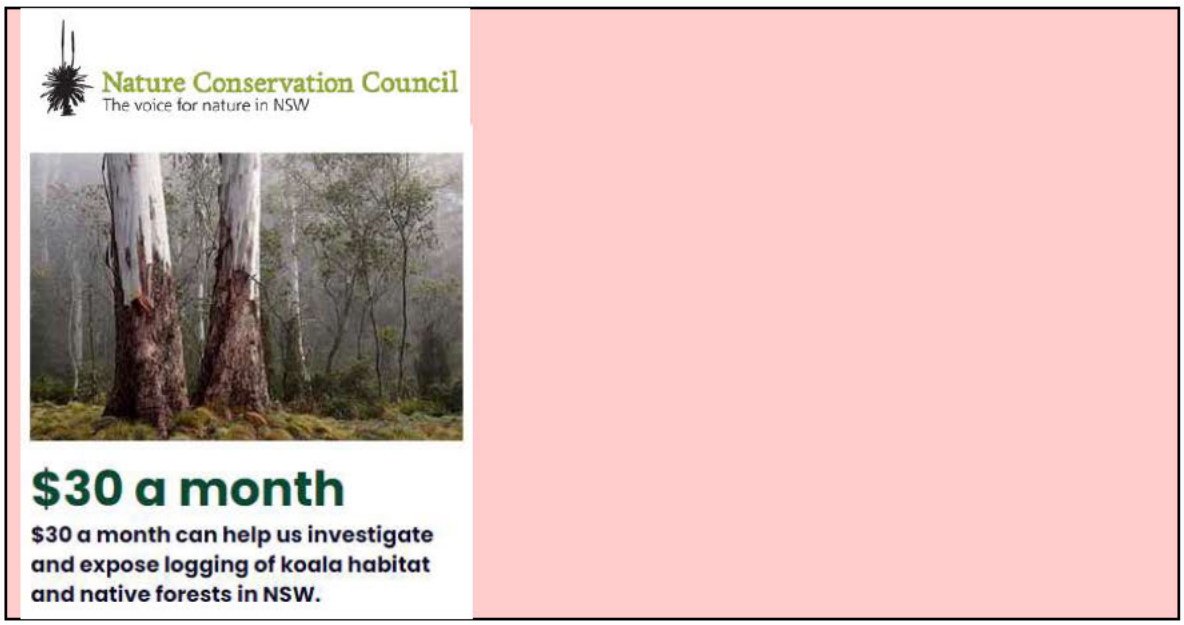
The chart below shows that as the area devoted to NSW National Parks has increased, so have the numbers of threatened flora and fauna. In the absence of a holistic land management system that actively manages the health of all forests in NSW, these issues of forest health remain neglected across all tenures - on State forests as well as on National Parks and Crown reserves.



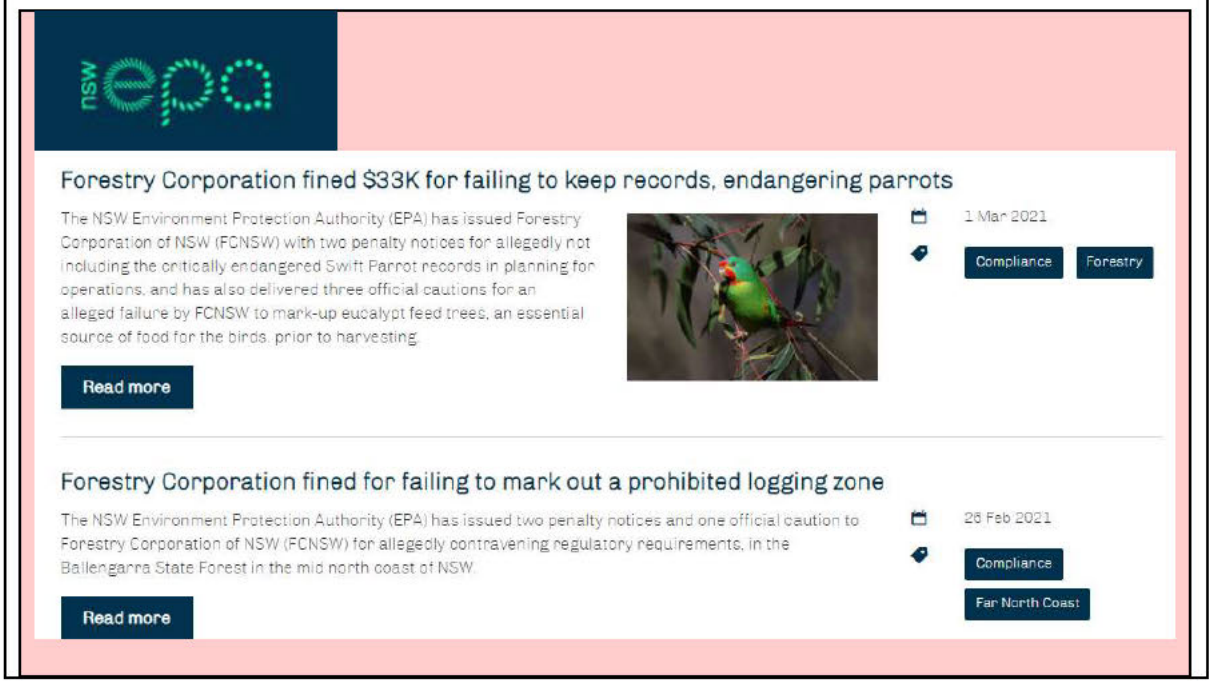
As below, in large part this focus on native forest harvesting is driven by the longstanding ideological alliance between environmental NGO's and the EPA.

ENGOS & the EPA: The Focus on Native Timber Harvesting

The NSW EPA has repeatedly shown that it is sympathetic and responsive to the NSW ENGOs, which focus on stopping native timber harvesting. A recurring tactic of the ENGOs is to undertake quasi-operational investigations to engage the EPA.



In recent years the EPA has been prosecuting the Forestry Corporation at every opportunity. The NSW EPA has become obsessed with discrediting the Forestry Corporation for breaching harvesting rules.



This focus on native timber harvesting has come at the expense of other more pressing issues, like the management of fire, the control of pest and weeds and the prevention of water pollution across the broader landscape. As the 2019-20 bushfires show, this

neglect has had devastating environmental, social and economic impacts. Until the NSW Government (and the EPA) starts taking a more balanced and holistic approach to its environmental responsibilities, the degradation of the natural environment will continue.

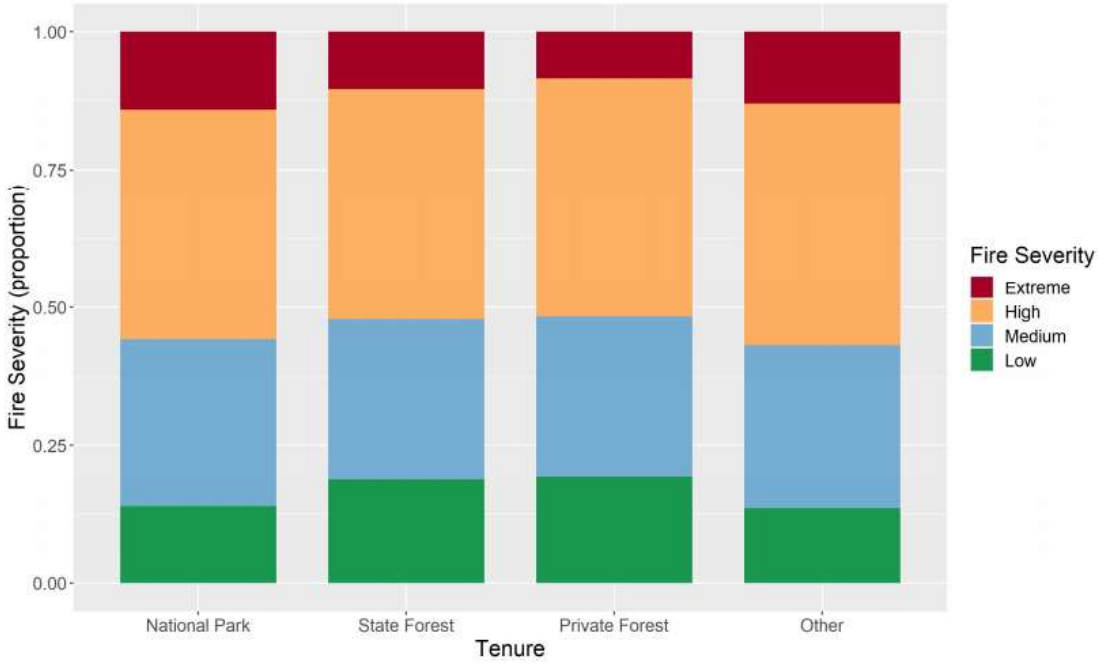
The 2019/20 Bushfire Season

The 2019/20 Bushfire Season was a wake-up call for the NSW Government and the people of NSW. It was the worst in living memory, with 4.1 million hectares of forest burnt, equating to 20 per cent of all NSW forests.

	National Park	Private Forest	State Forest	Other	Total
Area (ha)	2,233,810	1,008,087	763,089	92,136	4,097,123
Proportion (%)	54.5	24.6	18.6	2.2	

Source: NSW DPI

Over half of the forests that were burnt were subject to high or extreme fire severity.



Source: NSW DPI

Twenty per cent of NSW State forests, where most native timber harvesting occurs, was subject to high or extreme fire severity. The impacts were concentrated in some regions while others remained relatively unaffected.

The scale and severity of the fires triggered two assessments by the Forestry Corporation on the affected State forests:

- *2019–20 Wildfires Environmental impacts and implications for timber harvesting in NSW State forests, June 2020.*
- *2019–20 Wildfires NSW Coastal Hardwood Forests Sustainable Yield Review* dated December 2020 (publicly released In April 2021). This provided modelling and analysis of the impact of the 2019/20 NSW bushfires on growing stock. Sustainable yields have been impacted to some degree across all RFA regions.

Timber Sustainability Implications of the Fires

The impact of the 2019-20 bushfires on sustainable timber yields was estimated by Forestry Corporation, as below, based on assumptions about the effect of different fire severities on timber quality. These estimate reductions of timber supply from between 4 per cent in the North East to 30 per cent on the South Coast.

Ground validation of the Forestry Corporation's modelling assumptions will be required, including investment in research on the effects of fire on native wood timber properties. The cost of undertaking this task should not be underestimated, however it is critical for ensuring that Forestry Corporation's projections of sustainable sawlog yield are in fact correct.

Timber Sustainability Implications of the 2019-20 Bushfires

Impact of the 2019/20 NSW Bushfires on Growing Stock and Sustainable yields.

Overview of fire impact on short-term (10 year) wood supply for NSW RFA regions

Annualised sustained yield for first three reporting periods			
RFA region	Year range	High-quality logs (m3)	Modelled Reduction due to fire Impacts %
North East	2020 – 2031	230,000	4%
Eden	2020 – 2034	22,700	13%
South Coast	2020 – 2034	35,000	30%
Tumut	2020 – 2034	25,800	27%

- Modelling and analysis presented in this report demonstrate that both current growing stock and sustainable yields have been impacted to some degree across all RFA regions.
- The biggest impacts are seen in the southern regions, with lowered sawlog availability on the South Coast and Tumut in particular. The modelling presented for the Eden region focuses on recovery of timber from intensively burned areas for the first 10 years of the model and the volumes generated from this are similar to those required under the existing WSA. There is a slight reduction in forecast yields after this initial period.
- In Tumut, the level of tree mortality was unclear at the time of modelling. Depending on this outcome the resulting sustainable wood supply may change significantly. The model presented in this review assumes significant recovery of dead standing trees in the initial period after the fires, then aims to produce timber volumes similar to those in the current wood supply agreements from the broader region. However, the potential supply from Tumut region then declines in the medium term.
- For the north coast the main fire impacts were in slower growing or less commercially important areas. As large areas of faster growing species on more productive sites were not impacted, the reduction in sustainable yield is lower. In the long term, models indicate that fire-regenerated forests are likely to increase productive capacity after several decades of regeneration, recovery and growth.

Environmental Impacts of Native Timber Harvesting Post-Fires

In terms of environmental impacts of native timber harvesting after the fires, Forestry Corporation found that most of the existing environmental protections are sufficient going forward. This finding was supported by the fact that only a tiny percentage of NSW public forests are harvested each year.

The existing Coastal Integrated Forestry Operations Approval measures provide significant environmental protections and the speed of the forests' natural recovery

mechanisms has ensured that ground cover, which is essential for the protection of soil and waterways, has already been restored.

Full understanding of the impacts of the fires on biodiversity will take many years and require ongoing data gathering and analysis through a long-term forest monitoring program. **However it has been confirmed that native forest timber harvesting is a minor activity that will make little difference to any long-term fire impacts.**

Forestry Corporation however seeks to apply the precautionary principle, which provides an additional safeguard. This is reflected in their media release regarding the recommencement of harvesting on the South Coast and at Eden.

Forest harvesting to recommence on South Coast and Eden
15 Mar 2021

Forestry Corporation of NSW (Forestry Corporation) will recommence renewable timber harvesting on the South Coast and Eden this week with additional environmental safeguards in place to ensure our commitment to sustainable forest management. Daniel Tuan, Forestry Corporation's General Manager of Hardwood Forests, said the recommencement of harvesting would allow the timber industry on the South Coast and Eden to stay in business following the 2019-2020 bushfires and avert job losses in local communities.

Mr Tuan said Forestry Corporation worked constructively with the Environment Protection Authority (EPA) for the last 16 months to negotiate site-specific operating conditions for each harvesting operation in bushfire-affected coastal forests. But no site specific operating conditions had been issued since mid last year and the industry has exhausted its log stocks and opportunities for harvesting on private property.

As a result, renewable timber harvesting on the South Coast and Eden will take place with additional environmental safeguards to further minimise any risks to fire-affected forests and supply much-needed timber to local industry. These new rules are above and beyond the existing Coastal Integrated Forestry Operations Approval (CIFOA), which prescribes protections for wildlife, soil and water and enables sustainable timber to be produced and the trees regrown.

Forestry Corporation's operations are independently audited by the EPA to assure compliance with the CIFOA regulations. The additional environmental safeguards put in place in recognition of the impacts of the 2019-2020 bushfires, include additional searching for plants and animals, retaining a greater number of hollow bearing trees and increasing the area of land to be excluded from harvesting.

"We believe these additional environmental safeguards provide the right balance which Forestry Corporation is required to strike between environmental considerations; the need to support the regional communities reliant on timber industry jobs; and meet its supply commitments with small family businesses and key local mills," Mr Tuan said. "We have put in place robust operating procedures to manage compliance with the additional safeguards and we will share the outcomes with the EPA. The EPA has also indicated that it will step up its oversight of our operations." Mr Tuan said.

Plans are being prepared for four operations on the South Coast and Eden and these will be available on our website once approved. These initial forests include Nadgee, Mogo, Yambulla and

Shallow Crossing. “Forestry Corporation is open and transparent with the community publishing plans for all native forest operations on its website. Interested community members can subscribe to these plans and get alerted of any updates.@

Operations will be conducted under this interim arrangement until the results of the review by the National Resources Commission, due later in 2021, are available. Forestry Corporation is actively participating in this review. Timber is the most renewable building product available and on the South Coast and Eden is harvested and processed by a range of local businesses into a range of products including poles, bridge decking, floorboards, decking, fencing, landscaping timbers, pallets, and a range of other products that communities use and need, creating ongoing employment in the region.

Fire Not Native Forest Harvesting Threatens NSW

The attention and resources which the EPA and NRC are directing toward the examination of the environment effects of native timber harvesting in fire-affected landscapes has been disproportionate to the footprint which native forestry occupies.

The actions of these agencies reflect a dangerous bias which is inconsistent with the RFAs. The impact of this bias is that the NSW government currently perceives native timber harvesting as the key risk to NSW native forests. In fact, catastrophic bushfire is the key risk to all NSW landscapes – not just native forests.

It is the government’s own failure to reduce the risk and impact of fire through cross-tenure land management that has exacerbated the devastation of the 2019/20 bushfire season across all 20 million hectares of NSW forests.

For decades, the timber industry and forest & fire scientists have been warning the NSW government about the risks of neglecting the management of fire. As such, the NSW government is aware that, after many decades of failing to actively manage NSW forests in pursuit of cost savings, its policies were a contributing factor to massive biodiversity loss caused by fire across the NSW forest estate. A comprehensive review of the government’s forest management policies and practices is needed to ensure the sustainability of these forests into the future.

As below, EPA communications wrongly focus on the actions of Forestry Corporation, as scapegoat for the bushfires. This adds to community confusion and diverts attention from preventing catastrophic bushfires.

EPA Statement - Update on forestry regulation
16 February 2021

The Environment Protection Authority (EPA) has been advised by Forestry Corporation of NSW (FCNSW) that they will shortly revert to operating under the standard forestry rules, meaning logging in new compartments will not use special site specific conditions put in place to protect burnt forests, following the 2019/20 bushfires.

Based on expert advice and the literature, the EPA is of the view that site specific conditions are the most effective way of managing the environmental risks associated with harvesting in landscapes that have been so extensively and severely impacted by fire.

The EPA has been working to negotiate updated site specific conditions based on current knowledge of the impact of the fires, and to identify and implement a long-term approach to manage the risks posed by timber harvesting in the post-fire landscapes of coastal NSW.

FCNSW has now withdrawn from those discussions around logging on the South Coast.
The EPA expects to receive advice from FCNSW regarding additional voluntary measures they intend to apply to manage the impacts of logging operations. These will not be enforceable by the EPA under the current rules.

The EPA's site specific conditions previously applied in addition to the Integrated Forestry Operations Approvals (IFOA), maximise the protection of unburnt or lightly burnt forest and limit harvesting intensity to assist wildlife and biodiversity recovery efforts.

Designed following consultation with experts and government agencies, they aim to mitigate the environmental risks caused by the bushfires and are tailored for the specific impacts on plants, animals and their habitats, soils and waterways at each site.

The EPA has been working with FCNSW to ensure these controls are implemented and effective.

The EPA has increased its regulatory presence on the ground at all stages of logging operations and is working closely with community, industry, Aboriginal and environment groups, concerned about the impact of logging on the environment, their communities and their regional economies.

In response to the decision of FCNSW, the EPA will further increase its regulatory oversight of future logging operations.

The EPA has a statutory objective to protect, restore and enhance the quality of the environment in NSW having regard to the need to maintain ecologically sustainable development. Where the EPA identifies non-compliance, it will take appropriate regulatory action.

FCNSW is authorised by the NSW Government to undertake forestry operations under the Forestry Act 2012, and must comply with the **IFOA** rules.

More information and updates as well as risk assessments **here** .

The Response to the 2019-20 Bushfires Must Balance Forest Values
Timber NSW acknowledges the devastation caused by the 2019-20 Bushfires to life, unique flora and fauna, property, communities and livelihoods in NSW.

Given the extremely strong existing environmental protection measures and the extremely small area of public forest available for timber harvesting, Timber NSW submits that the additional safeguards proposed by the Forestry Corporation are appropriate, yet the site specific post-fire environmental protection measures being demanded by the EPA are too restrictive and unduly risk averse.

Any adjustment to sawlog yields arising from the bushfires must be based on sound data. As such, there is need to validate the Forestry Corporation's modelled estimates. Before any decisions are made consideration should also be given to making replacement timber available from other public forests.

A Track Record of Failing to Balance Forest Values
However, the NSW government has a poor track record when it comes to maintaining timber supply. In 2018 the NSW government finalised a remake of the Coastal Integrated Forestry Approvals. Before their release, the government announced that there would be no reduction in wood supply arising from the new rules.

Yet when the rules were finalised it was stated that additional operating conditions would likely result in the need for a reduction. Forestry Corporation proposed that the shortfall could be avoided by reviewing and remapping forest that had been incorrectly mapped as Old Growth. The NSW Government agreed with the proposal and instigated a review.

The remapping of old growth forest did not however enjoy the support of staff within the EPA and EES who were tasked with the assessment. Staff obfuscated and delayed the process, by making it subject to a raft of unworkable and costly environmental studies.

After two years the NSW Government intervened and appointed the NRC to oversee the completion of the assessment. Unfortunately, NRC staff were unable to complete the

task, claiming '*where the fires burnt the forest canopy, the remote sensing approach proposed cannot be accurately applied*'.

https://www.nrc.nsw.gov.au/old-growth

The Commission determined that the draft framework could no longer be implemented in accordance with the timelines and funding under the Premier's terms of reference. This is because the proposed old growth assessment method would have applied remote sensing techniques to assess canopy cover and structural maturity. Where the fires burnt the forest canopy, the remote sensing approach proposed cannot be accurately applied. Our assessment found that over 45 percent of mapped old growth in north coast state forests experienced full or partial canopy burn in the 2019-20 fires.

The Commission advised the NSW Government we would be unable to continue in accordance with the terms of reference.

Based on this advice, the NSW Government has now suspended the program and approved the remaining funds being repurposed to the **Forest Monitoring and Improvement Program**.

CASE STUDY: Native Hardwood Harvesting in Queensland & Victoria

State government attempts to ban the native timber and forest products industry in both Queensland and Victoria are ill-conceived and unnecessary. The sustainable native hardwood timber industry can exist harmoniously with social and environmental values. It requires science-based holistic land management policies which are in alignment with the sustainable forest management principles of the Montreal Process.

Queensland

In 1999 the Beattie Labor government passed legislation to provide only a further 25 years to continue native timber harvesting in in Queensland. This meant that the industry would cease in 2024.

However, in 2019 the Palaszczuk Labor government weighed up the impending loss of jobs in rural and regional Queensland, along with the significant revenue contribution of the timber industry and decided to develop a timber action plan to ensure the industry had a future.

Through the planning process, the government realised Queensland needed a sustainable timber industry and that its hardwood plantations have not been entirely successful to date.

Going forward, the Queensland Timber Plan will:

- Extend the continuation of hardwood timber harvesting in Wide Bay Burnett for an additional two years, guaranteeing access up to 2026

- Establish a timber advisory panel responsible for overseeing and making future plans with the industry
- Conduct a comprehensive two-year study to identify sustainable future options for timber supply, including on private land, to be completed in 2021
- Bring the unsuccessful hardwood plantation program, a partnership between HQ Plantations and the Queensland Government, to a close
- End the issuing of 'rolling-term' permits in the Western hardwoods region, with sales permits to end in 2034. New permits will be fixed term and competitively based to provide opportunity and certainty for industry;
- Help to transition hardwood plantations to best land use and sustainable arrangements.

Victoria

In November 2019, the Victorian Premier announced the phasing out and closure of the Victorian native forest industry by 2030, despite 94 per cent of Victorian forest already being reserved and the Victorian native hardwood industry employing close to 2,500 people.

The policy included reducing the levels of native timber available for logging from as early as 2024-25, as well as placing an immediate ban on logging in old growth forest, locking away c. 90,000 hectares. Reduced supply put a strain on thousands of Victorian timber jobs and communities and put pressure on already struggling sawmills facing supply shortages as a result of the 2019-20 bushfires.

The Victorian government also announced a transition package of $120M for this 150-year-old industry, as well as $110M to acquire land and commence new plantations. Yet as at June 2021 no money has been invested in plantations by the Victorian government.

Should new plantations be established, it will be 10-15 years before a woodchip facility will deliver value and 25 years before a solid wood product will emerge from sawmilling. The question of how timber production businesses and employees survive in the gap years between native forest closure and plantation substitution remains unanswered.

Even worse, environmental NGOs took the signal that the native forest industry was being closed as an opportunity to campaign against Victorian native timber products being stocked by Bunnings. Bunnings duly imposed an ongoing ban on Victorian native forest timber.

Friends of the Leadbeater Possum (FOLP) also mounted a federal court challenge to VicForests' harvesting, challenged the basis of the RFAs in the context of the *EPBC Act*. After an successful appeal by VicForests to the Full Bench of the Federal Court, FOLP is seeking leave to appeal the matter to the High Court.

The combined effect of the above is the loss of Victorian timber industry jobs, the loss of supply contracts with wholesale/retail timber outlets and the prospect of VicForests defending a High Court challenge.

SOCIAL SUSTAINABILITY

Social Licence: Harnessing Support for NSW Timber

As outlined below, research shows that Australians love timber and support sustainable timber production. This research clearly shows a strong social licence for the Australian timber and forest products industry and has been reported and endorsed in Australia's State of the Forests Report 2018.

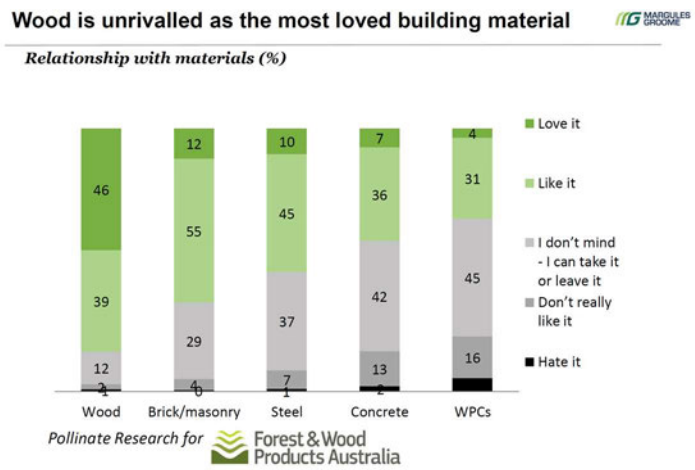
However there is a wider, more significant role to be played by government in increasing public understanding and reducing confusion and misinformation surrounding the multifaceted role of forestry and the NSW timber industry in:

- the circular economy
- carbon sequestration and reducing carbon emissions
- preventing and reducing the impact of catastrophic bushfires
- meeting growing demand for timber
- replacing non-renewable materials with innovative timber products
- providing local, renewable bioenergy
- supporting the Australian construction sector
- creating new jobs in regional NSW.

Researching Community Attitudes to Timber

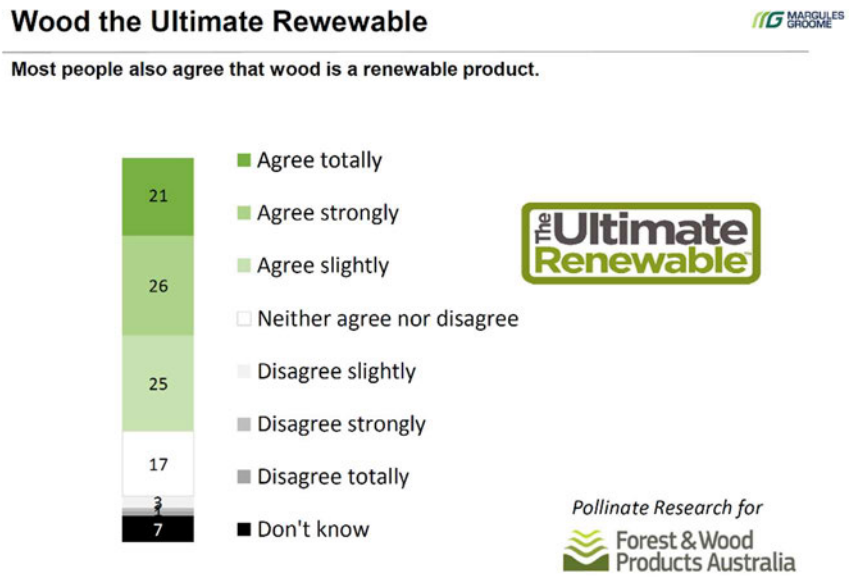
Ongoing research commissioned by Forest & Wood Products Australia (FWPA) in 2019 tracked Australian consumer attitudes and behaviours around building materials and the environment.

The annual research shows that wood is unrivalled as the most loved building material.

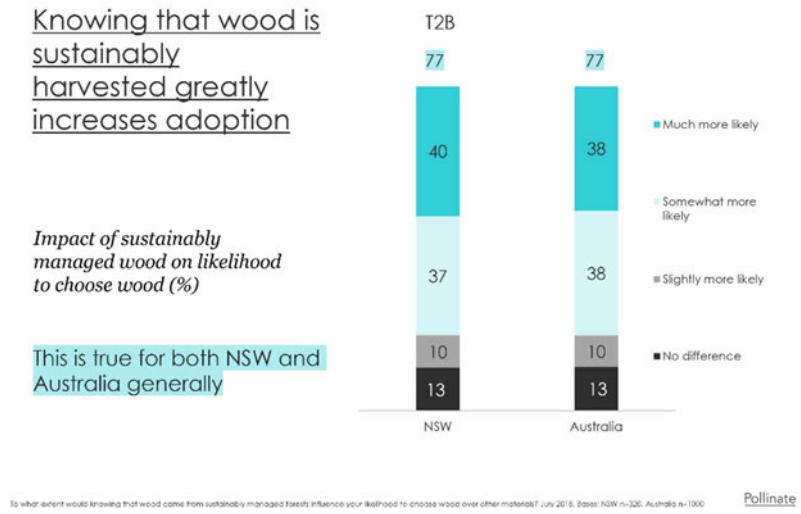


Overwhelmingly (c.90 per cent) respondents either like or love wood, with three quarters reporting being surrounded by wood in their homes and office environments.

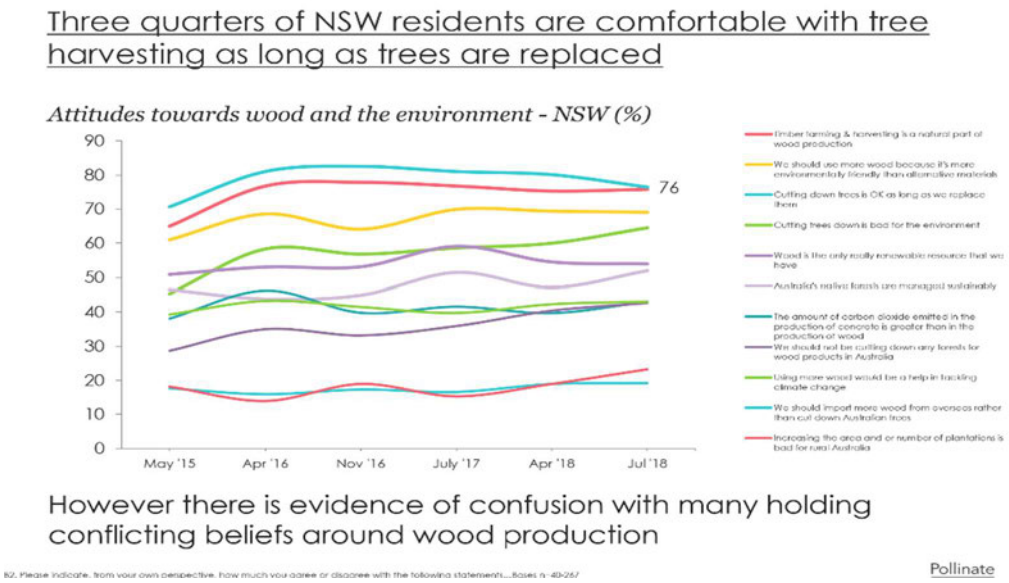
There is a broad, general understanding among consumers that wood is a renewable material.



The research also clearly demonstrates that Australian consumers will choose wood and timber products once they know that timber is sustainably harvested.

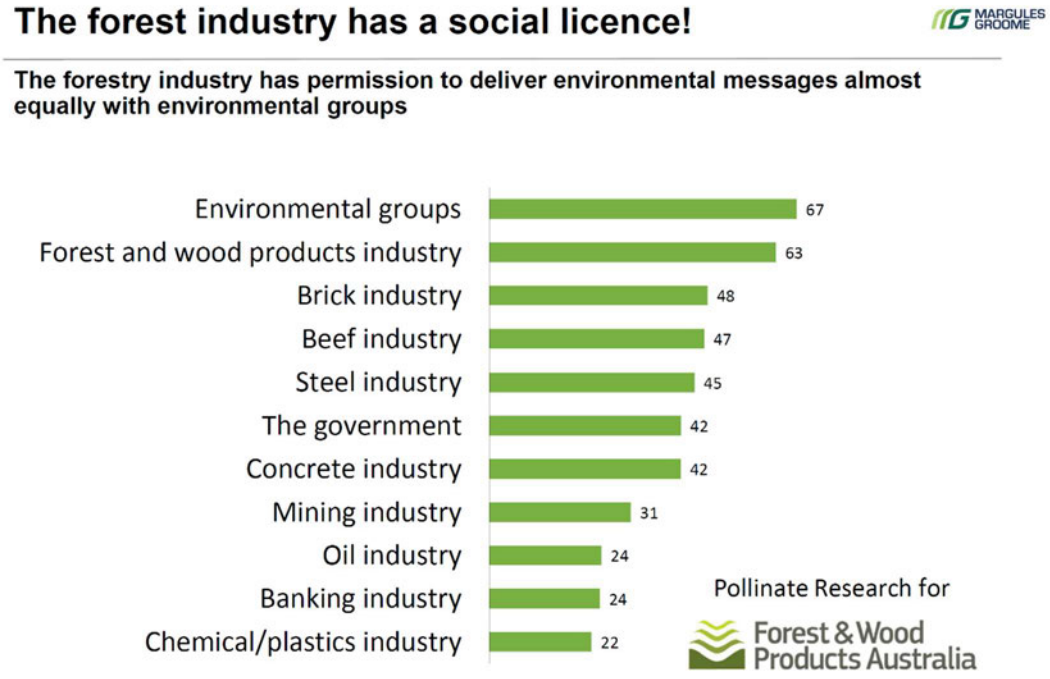


Likewise, three quarters of NSW consumers are comfortable with tree harvesting, as long as the trees are replaced. However, as below, the research identified evidence of confusion among consumers, with many holding conflicting beliefs around wood production.



The research reports that 77 per cent of NSW consumers want to do more for the environment, but want reliable information first. Likewise, 83 per cent are sceptical about claims made by companies about products and services.

Consumer access to credible information is critical. When asked which groups have the most credibility in delivering messages about environmental issues, consumers ranked the forest and wood products industry second only to environmental groups.



All of the above is testament to the important social licence held by the timber industry in Australia.

Recommendations

- Fundamentally, Timber NSW submits that the impacts of the catastrophic 2019-20 Bushfires in NSW, overlaid with a history of incremental decline in timber supply, underpins the need for a fundamental review of how NSW forests are being managed.
- The management of NSW native forests needs to move beyond the current infighting and siloed approach which pervades all aspects of the sector. The current approach is not only failing the timber industry but also failing the environment, regional NSW communities and the NSW economy.
- Timber NSW submits there must be a recommitment to and realignment with the principles of ESFM and the balancing of environmental, social and economic forest values.
- There must also be a willingness to look beyond native timber harvesting and to focus on the issues and threats which are common to all NSW forests, such as fire management and the control of invasive pests and weeds.
- A common approach to the management of forest roads and trails and recreation and tourism is also needed and long overdue.
- Underpinning all this is a need for active and adaptive management with greater flexibility to respond to changes such as those which have recently impacted the forests.

CASE STUDY: **Hayden Timbers**

The Hayden Timber's hardwood mill is classified as part of the essential services sector with many heavy uses supplied including railway sleepers and railway bridge timbers and mining timbers.

The mill is known as a salvage mill and has a class C wood supply agreement for state forest supply. This means it accepts logs that have not met the grade for other higher value uses. It is family owned and has been operated for more than two decades. On average the mill directly employs about 50 people, all of whom live locally and along with their families are all part of the community. The mill employs a maintenance engineer fulltime and relies on contractors for the plant mechanic work because it's almost impossible to find plant mechanics. In fact, it could put on another or 6 right now but aren't getting the candidates applying. Everyone is paid above award and some workers who start as casuals can be made permanent if they are good workers.

The company has a varied customer base across industry sectors that need hardwood timber and in turn it supports many ancillary industries.

The timber for the NSW mining industry is sold to a value adder to produce specialised mine supports. The railway network has a constant sleeper replacement program and demand for sleepers is not declining at all, we supply the network right across Australia. The North coast hardwoods have necessary durability and Hayden's is a preferred supplier to rail.

Fencing demand is huge all along the eastern seaboard. Of course, the fires caused a spike to replace fences but also because timber's a product of nature and is renewable and very long lasting it is very well suited and always popular for fences including posts, rails and palings. A lot of sub-division approvals insist on the use timber for environmental and appearance reasons. The mill also supplies decking used on bridges and flooring boards.

The recovery rate is high and so waste or lower value by-products are quite low. All that biomass is put to a good use. Woodchips are sold to the landscaping industry and one Hunter Valley power generator is a customer. Sawdust is used by chicken and egg farmers in the region

The bulk of our raw material is sourced from Forestry Corporation and supplemented with purchases from private property registered for native forest activity. There's just not enough available to meet the demand now let alone future demand for these essential products. The wood supply agreement is problematic – there is lack of certainty. It expires in 2023 – we hope it will be renewed but time is of the essence. An essential service business needs certainty.

If the state forests wood supply agreement is not renewed, then there is a bleak future for this business because private property volumes only supplement the Forestry Corporation timber and not replace it. It could downsize but that brings many problems not the least of which is loss of scale efficiencies.

Since the 2019/20 fires there's been no supply at all from Forestry Corporation which has been a serious impact. Fortunately, the mill had yard inventory and made the decision to draw down on that to keep employees in work on rather than shut down and put them off. This depleted cash reserves and meant that planned upgrades to install new technology and equipment stalled. Of course, most recently the log supply was interrupted by the floods.

Supply is the base of this whole supply chain which the state needs. Forestry Corporation has no appetite for growth, yet supply is the base of an important set of wood products which are needed in NSW and interstate.

The mill sources goods and services from many other regional businesses. That regional economy has an interdependency that is possibly more important outside of a big city. When one sector runs into trouble the multiplier effect quickly impacts the viability of other businesses. The same goes for the multiplier effect on the wellbeing and mental health of affected owners and employees of those businesses.

Hayden's spends at least $6 million annually procuring local services and goods. This includes contractors to harvest from some suppliers, freight of the logs from the forest harvest sites into the mill, outward bound freight of processed wood to customers, materials and equipment for maintenance, numerous contractors, vehicles maintenance and so on. The multiplier effect is significant at tens of millions. Sawmill equipment is bought local from the well-respected NSW manufacturer AE Gibson, based nearby at Kendall. There are two mill equipment manufacturers with very good reputations in the region. Hardwood mill equipment has specific needs to handle these timbers. Softwood (pine) mills are quite a bit simpler.

The most optimistic outlook for this important mill would be to flatline. There can be no growth whatever under the NSW policies and approach around forestry.

Australia is growing and our ability to be self-sufficient in timber is declining. Infrastructure investment has lifted to catch up on essential facilities needed by the population. But our NSW state government machinery has made no provision for the serious ramifications that have arrived due to lack of timber supply.

Timber NSW submission to the NSW Legislative Council Inquiry into the long term sustainability and future of the timber and forest products industry

TERM OF REFERENCE 1(i): best practices in other Australian and international jurisdictions in relation to the sustainability of the timber and forest products industry, including social sustainability, community and Indigenous engagement and multiple uses of the forest estate

Australia's Sustainable Forest Management Framework of Criteria and Indicators is the agreed framework that applies to all Australian forests. It provides for international best practice in relation to environmental, social and economic forest values.

The framework is founded on ecologically sustainable forest management principles and is based upon internationally agreed criteria and indicators for tracking performance. Known as the Montreal Criteria, the criteria and indicators are embedded within the National Forest Policy Statement and within Regional Forest Agreements to which the Commonwealth and States are signatories.

The way that Australia's agreed sustainable forest management framework is applied in practice is largely determined by State laws and policies. Each State has their own governance system and the extent to which this system is consistent and aligned with the nationally agreed approach has a major bearing on forest management practice.

Timber NSW submits that where the States have diverged from the nationally agreed forest policy, the capacity to optimise environmental, social and economic forest values is often lost. Departures from the nationally agreed approach at the State level have almost always occurred in response to entities with single interests seeking to dominate over others.

A practical example of this may be found in NSW, where the State government has deliberately separated and divided the delivery of environmental and socio-economic values by dedicating forests to either production (*Forestry Act*) environmental protection (*National Parks & Wildlife Act*) or administration (*Crown Lands Act*).

By having separate agencies, the NSW government has forgone the opportunity to optimise and balance forest values. Having three discrete agencies (NPWS, FCNSW and Crown Lands) to manage these estates, each with their own cultures and ideology, has turned the management of NSW's forests into a bureaucratic contest. This in turn has given rise to major inconsistencies and imbalances in the way limited public resources are allocated.

In Victoria, the government has created a single forest management agency. This has gone a long way toward eliminating inconsistency in the resourcing of public forests.

However, what the Victorian government has failed to do is dismantle the notion that forests are static and need to be designated as either for 'production' or for 'conservation'.

Best forest management practice will never been achieved until there is a greater willingness to recognise and balance the full suite of environmental, social and economic values of forests, in accordance with Australia's National Forest Policy Statement.

To optimise the multiple value that forests provide, there needs to be greater acceptance that they are constantly changing and as such, there needs to be a system to monitor that change.

The scale and distribution of NSW's native forests – public and private makes them an incredibly valuable resource. This resource is far too valuable to be narrowly defined or simply set aside in the hope that forest values will be protected.

The 2019/20 bushfires in NSW were proof that the 'lock up and leave' approach does not result in good environmental outcomes. To protect and conserve forests it is essential that active and adaptive management be adopted.

To protect and conserve forests in the future, new State-based legislation and policies must incorporate a greater degree of flexibility so that management practices can respond appropriately when changes in the forest inevitably occur.

Timber NSW submission to the NSW Legislative Council Inquiry into the long-term sustainability and future of the timber and forest products industry

TERM OF REFERENCE 1(j): any other related matters

Advocating for Sustainable Timber

In Australia the FWPA plays an important role in researching the timber and wood industry. FWPA's research & development work has historically focused on the benefits of wood in comparison with other materials. While research shows acceptance of wood on a number of measures, the industry has struggled to improve community acceptance of native timber harvesting.

To address this gap, the industry has broadened its campaign:

- MESSAGING: messaging now focuses explicitly on the renewability of the timber resource under the banner of *The Ultimate Renewable™*, phasing out the *Wood. Naturally Better™* brand.
- PARTNERSHIPS: FWPA's partnership with Planet Ark remains a key cornerstone of consumer activities, increasing the leverage and credibility of communication activities with the *Make It Wood* campaign.
- CLASSROOM RESOURCES: The ForestLearning activity focuses on embedding forestry and wood product topics into the national school curriculum and providing relevant resources for teachers, enabling them to successfully integrate forestry and wood product information into their classroom teaching.

Dispelling Confusion & Misinformation

Despite timber industry communications, consumer research shows there is a need to address community confusion and to combat persistent misinformation about regarding forestry and timber harvesting.

Certainly, the state and federal regulation of forests and the timber industry and the science of land management is complex and confusing. However, as the regulatory regime shifts to regulate land management in accordance with the circular and carbon economies, there will be a renewed need for state and federal governments to play a critical role in explaining the basis for policy decisions.

The lessons from the health sector regarding COVID-19 transmission and vaccination demonstrate that critical policy implementation challenges require clear community information campaigns that resonate with Australians.

The following FWPA News Release shows how misinformation contributes to community confusion.

BOB BROWN LEGAL CHALLENGE SHINES A LIGHT ON DECADES OF ENVIRONMENTAL MISINFORMATION

Last week, the Bob Brown Foundation's (the BBF) latest legal challenge against Tasmania's native hardwood timber industry was dismissed by the Federal Court. Following the court's decision, Brown indicated that his Foundation's activists will continue protesting in the forests while its lawyers will appeal the decision in the High Court. He remains adamant that the state's (and the nation's) native hardwood timber industry will eventually be forced to close because logging is on the nose in the 'court of public opinion'.

Brown may well have a valid point. Most with a strong interest in the environment probably do believe that the future of our native forests is being jeopardized by continued timber harvesting. But just how this belief has taken root and grown over the past 35 years should be of concern in this so-called new age of 'misinformation.'

Brown, the founder of the Australian Greens and, arguably, still the spiritual leader of Australia's environmental movement, recognised early-on that mass-market advertising strategies could give environmental campaigns the cut-through needed to shape public opinion and influence political decision-making. In a 1983 interview in the aftermath of his successful Franklin River campaign, Brown admitted that:

We have grabbed ideas from wherever we could. We looked at the way other people sell cheese and paper tissues, how they do it, and thought if that sells an idea than how much more important that (it) be grafted by us into saving wilderness.

Most of us are sceptical of mass-market advertising. It is, by design, based on selective facts, exaggeration or distortion, emotion, and even blatant untruths in some instances. Environmental campaigns against native forest use have, since the mid-1980s, been based on these core principles. But without exception, **they have also featured a strategic omission of wider context and perspective**, such as, for example, acknowledging the actual scale and proportional extent of timber harvesting, or the adverse socio-economic and environmental consequences of ending it.

The BBF's recent Federal Court challenge to Tasmanian native timber production is a good example of how this works. For marketing purposes, they gave the legal action a catchy name – 'The Great Forest Case' – with a web page linked to an 'Australian Native Forest Declaration'

which, for each signatory, sends an email to Federal Parliamentarians making a range of dubious claims and calling for them to act to end native forest logging.

Their 'Australian Native Forest Declaration' makes claims that are wrong (i.e. Australia has more than enough plantations to meet its wood needs); at least highly contestable (i.e. logging increases bushfire risks); or just lack context (i.e. logged and burnt forests emit greenhouse gases, which is true - if subsequent carbon sequestration by regenerating forests is ignored).

Other claims are based on a **misconception that timber production represents an existential threat to biodiversity** which is completely at odds with its minor extent over a huge forested (and largely already reserved) landscape.

To generate further support for their case, the BBF engaged in a media blitz in the two months prior to the Federal Court's ruling in early February. Over this period, they produced 22 media releases on Tasmanian logging which **created a litany of erroneous or dubious claims**.

These included that there are "precious few native forests left"; that there is "large scale removal of Tasmania's giant ancient trees"; that "logging the Swift Parrot to extinction is a choice by Tasmanian Premier Gutwein and Federal Environment Minister Sussan Ley"; and that there is an "effective exemption from environment laws granted to all native forest logging".

Indeed, their 'Great Forest Case' was effectively based on the notion of Tasmanian timber harvesting being exempt from national environmental laws enshrined under the Environment Protection and Biodiversity Conservation (EPBC) Act 1999. Over a long period, **environmental activists have pushed this claim even though forestry has never been exempted from these laws, and is arguably the nation's most highly regulated land use**.

Far from granting an exemption to timber production, the EPBC Act delegated its forest conservation requirements to the Regional Forest Agreement (RFA) planning and regulatory process. This was a practical response to the prohibitive difficulty of otherwise requiring all of the hundreds of small timber coupes harvested each year to be individually subject to Environmental Impact Statements and other approvals processes normally applied under the EPBC Act to large-scale one-off development proposals, such as new housing estates or mines.

A 2009 Independent Review of the EPBC Act by former ANU Chancellor Alex Hawkes and four expert scientists, specifically examined the interaction between the EPBC Act and the RFAs, and noted that:

The interaction between the EPBC Act and forestry operations is often referred to as an "exemption". This term does not, however, accurately reflect the relationship. The rationale for the RFA provisions in the Act recognises "that in each RFA region a comprehensive assessment has been undertaken to address the environmental, economic and social impacts of forestry operations". Rather than being an exemption from the Act, the establishment of RFAs (through comprehensive regional assessments) actually constitutes a form of assessment and approval for the purposes of the Act.

Under the Regional Forest Agreements, native forest timber production is regulated by a hierarchy of plans and enforceable operational prescriptions designed to prevent and/or minimise environmental impacts. These include regional forest management plans describing regional conservation values; a code of practice that gives operational guidance and sets minimum standards of protection; area-based operational prescriptions for particular situations and localities; and individual harvesting plans for each coupe that guide on-site practices and act as the benchmark for operational supervision and monitoring of contractor performance.

Since the Tasmanian Regional Forest Agreement was first signed in 1999, conservation areas have significantly expanded, more stringent protections for threatened species have been developed, and timber harvesting has substantially declined due to various state and Federal government policy changes, as well as difficult market conditions. The same has occurred in Victoria. **This**

contradicts the activist rhetoric which continues to misrepresent RFAs as exempt from environmental laws and thereby an impediment to environmental protection.

Just one example of the reality is that **97% of Tasmania's 1.2 million hectares of old growth forest is either protected in world heritage areas, national parks and other reserves, or is otherwise unavailable for timber harvesting. That fact alone debunks the persistent claim by the BBF that logging poses an existential threat to Tasmania's 'ancient' forests** and all threatened wildlife species that inhabit them. The other 3% that is still available for harvesting is essential to maintaining Tasmania's iconic special timbers and wooden boat-building industries.

There is no doubt that misinformation has been the lifeblood of anti-logging activism for several decades. It has been conceived by activists but promoted by the city-based mainstream media either without question, or with only minimal opportunities given to alternative, and usually far more informed, views.

Yet, today's media pile-ons against alleged contrarians, conspiracy theorists, or the politically-incorrect suggest that journalists have only 'discovered' misinformation since 2016 when a recently departed US President began over-using his Twitter account.

Those journalists who are most vocal in calling-out misinformation seem to view it solely as a weapon of right-of-centre politics, while oblivious to, or hypocritically silent on, their profession's role in misinforming the wider community for decades on left-of-centre, politically-correct causes, such as 'saving' forests from logging.

The damage attributable to misinformation spread about forestry has been immense. Both in terms of industry livelihoods lost and rural lives unfairly over-turned by political decisions forced by misguided public sentiment; and latterly through the obvious environmental impacts of forest fires no longer able to be fought as efficiently as in the past when a strong forestry culture and workforce prevailed.

It may be too late to turn this around, but perhaps the propensity for environmental activist groups to engage in legal actions offers a belated opportunity to expose their modus operandi of exaggerating and distorting reality for ideological purposes, and its quantifiable adverse consequences.

https://fwca.org.au/bob-brown-legal-challenge-shines-a-light-on-decades-of-environmental-misinformation/?fbclid=IwAR2l9_3E3Pl0eT7aKYzYeXXvuo5boEmbZz-LwyeIzrKXnhXpeKObG6Fb1iE

DEBUNKING TIMBER MYTHS

Timber NSW recognises that NSW communities care about the forest estate. The timber industry also cares deeply about the wellbeing of our forests.

We often get asked questions about a range of forestry and timber industry issues. Below we debunk common timber myths to lessen confusion, counter misinformation and inform the Inquiry.

Myth: We can protect our natural heritage by making all native forests national parks

To consider this issue we need to ask:

- what is required to 'protect our natural heritage'?
- do our current efforts actually achieve that aim?
- can we achieve our aim of protection in a more cost-effective way?

- is it legitimate to manage forests for economic values as well as social and environmental values?

Underlying this common refrain is an assumption that ‘rewilding’ the forests – leaving them unmanaged – is a viable strategy. It is not. In fact, active stewardship of all of our forests is required to maintain forest health.

Areas designated as National Parks and reserves are internationally recognised as a critical conservation tool. Their purpose is to provide permanent protection of biodiversity by preventing land-use change and maintaining habitat integrity.

New South Wales has as well-established reserve system covering 7.4 million hectares or nine per cent of the State. Continuing to build on this estate is the goal of many conservationists. The merits of such a strategy need to be carefully assessed and considered on a case by case basis.

When considering a new national park proposal, it is necessary to look at the adequacy and representativeness of the existing reserve system within the area of interest. The agreed framework for undertaking this assessment is provided by the Interim Biogeographic Regionalisation for Australia (IBRA).

New South Wales has 18 IBRA regions. Each IBRA bioregion is geographically distinct with common climate, geology, landform, native vegetation and species information. The adequacy and representativeness of conservation reserves within each bioregion is quite variable. In New South Wales the bioregions which are most under-represented within the reserve system are those located to the west of the Great Dividing Range.

Where timber harvesting currently occurs, the level of reservation has already been deemed to be comprehensive, adequate, and representative. For example, within the New South Wales component of the South East Queensland, NSW North Coast, Sydney and South East Corner bioregions, 88 per cent of all public native forest is set aside in formal and informal reserve.

Other issues to consider when assessing the need for more National Parks is their cost and whether they are achieving their conservation aims. The NSW National Parks & Wildlife Service currently spend half a billion dollars annually on the management of their estate. This equates to $68 per hectare per year.

On private land, the NSW Biodiversity Conservation Trust has spent $125 million over two and a half years establishing and maintaining conservation agreements and partnerships which cover 59,300 hectares. This spend equates to $2,108 per hectare with the annual management costs ranging between $19 and $1,637 per hectare.

During the summer of 2019-20, 2.7 million hectares or 37 per cent of all New South Wales National Parks and reserves were burnt by wildfire under extreme conditions. For 130 parks and reserves more than 75 per cent of their area was affected. The effect of these wildfires on habitat integrity was catastrophic, with the most severely affected areas likely to take hundreds of years to return to their pre-fire state.

In light of the bushfires, in areas where the reserve system is ‘comprehensive, adequate, and representative’ it makes sense to consider alternative (lower cost and lower risk) options that can be applied more broadly across the landscape.

On private land this means encouraging all landholders to undertake activities that promote biodiversity conservation without removing their right to continue with primary production activity. On public land it means taking a tenure-neutral approach to biodiversity conservation through better management of common threats, namely wildfire and invasive pests and weeds.

Greater integration of forestry and environmental conservation could also have many flow-on benefits for biodiversity. For example, ecological thinning is a tool that can be used to improve habitat integrity and better protect significant environment features such as large habitat trees. It can also generate commercial wood products. Thinning is also a highly effective way of maintaining low fuel zones where future wildfires can be more easily controlled. The timber industry has a key role to play in ecological thinning as it is best equipped to undertake the task at least cost.

Myth: NSW Forests are being clear felled

Clear felling is not a practice used in any New South Wales native forests. Below we outline what clear felling is and is not and the method by which regrowth native forests in New South Wales are harvested.

What is Clearfelling?

Clear felling is a forestry practice that involves the felling and clearing of an area of forest prior to it being replanted or naturally regenerated. The practice of clear felling typically applies to plantation forests, which are of a single species and age. Like any agricultural crop, pine plantations are clear felled when the trees reach maturity at around age 30-35.

Clear felling should not be confused with land clearing. Land clearing means the permanent removal of native vegetation to make way for an alternative land-use such as agriculture, mining, roads or commercial development.

How are NSW Native Forests Harvested?

In New South Wales, all old growth forest is protected in reserve, which means that only regrowth native forests are available for harvesting. The trees in New South Wales regrowth forests are typically mixed species and multi-aged.

Harvesting of these forests is selective. A typical harvesting event involves the removal of mature trees, usually between 50 and 80 years of age, with the retention of younger regrowth and pole sized trees. Older trees may be retained for their animal habitat value (hollows) and as a source of seed for forest regeneration.

Areas subject to selective timber harvesting typically have around one third of their tree canopy removed. This proportion will vary between sites due to a range of influences, including timber markets and forest attributes including the mix of tree species, their condition, stocking density, age and size.

Australian native forests are dynamic and have a natural capacity to regenerate and recover following disturbance events. Their capacity to recover from wildfire, wind storms, temperature extremes and drought equips them equally well to recover from timber harvesting.

Myth: NSW native forests should be left untouched as carbon stores

Native forests and timber products are an important store of carbon. What many people do not realise is that to maximise the sequestration of carbon forests – which are dynamic, living organisms - must be actively managed.

The key roles of active forest management:

In Protecting Forests from Major Disturbances: Like all living things, forests follow cycles of growth, development and mortality. Along the way their development is often halted and reset by major disturbance events like bushfires and drought. These events can be dangerously polluting.

- In 2019-20 over 5 million hectares of native forests along Australia's eastern seaboard was burnt by wildfire. Most of these forests were in National Parks. The Australian Department of Industry estimated net emissions from these forest fires at 830 million tonnes of carbon dioxide equivalent (MtCO2-e).
- Most of these forests were located in National Parks. Even National Parks need to be actively managed for environmental reasons.
- Active forest management is an important part of reducing the impact of these major disturbances.
- The threats posed by events of this type and scale mean that it is very difficult to manage a forest from a 'regrowth' state through to an 'old growth' state. Active forest management is an important part of mitigating the risks posed by these major disturbance events.

In Sequestering Carbon: When assessing the best way to manage forests for carbon storage it is also necessary to consider the rate that trees sequester (i.e. capture and store) carbon.

- In general, trees sequester carbon more rapidly when they are young, with their peak growth period typically between 10 – 30 years of age.
- Carbon sequestration rates slow after a tree matures, which for a eucalypt occurs from about 80 years of age. Beyond this point the rate of sequestration flattens as carbon captured from new growth is offset by the release of carbon from parts of the tree which begin to decay and or are shed.
- Sustainably harvesting trees in their early mature phase ensures that a forest's carbon sequestration rate is kept at an optimal level. Under a sustainable harvesting regime, forests have the capacity to store more carbon over the longer term than if the forests are left unmanaged.

Wood Products Store Carbon Too: It is also important to recognise that *both* forests and harvested timber products provide carbon storage over the long term.

- Timber products have a long and stable service life, with the half-life of solid and composite wood products being up to 30 years (when used in furniture) and up to 100 years (when used in homes).
- A timber-framed home *stores* 7.5 tonnes of carbon, while a steel framed house *emits* 2.9 tonnes of carbon.
- The carbon benefits of wood also include the lower energy requirements needed to *manufacture* them, by comparison with alternate materials. This advantage is particularly important for the construction industry.

- It generally requires around 19 times more energy to make a product from steel rather than kiln- dried hardwood; 45 times more to make a plastic product; and 85 times more energy to make a comparable aluminium product.

Myth: The native forest industry is being subsidised

Businesses in the timber and forest products industry in New South Wales operate commercially and without government subsidy, as they have done since the days of the early settlers.

The industry buys its timber as logs at market rates from private forest growers and from the Forestry Corporation of NSW. In NSW there are c.4,000 private forest growers who produce and supply commercial quantities of native timber from their properties. Together these landholders manage around 400,000 hectares of private native forest.

Forestry Corporation manages 2.2 million hectares of public-owned State forests comprising 2 million hectares of native forest and 230,000 hectares of plantation. The supply of timber to industry is the agency's principal source of income. Forestry Corporation of NSW has two trading divisions, hardwood forests and softwood plantations.

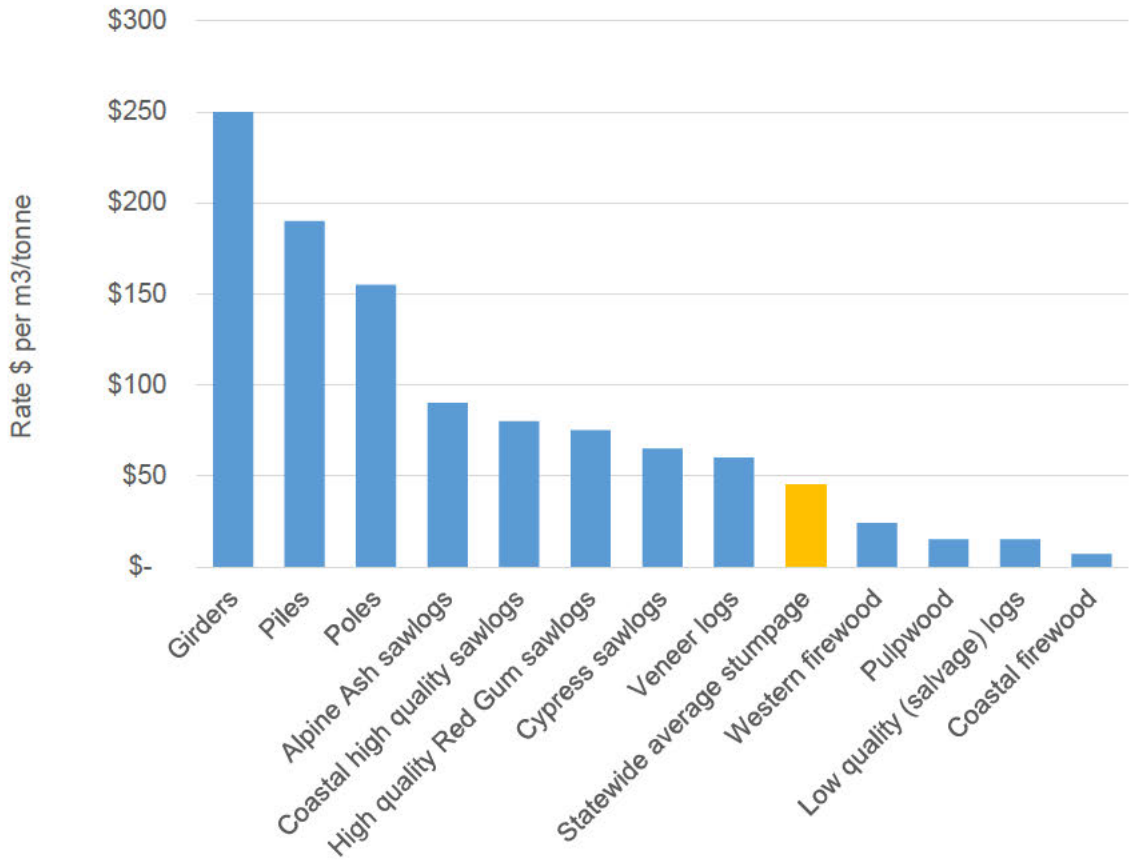
Native State forests are managed by the hardwood division for multiple-use purposes. Over the five-year period ending 30 June 2019 the hardwood trading division generated an average annual profit of $2 million. By comparison NSW National Parks & Reserves cost c.$500 million per year to manage. If native State forest were not managed for timber, they would need to be subsidised at a cost of ~$100 million per year.

All commercially harvested timber that is sold from State forests attracts a royalty (also known as a log stumpage). For high quality logs the royalty is based on volume and the unit rate is dollars per cubic metre ($/m3). For low quality logs such as salvage, pulpwood and firewood the royalty is based on weight and the unit rate is dollars per tonne ($/tonne).

Timber stumpage rates are based on market demand. The Forestry Corporation undertake regular market surveys to determine the value of the timber. Adjustments are then made to the rates which reflect whether prices have risen or fallen.

Indicative timber stumpage rates for a range of native log products is shown in Figure 1. The weighted average stumpage rate obtained by the Forestry Corporation for native logs is ~$45 per m3.

Indicative native log stumpage rates:



Myth: The native forest industry is uncompetitive

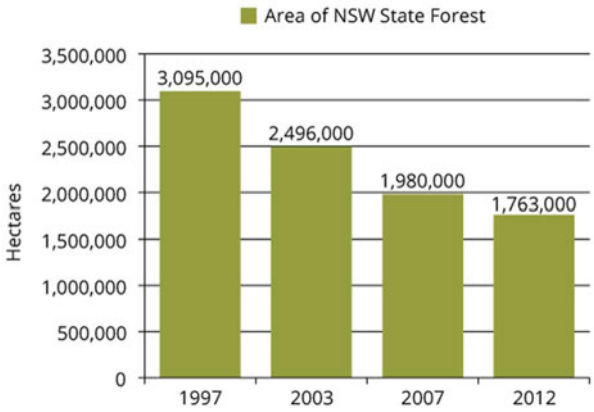
Australia is the sixth most forested nation on earth, with a wealth of timber resources. The timber and forest products industry has demonstrated over the last century that it can and should compete effectively both in domestic and global markets. Certainly, the current demand for Australian timber has rarely been higher.

The economic viability and competitiveness of the native forest industry depends on four key operating parameters:

- A sustainable supply of timber
- Equitable access to commercial regrowth forests
- Workable operating rules
- Fair log pricing

We address each of these parameters below:

Sustainable Supply of Timber
Less than ten per cent of the NSW's native forests (public and private) is currently available for timber harvesting. Over recent decades many State Forests have been reclassified as National Park and are no longer eligible to supply timber.



Declining area of NSW native State Forests
Source: McIntosh (2013) The Australian native forest sector: causes of the decline and prospects for the future. The Australian Institute Technical Brief No. 21 April 2013

The NSW forest estate is able to accommodate all the forest values – social, economic and environmental. In fact, many of the values work together. The timber industry has an important role to play in the active and adaptive management of the entire forest estate.

Equitable Access to Commercial Regrowth Forests

The problem with changes of State Forest into National Parks in recent decades is that these changes are not necessary to achieve the stated environmental protection aims of the NSW government.

Coastal regrowth forests are where the timber industry has traditionally operated without adverse impact on the environment. However, in recent decades the vast majority of these coastal forests have been reclassified as National Parks, despite the fact that many of them are not required to meet scientific conservation objectives.

The timber industry cannot be expected to remain competitive if it is only allowed to operate in steep and or rugged terrain that is remote from its processing facilities. To remain competitive, the industry needs equitable access to coastal regrowth forests.

The timber and forest products industry is a supporter of a comprehensive, adequate and representative reserve system. The industry does not however support the management of former multiple-use coastal regrowth forests as National Parks where they are not required.

The industry calls on the NSW Government to reinstate these forests as multiple-use conservation areas which cater for selective timber harvesting.

Workable Operating Rules

Although wood resources remain plentiful, access to them is now heavily constrained by tenure and regulatory restrictions. So, in New South Wales native forests are protected from clearing (i.e. clear felling of trees) and land-use change (i.e. for non-forest purposes, such as agricultural or urban usage).

On land that is available for timber production, strict operating rules mean that now only around half of the forest is actually available for selective harvesting. Each coastal native forest operating region now has over 2,000 operating conditions which must be complied

with. A huge disparity has developed between the regulation of the native timber industry and the regulation of comparable land-use activities like agriculture.

For operating rules to be workable there needs to be a balance between the needs of the environment and the requirements of a sustainable timber industry. Over the last 15 years the industry has been forced to operate in an increasingly smaller area as more and more forest is set aside to cater for site specific environmental requirements.

This has led to the areas that remain available for harvest being harvested more frequently than they otherwise would or should be. It has also constrained the industry by reducing the ability to plan the spread of operations in time and space. In the event of changing markets or seasonal fluctuations this inflexibility comes at a direct cost to industry.

Making more State forest available for timber harvesting would resolve this issue.

Fair Log Pricing

The ability of the timber industry to compete effectively in the market is dependent on its production costs being less that the price it receives for its processed timber. One of the biggest cost variables is the amount that it pays for the supply of logs. Logs delivered to a processing mill include the cost of harvesting, loading, haulage and a price for the log product (stumpage).

Native timber logs are inherently variable, given the many different species, sizes and qualities. All of these variables have a bearing on the amount, quality and type of timber that can be recovered from them. Relative consistency in log mix is important as this determines how well processors can match their log mix with their markets and processing equipment.

Tracking trends in log quality (defect percentage) mix from State Forests is an important aspect of log pricing that is not currently getting due attention.

The mix of locations from which logs are sourced is another important variable as this determines the cost of harvesting and haulage. If the average harvest and haul cost keeps increasing, logs become unaffordable.

Due to the tenure restrictions mentioned above, on the NSW North Coast an increasing proportion of logs are being sourced from more remote locations in more rugged terrain. Over the last five years this has led to harvest and haul price increasing by more than 20 per cent in real terms. The root cause of this problem was the transfer of large tracts of coastal State forests to National Park.

The only way to solve this issue is to transfer some of the coastal regrowth forests back to State Forest and or to adjust log stumpage prices down in areas that have higher than average delivered costs.

The decline in the area being made available for wood supply has caused a commensurate decline in production of timber and a requirement on industry to restructure and downsize.

The following changes need to be implemented by the NSW Government to ensure a sustainable and competitive footing for the native timber industry:

- Make available a sustainable timber resource that cannot be eroded by the cumulative impacts of environmental operating rules
- Reduce the number of operating rules where environmental risk is low and make remaining rules more workable
- Achieve greater regulatory consistency and transparency with other primary industries
- Ensure log stumpage pricing is more closely aligned with log production costs and changes in log quality
- Allow greater access to coastal native regrowth forests
- Make more areas available for timber harvesting to provide flexibility to move operations in time and space.

Myth: The native timber industry is unsustainable
The native forest industry is one of the very few industries which is truly sustainable. The production of timber is a completely natural process. There is no requirement for chemicals or artificial fertilisers and no genetic alteration or manipulation of the species mix. The industry utilises only what the forest produces.

By aligning itself with mother nature the native forest industry has become incredibly diverse. Over 50 different tree species are utilized, producing hundreds of different timber products. Maintaining this diversity is central to the way the industry operates.

New South Wales is blessed with a bountiful supply of native forests. On the north coast (where most native timber comes from) two-thirds of all land remains forested. Proactive protection of these forests commenced over one hundred years ago with the creation of the first State forests. Since then State forests have become the mainstay of a sustainable native timber industry.

Although wood resources remain plentiful, access to them is now tightly controlled by legal regulation. Regulation not only protects the forests from clearing, it also ensures protection of important environmental features such as riparian habitat, rainforest, wetlands old growth, rare and threatened species, steep slopes, rocky outcrops, habitat and feed trees.

To ensure the supply of wood never runs out the rate of growth and the area which is available to produce timber is carefully monitored. If either of these factors change, adjustment is made to the amount of wood that is supplied to the industry.

Myth: NSW can replace wood from native forests with plantation wood
Some believe that sourcing wood from plantations rather than native forests is more environmentally responsible. However, a holistic perspective is needed. Both native forests and plantations have their environmental advantages and disadvantages.

It's also important to distinguish between the viability of hardwood and softwood plantations as a replacement for native wood resources and to acknowledge industry innovation in addressing limited hardwood supplies.

Native Forest vs. Plantation Production
Their Environmental Impact

- Plantations are a form of industrial agriculture which cultivate a single species. They require a large upfront investment to ensure successful establishment, as well as fertiliser, intensive cultivation and management.
- Wood production from native forests is more akin to permaculture than the industrial agriculture. It is relatively low cost as they do not require a large upfront investment to ensure successful establishment, nor fertilizer or intensive cultivation.
- What many people don't realise is that all native forests must be actively managed for environmental and safety reasons, whether they are used for timber production or not. The harvesting of sustainable levels of native timber is a form of active management that can be applied as a silvicultural tool to improve resilience against fire and to promote biodiversity and forest health. In this context, arguably the native timber production system is more environmentally friendly than plantations.

Silviculture vs Native Forest Management

- Plantations are a form of intensive cultivation or silviculture, so in comparison with native forestry they tend to:
    - grow wood much more quickly
    - produce a more consistent and less defective product in a much smaller space
    - be less variable in terms of their timber quality, size and species, which makes them much less costly to harvest and process. This uniformity also makes plantation timbers better suited for use as commodity products like paper, reconstituted and engineered wood.
    - be susceptible to fire and, being single species, are less resilient to pests, weeds and diseases. During the 2019-20 bushfires tens of thousands of hectares of timber plantations were destroyed in New South Wales resulting in financial loses in the hundreds of millions.

Hardwood vs. Softwood Plantations

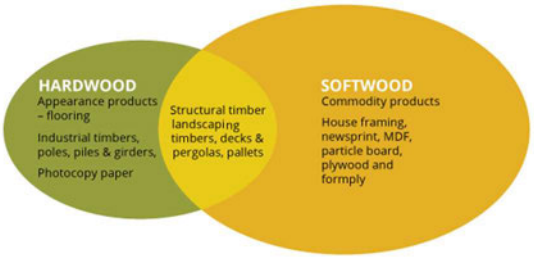
- It is helpful to distinguish between hardwood and softwood plantations in assessing how feasible plantation timber is as a replacement for native timber.
- NSW's softwood plantations are a much larger and more mature resource. New South Wales has 306,000 hectares of softwood plantations and approximately 87,000 hectares of hardwood plantations.
- A typical softwood plantation has a rotation length of 30 to 35 years. NSW softwood plantations have been producing sawlogs for more than five decades with many plantations on their second or third rotation. Apart from the impact of the 2019-20 bushfires the softwood plantations have performed well, accounting for three quarters of NSW domestic wood production in recent years.
- A typical hardwood plantation takes between 35 to 40 years to reach maturity.
- Many hardwood plantations were planted in the 1990s, so only a small percentage of hardwood plantations have reached commercial maturity in NSW.
- The performance of NSW's hardwood plantations has been mixed in terms of their health, growth rates and the quality of their timber.

Despite high expectations, hardwood plantations are no longer seen as a viable replacement for native wood resources. They can however be expected to supplement

native wood supply in the future. In fact, since the 2019-20 bushfires, hardwood plantations have been an important source of unburnt timber.

Myth: We can use softwood grown on plantations instead of native hardwood
Reducing Reliance on Hardwood through Industry Innovation

- Over the last 20 years, the timber and forest products industry has introduced considerable innovation to overcome the limited supply of hardwood.
- Softwood products have made considerable inroads into structural markets that have been the traditional domain of native hardwood.
- This has occurred through the production of engineered wood products and the treating of softwood timber to make it suitable for outdoor use.
- In New South Wales the extent of this market overlap has more or less reached equilibrium (refer Figure 3), with each industry having found its competitive space.



Relationship between hardwood forest products and plantation softwood product markets.

Recommendation

- Timber NSW and its members are continually working with their communities and local media to spread the message of sustainable forestry and timber production. We submit that as NSW implements policies of integrated land management, the NSW government must work with industry to communicate the important roles of sustainable forestry and the timber industry, reducing community confusion and misinformation.

APPENDIX

CASE STUDY: **Hurford Hardwoods**

The commitment of our family to the forestry and timber products industry is long standing and deep. We have a love of the magnificent forests of the north coast which has been our home for generations.

We operate in several tiers of the supply chain - spanning from a private native forest tree grower and tree plantation grower to a manufacturer and wholesaler. We are also an importer of timber because of NSW shortages.

I'm Andrew Hurford, the executive chair of the Hurford Group, I work alongside our CEO Bob Engwirda, our family members and our great team of staff.

We have a wood supply agreement with Forestry Corporation NSW. This is our major source of the raw material in the form of logs. Our modern processing operations in NSW are sawmills at Kyogle, Casino, Kempsey, Bulahdelah; a state-of-the-art dry mill facility at Tuncester; value adding processing Kempsey.

We've made significant investments towards building a sustainable timber industry in the North Coast since the 1950s. We had invested to bolster supply, growing 5,000 hectares (12,500 acres) of trees on our land. Both hardwood plantations and private native forestry are sustainably managed by us to produce high end timber products into the long term. When bushfire attacked a few of our properties, severely damaging parts of our private forests in 2019, timber supply was already tight. Two years mill supply of precious future high-grade timber we were growing went up in flames. Reestablishing the worst damaged areas will take many years.

There is an increasingly serious impact on our business due to ongoing shortage of harvested timber that is normally hauled from the major forests that supply the Hurford North Coast mills. There are two causes to this. The area of State Forests that is authorised for harvest has continued to shrink, due to ongoing transfers of productive forests into the reserve system even after the regional forest agreements were set. The other disturbing cause is that the preferential wood supply agreement Forestry Corporation has provided its largest customer, Boral. The terms of that agreement are publicly available, but they give one company preferred access to the most important species in volumes that mean that all other operators ability to compete on a level footing is compromised. It provides Forestry Corporation with very little room to manage the natural variations which occur in specie mix and log sizes and grades which occur in natural forests. It is a bad outcome for competition, as it favours one company over the rest of the industry.

Government efforts in 2014 to fix that problem with a "buy-back" from Boral further locked in that situation by committing hard volumes of each of the key species which must be supplied to Boral each year. All other A & B Common Agreement holders have suffered a diminished resource supply in terms of specie mix and higher landed log cost since that 2014 agreement with Boral was made.

The solution to this would be to make all High-Quality log customers equal with an expectation of receiving an even share of key log species in any given supply year. This would give Forestry Corporation the flexibility to manage their resource according to the

silvicultural needs of their estate, matched as best as possible to the requirements of the market. Importantly it would allow each company to compete on an even footing in the marketplace in terms of competition and product development.

We take deep pride in being able to both grow and process these beautiful, durable, strong and carbon friendly timbers. Our industry enables people in Sydney, Bathurst, Ballina, Bowral, Goulburn, Griffith, Cowra, Cooma, Jugiong, Orange, Mudgee - all over NSW to have sustainable, long lasting, beautiful natural floors, stairs, cladding and lining in their homes, shops, offices, community facilities, schools. We think this is worthy work.

Our industry is made up of people. Good people with ethics and a love of forests, trees, wood. Science shows and experience shows it is possible to produce products out of the sustainable harvest of native Australian timbers and have good environmental stewardship.

Thousands of hard-working people from our communities go to work every day in a forest, on a sawmill line, in a truck cab, in a warehouse, on a showroom floor to provide timber. Thanks to their work Australians have access to locally grown ‘low timber miles’ wood products.

Even after the severe fires, which were exacerbated by poor land and fire hazard management by National Parks and Wildlife Service, NSW grows huge volumes of renewable wood. Every (healthy) tree grows bigger every year. We can certainly fix this shortage and equip the state with the growing timber products industry to supply what our society needs. At the same time NSW citizens can enjoy large swathes of protected conservation forest tenure, plus have the assurance of protections that forestry operations cater for our native animals.

In 2021 our NSW native hardwood wood products industry is being unnecessarily starved of raw materials. This adversely impacts the construction industry. The construction ecosystem is made up of tens of thousands of people in various parts of the building world from the local hardware store to individual plumbers, carpenters, plasterers and then the larger firms. They are people - their customers are also people - tens of thousands who need housing every year. Problems in our north coast timber industry are not an irrelevancy to city dwellers – it’s directly relevant.

The government policy to lower total hardwood availability In NSW over decades has forced increasing reliance on imported wood. We would prefer not to buy timber from other countries, but we cannot meet our customers’ needs without it. We buy timber in a tough international market.

Government has done this in the past with the establishment of the plantation pine estate in NSW and other states. These are now magnificent estates that are much sought after by foreign pension funds. These large softwood estates were visionary when they were established, as they were planted for a known future requirement of our state and country. They largely service the production of structural wall framing. They do not provide the high quality, durable appearance products that is produced from our native hardwood species. Unfortunately, when the decision was taken to move large swathes of the managed State Forests into National Parks, inadequate provision was made for additional long rotation plantations of native hardwoods.

Apart from providing a basic need of our society, we would be creating further regional employment opportunities in planting and maintaining the plantations along with future jobs processing distributing and further manufacturing of the timber products.

We have grown our business, invested, innovated, we employ a lot of people, we train them and reward them, we are deeply involved in supporting the arts, culture, events and sports of our local region. We procure large quantities of goods and services from other businesses in the region. By any measure, the presence of our family business is a positive for our region.

We are optimistic of a bright future for the hardwood timber industry in NSW and our place in it.

However, we cannot do it in a vacuum, and we require long term and visionary policy settings from government to fully capture the opportunities presented by a vibrant growing timber industry.

APPENDIX

Submission

Inquiry into the Long-Term sustainability and future of the Timber and Forest Products Industry.

NSW Parliament – Legislative Council – Portfolio Committee No 4 - Industry

Mr Colin Dorber

My Background:

Colin has been actively involved in employment and related issues throughout his working life, including over 10 years with the Police Association of NSW whilst a serving Police officer, 11 years as CEO of the National Timber Trade Industrial (Employer's) Association, and simultaneously 13 Years as Manager Member Services and/or Executive Director NSW Forest Products Association (now Timber New South Wales) together with previous service in industrial relations in the NSW health sector and, as the first ever national IR advocate for the Australian Federal Police Association.

Colin is a former member of the Australian Institute of Company Directors, a current member of the Institute of Arbitrators and Mediators Australia, and the AHRI (Australian Human Resources Institute). He builds upon a 50-year employment history in industries as diverse as Stockbroking, Policing, Health, Timber, Wool. He is now focused on advocacy and court work in industrial relations and related training services (19+ years).
I have appeared as an advocate extensively for both employers and employees, in industrial tribunals in NSW and at the federal level, including pro bono work since 1989.

I have an Advanced Certificate in Professional Arbitration, awarded by the South Australian University, and previously headed up the regeneration and redevelopment of a national industry employer association, in addition to having been an employer/employee representative, over many years.

My 13 years police career also equipped me with the ability to provide professional leadership in the investigation of workplace accidents, disciplinary investigations, preparation of statements, representation in prosecutions, training education and support services. As an Advocate I am committed to ensuring equal opportunity rights are upheld. I have conducted many formal/informal conciliations, arbitrations and mediation processes and helped negotiating workplace agreements, enterprise bargaining, conflict with unions or employers, and all forms of dispute resolution and mediation.

During my career in the New South Wales Forest Industry, I was an appointed member of the interim Forest Assessment Committee established by the Carr Labor government; and the regional Forest agreement process established by the federal government- on which I sat what as the sole industry representative.

The Industry.

In my capacity as the Executive Director of the New South Wales Forest Products Association I observed the wholesale and insidious attempts to bring about the destruction of the hardwood cypress and native red gum industry sectors. We represented both sawmillers and logging contractors, transport operators and related industry groups. We observed that many medium to small sawmilling businesses, once the backbone of the local communities in which they were located, were destroyed, meanwhile, (principally because trees have no understanding of humanity) continued to grow and flourish and produce vast amounts of potentially usable resource, most of which now is locked up in national parks which are slowly but surely dying.

Years of predictions by extreme green representatives about the wholesale destruction of forests, the elimination of vast species of animals, and from their perspective, what they saw was the end of a sustainable regional/country life in New South Wales, have fortuitously been unfounded. However, the

damage that they have caused, particularly between the early 1990's and 1998, is absolutely unforgivable, and has led to a vast increase of imported timber products into this country, in the main for parts of the world where there is almost no regard paid to the environment, with the elimination of significant employment opportunities, particularly for young people who may not possess the necessary educational skills to aspire to city life employment, but who could have had rewarding and significant employment opportunities and help to keep regional communities alive and well. No matter tourism substitutes for long-term stable employment, using a completely renewable and environmentally responsible product – wood!

I credit and acknowledge the former federal Labor government, particularly Prime Minister Bob Hawke and subsequently Prime Minister Paul Keating for their initiative in the establishment of the $120 million NSW forest industry restructuring fund. We also acknowledge the decision by the then Prime Minister John Howard to allow the fund to continue to operate, working to improve by introducing value adding operations across the New South Wales forest industry to maximise the utilisation of the dramatically reduced resource levels.

Any submission about the state of the forest industry New South Wales cannot ignore or fail to recognise the efforts made by people like the former premier Mr Nick Greiner, Peter Cochrane, the former but now deceased secretary of the Timber division of the CFMEU (as it then was) Mr Gavin Hillier, current CFMEU Manufacturing Division Leader Michael O'Connor, the excellent work by Mr. Mark Greenhill, and my former work colleagues Jackie Tracy, and Russell Ainley. I especially wish to acknowledge in this submission, the role of Minister Kim Yeadon, the NSW ALP Minister of Forestry (1997-2003) during the Carr years. From my observation, Kim Yeadon paid the ultimate price that can be inflicted upon a committed member of the NSW ALP, he stood up for the forest industry New South Wales, it cost him his job and his career.

I remain constantly astounded at the continuing great work now been done by Timber New South Wales with limited resources to sustain the industry, under the auspices of its Executive Director Maree McCaskill. There are too many to name but people like Kerry Peacock, Bruno Notaras, Alan Greensill and Lexi Hurford, Evan Ford and Susan Bennet were fantastic representatives on behalf of sawmillers, as we fought up and down the state of New South Wales to reduce the unreasonably negative impact of the green campaign aimed at closing the forest industry.

The terms of reference of this Parliamentary committee reflects so much the historical work that has been done. I have lost count of the number of times that we have made submissions relating to the terms of reference, particularly, (a), (b), (e), (f) and (g). I would commend the Honourable Committee to look at historical data collated over the last 20 years to find that almost all the answers you now seek have previously been researched and published. I am yet to see a government of any persuasion recognise that a viable, environmentally responsible, and sustainable timber industry, usually utilising native grown product supported but never substituted by plantations can lead to valuable employment, high product value value-added materials, which reduced reliance upon imported product, and the creation of truly vibrant regional communities, contributing significantly to the well-being of the State. I have reached the age where I no longer believe that any reviews, reports, enquiries, or investigations into the forest industry New South Wales will deliver any meaningful and viable results, until it is recognised that sustainable harvesting of native forests is a responsible and vitally significant contribution to the well-being of the community.

By way of an anecdote, I recall in my very early years, a logging contractor in Dorrigo. Out of respect to him not having had his permission to do it. I will not name him. But I recall this logging contractor calling me to Dorrigo and taking me to a forest compartment. There a Forestry Commission officer was directing the harvesting of a particularly beautiful tree- commonly referred to as an old-growth tree. Nowadays- but even though we say that I am quite sure quite dead by now. The logging contractor did not want to cut the tree down because he had been caring for that forest for the whole of his working life – at that

stage over 30 years – he was aware of a koala habitat, and that that tree was particularly valued by native species of various kinds. He did not want to cut down the tree, and he did not want to abate a Forestry Commission officer. Ultimately, the tree was saved. Unfortunately, salvation was only temporary, as then it became part of a national park and as we know from the recent shocking bushfires significant areas of those products have been destroyed by wildfire. Meaningful and proper regulators sustainable harvesting of the forest, and the creation of the ancillary road networks have saved many a forest during the bushfire season. I recall the prediction I made in 1995 that one day we would log the national parks of New South Wales, not for timber production, but to rescue those forests. After major disasters. It is disappointing that that came through and that indeed in the last six months that press releases been republished in the land of newspaper as an unfortunate but predictable observation that when you do not care for your habitat. It can be destroyed quite quickly and savagely by fire.

Conclusion

In concluding these comments, lest anyone should misunderstand me. Let me make it clear, I believe that the Carr Labor government set out with one objective, the closure of all of New South Wales State Forests and the closure of an industry with an established historical record of commitment not only sustainable forest management and environmental standards, but to the welfare of those regional communities who depended upon forests for life, living and employment.

Why did they do this? So that they could be claimed as heroes by the Greens. In the process they used subterfuge and deceit and dubious practices, often destroying even those within their own ranks, who dared to encourage support for regional communities, jobs and the supply of high-quality timber products to the consumer, solely with the short-term imperative of saving the Green vote.

In truth, the Carr government led the wholesale destruction of small and medium country enterprises, operated by sawmillers and logging families, and have caused irretrievable damage to regional New South It was predicted (and sadly had come true) that over the coming decades, that would lead to the terrible destruction by fire of our forests and their ecology, destroy wildlife habitat and escalate unemployment!

I will leave it to others to make recommendations to this honourable committee as to how it ought to bring the timber industry back to life other than to say sustainable timber harvesting is the lifeblood of many regional communities. Although the campaign to snuff it out continues, ultimately common sense will prevail.
Surely, the community supported by their parliament and their elected members will recognise that an entire new industry built on value adding timber products remains waiting to emerge.

Colin Dorber