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Primary processors survey report

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North Coast NSW Private Native Forest Primary Processors Survey Report

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John Samuel / Forest Science / Parramatta

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With thanks to the North Coast NSW primary processors of native timber and Forestry Corporation of NSW

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Summary

A survey of 33 hardwood primary processing businesses on the NSW North Coast was undertaken between February 2016 and February 2017. The survey sought to quantify the amount and value of native hardwood logs processed from private property and State forests. The survey also captured information on employment and the views of the wood processors on private native forest wood supply and the role of government. Data for a separate project on wood residues arising from processing was also collected.

Thirty-three out of 49 of the largest wood processors were interviewed. The survey captured 86% of the logs sold by the Forestry Corporation of NSW (FCNSW) in the region. Twenty-six used private native timber, averaging 4,890m³ per year per processor, and four exclusively processed private native timber. Twelve processors had more than 50% of their intake from private property.

The survey assessed the volume of private property native timber flowing into larger primary processors amounted to an adjusted 153,512m³ per year. Twenty-six smaller sawmills, estimated to be processing less than 3,000m³ per year, were not interviewed. A 'sister' survey of private property harvesting contractors estimated 274,950m³ of native forest logs are sold each year¹.

This study found that for every cubic metre of private property log bought by primary processors, \$556 of turnover was generated for those businesses. For every 533m³ processed a job was created.

If the volume of private property harvesting by contractors is used, this means the private property primary processing sector on the North Coast directly creates \$153 million turnover annually for regional economies and 516 jobs.

Using multipliers from Margules Groome Pöyry² to the \$153 million turnover, these multipliers indicate that in total \$482 million was created in the region's economy from

¹ Jamax Forest Solutions (2017), Survey of North Coast NSW PNF harvesting contractors.

² Margules Groome Pöyry Pty Ltd. 1995, The Economic Impact of the New South Wales Timber Industry. State Forests of New South Wales, 1996.

private property native primary processing. Of this, \$94 million was from output flow-on effects, \$148 million from value adding, and \$88 million from household income.

Using updated employment multipliers, the total employment due to private property hardwood processing is estimated at 835 people, 516 directly, 58 from production flow-on, and 260 from consumption flow on. As the multipliers used to generate our estimates of private property processing were based on 1995 data there is a need for these values to be updated. It is recommended that future research focus on industry flow-on employment, value adding and household income benefits.

Seventy-two per cent of the private property logs purchased by the larger primary processors were high quality and 21% were salvage logs. The contractors' survey found that they harvested 48% high quality and 35% salvage grade logs, with the rest pulp grade logs and firewood.

The five largest private property processors, all processing over 10,000m³, bought 58% of all private property logs.

Primary processors saw the private native timber resource as absolutely critical to their businesses.

Though some private properties supplied processors over multiple years, many processors rely on new properties coming to harvest to maintain supplies. Two-thirds of processors using private property timber source it through harvesting contractors or via forestry consultants. About a third undertake some harvesting on private property. The survey discovered that a number of processors have their own private property acting as a log supply buffer.

Most processors are approached by landowners, exploring or wishing to sell native timber from their property. Those not undertaking harvesting themselves refer them onto harvesting contractors or forestry consultants for assessment of the viability of harvesting.

When asked about future log supplies, primary processors think the log supply from private property is more likely to remain the same or increase. Log supplies from FCNSW were seen to stay the same or decrease, though many were not able to answer more than a few years

forward. Thirty-eight per cent of primary processors buying private property timber assist landowners to gain a Private Native Forest Property Vegetation Plan³ (PNF PVP), which are issued by the NSW Environment Protection Authority (EPA). PNF PVPs authorise the commercial harvesting of native timber.

Processors reported that a PNF PVP could take between two weeks to a year to approve. Six weeks was commonly reported, unless there was disagreement of mapping of old growth or rainforest by the EPA.

Where these mapped areas were disputed it was reported that it took between 6 to 12 months to resolve. Disputing rainforest or old growth mapping, despite contrary evidence in the forest, was seen as a serious impediment to maintaining business and timber flow, leading some to accept the mapping just to enact the PNF PVP sooner.

The future investment plans of primary processors were evenly split between investing, staying the same / potentially investing and those having views of not investing in the future at all. Economic forecasts of business investment in NSW⁴ are positive, including for manufacturing, with growth expected to continue. The principal reasons for not investing were log supply insecurity, change in market demand and processor owner retirement plans.

Seventy-nine per cent of primary processors thought that the government should be encouraging landholders to manage their native forests for timber production. Suggestions on what the government 'should do' included:

1. A related group of extension service, forestry advice, education and information to landowners
2. Easing the complexity of the PNF PVP process, including for smaller forest areas
3. Silvicultural treatment to improve timber growth
4. Promotion of private native forestry

³ <http://www.epa.nsw.gov.au/pnf/>

⁴ <https://www.parliament.nsw.gov.au/researchpapers/Documents/NSW%20Economic%20Update%20Summer%202017.pdf> and https://webapps.stgeorge.com.au/market-reports/economic-outlook/resources/downloads/April_2017.pdf

1. Introduction

The survey of primary processors sought to quantify private native forest production levels and estimate the value of this commercial activity for the regional economy and jobs. There is currently no data on this sector⁵, the last socio-economic study that covered the North Coast of NSW was in 1995⁶. Other studies have covered part of the North Coast in 2009⁷ or part of the topic in 2002⁸.

This survey of primary processors of private property native timber is part of a larger project on private property native forests on the NSW North Coast, funded by the NSW Department of Industry.

The survey of primary processors also gathered information for a project examining the type, volumes and markets for wood residues arising from native forestry and primary processing. Information on the Private Native Forest and Residues projects is available in Appendix 2 and at <https://www.dpi.nsw.gov.au/forestry/north-coast-residues-project>.

1.1. Where the private native timber comes from

Private native hardwood timber comes from harvesting of native forests as authorised under a PNF PVP. Within the study area there are currently an estimated 2,618 PNF PVPs covering an estimated maximum of 353,896 hectares of forest⁹. The area approved by the EPA includes areas subject to regulatory exclusions, which reduces the actual area that can be harvested by a minimum of 23%^{10,11} or down to a maximum of 272,500 hectares. The final report on this

⁵ The NSW EPA does not require landowners to provide yearly returns on volumes or areas harvested. Returns are voluntary and the data is very coarse.

⁶ Margules Groome Pöyry Pty Ltd. 1995, *The Economic Impact of the New South Wales Timber Industry*. State Forests of New South Wales, 1996

⁷ Jay et al 2009. *A review of timber production, biodiversity and soil and water indicators and their applicability to northeast New South Wales* RIRDC Publication No. 09/022

⁸ Northern NSW Forestry services 2002 *The Private Native Forest and Plantation Resource*

⁹ *NSW EPA data*

¹⁰ Rain forest and old growth at least 10% according to Webster M (2010) *Independent Quality Assurance of DECCW Old Growth & Rainforest review not including riparian areas, steep slopes, rock outcrops, cultural heritage, certain soils, flora, fauna and ecological communities*

¹¹ In-house GIS assessment across all forested private properties on the North Coast of mapped exclusions, except unmapped flora, fauna and ecological communities

project will investigate exclusions and report on the net PVF PVP area available for native timber production.¹²

Within the area available, selective tree harvesting is undertaken in accordance with a harvesting plan and the Private Native Forestry Code of Practice

This survey and report does not assess the private native forest resource, PNF PVPs or local council planning restrictions. Sub-reports will address these issues.

1.2. How much private native timber is being harvested and processed

The best previous estimate of the amount of private property native timber produced on the NSW north coast comes from a survey by Jamax Forest Solutions on PNF harvesting contractors (a separate part of the PNF project). It estimates annual log production from private property at 274,950m³ per year. This is 121,000m³ per year more than found in this survey. An explanation of this variance is provided in sections 3.31.and 5.1.

Primary processors on the North Coast of NSW purchase logs from:

1. FCNSW, delivered to the processor:
 - 1.1. if allocated a 'quota' (contracted amount per year, usually until 2023)
 - 1.2. if a supply of logs not sold under the 'quota' system (often each year) has been negotiated
2. Private property:
 - 2.1. from harvesting contractors or forestry consultants, usually delivered to the processor
 - 2.2. from landowners, where processors have their own harvesting crews or hire in harvesting contractors and arrange transport to the processing facility

1.3. Where the native timber goes

Primary processors on the north coast of NSW are principally sawmills, by volume processed. The other processors using native timber are a number of round pole and pile producers, two board plants and many fencing and firewood merchants.

¹² This report will be released on the forestry pages of the NSW Department of Primary Industries website.

Sawmills sell green or kiln dried sawn timber. Green timber is often sold to other processors (secondary) to be made into pallets, dried flooring and dried decking. Green timber is also sold, often via merchants, into building markets including bridge, wharf and jetty timber as well as mining and railway end uses. Kiln dried timber is mainly sold to merchants as hardwood flooring and decking, with small amounts sold as building and furniture timbers. The native timber products are sold along the eastern seaboard of Australia, with most going to end uses in Sydney. This survey and report has not assessed markets or the products produced by primary processors.

2.Objectives

The objectives of the survey were:

- i. to quantify (in conjunction with the PNF contractors survey) the volume of hardwood logs annually processed in the North Coast region and the relative proportion that comes from private native forest and publicly owned State forests managed by FCNSW.
- ii. to estimate the contribution of private native wood processing to regional economic impact and employment
- iii. to establish how primary processors source private property timber including PNF PVP approvals.
- iv. to capture the views of primary processors of private native timber on the following topics:
 - o the importance, quality and sources of private property timber
 - o the state of the private native forest resource
 - o their business investment outlook
 - o the PNF PVP approval process
 - o the role of government in PNF

3. The survey sample, process and method

3.1. Survey sample

The survey study area is the Lower North East and Upper North East Regional Forest Agreement areas (figure 1).

The survey was designed to meet the needs of the Private Native Forest project and another project looking at forestry and processing residue production on the North Coast.

The intent of the survey was to survey the larger native wood processors on the North Coast of NSW (>3,000m³/year). Residues arising from native forestry sawmills generally are about 50% of log intake. Smaller sawmills (<3,000m³/year) generally do not produce sufficient residues nor have the residue handling or commutation systems for commercial sale.

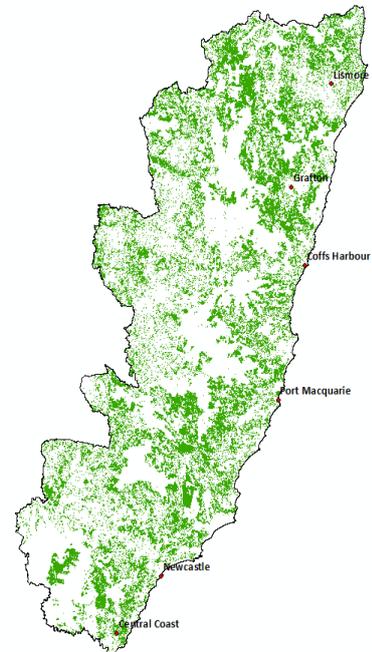


Figure 1 Survey area with Private Native Forests in green

Table 1 indicates the sources used to discover the population of primary wood processors. Principal among these sources were those supplied by FCNSW. Table 2 and 3 sets out the population by grouping of known processors including those that were excluded pre and post survey.

A nominal processing input of 3,000m³ per year of hardwood logs from both private forest and FCNSW was set as a cut-off point between smaller processors and larger processors. However, only some processor purchases of native logs for State forest (from FCNSW) was known before the survey, resulting in the survey of nine smaller processors.

Table 1 Sources of processors of native timber to determine the population

Forestry Corporation of NSW	Pers. Comm. Senior Manager, Marketing
Timber NSW	www.timbersw.com.au/our-industry
Manta	https://www.manta.com/world/Oceania/Australia/New+South+Wales/sawmills_and_planing_mills_general--E01A5/
Yellow Pages	www.yellowpages.com.au
Australian Hardwood Network	http://www.hardwood.timber.net.au/suppliers.htm - old information
Colleague working on Australian biomass for bioenergy assessment (ABBA) project	Pers. Comm. Project & GIS Officer, NSW Department of Industry; Lands and Forestry
Australian Woodworker Magazine	https://www.skillspublish.com.au/Timber%20Salvage.htm
Native wood processors	Pers. Comm. at interview

3.1.1. Exclusions to survey population

- Processors outside the study area of the Lower North East and Upper North East Regional Forest Agreement areas.
- Mobile sawmillers were excluded from the survey. This is because mobile machinery is usually unable to process more than a couple of thousand cubic metres of logs per year and would therefore fall into the <3,000m³ per year category. The residue produced is also not concentrated but dispersed on the various milling sites.
- Where contact details were missing or partial, web searches of yellow and white pages, Google and ABN¹³ were undertaken. If contact details could not be found, the businesses were excluded.

¹³ https://connectonline.asic.gov.au/RegistrySearch/faces/landing/SearchRegisters.jspx?_adf.ctrl-state=k44qq3f0z_4 and www.abncheck.com.au and www.abr.business.gov.au

- Processors who export logs, process softwoods, are based in Queensland or only undertake haulage were excluded.
- When the following triggers were met their information was checked in an ABN lookup.
 - no response from postal surveys
 - letters or postal surveys were returned
 - phone calls were not answered
 - phone was disconnected

If the ABN was listed as not active, they were excluded as 'out of business'.

Table 2 Sample population, surveyed processors and survey exclusions

Private native log processors survey – number of companies	Public and private		Total
	Estimated <3,000m ³ /year	Estimated >3,000m ³ /year	
Data collected – face to face	4	24	28
Data collected – postal or phone	5	0	5
Didn't refuse but didn't complete postal & couldn't arrange interview	3	0	3
Refused to be interviewed	4	4	8
Unable to contact by phone x 5, did not complete postal x 2	5	0	5
<i>Survey population Total</i>	<i>21</i>	<i>28</i>	<i>49</i>
Excluded - very small (<1, 000m ³ /yr) following contact	4	0	4
Excluded as a group – mobile sawmills	14	0	14
Excluded – no contact details in telephone directory, web citation & third parties did not know – could be out of business	N/A	N/A	8
Excluded - export, Qld, haulage, softwood following contact	N/A	N/A	8
Excluded – known to be out of business	N/A	N/A	9
<i>Excluded from survey total</i>	<i>18</i>	<i>0</i>	<i>43</i>

A post-survey assessment of the hardwood processors population was undertaken as shown in table 3. From data gained from FCNSW, hardwood log sales were averaged over the financial years 2014/ 15 and 2015/16. As indicated in table 3, there were 13 businesses unknown before the survey. All but one of these unknown businesses processed below 3,000m³ of publically sourced hardwood timber. The post-survey assessment presented in table 3, confirms purchase of logs from Forestry Corporation of NSW (FCNSW) in the excluded groups was below 3,000m³ and that the largest processors were interviewed or approached for interview.

Table 3 also shows that five processors purchasing no FCNSW hardwood logs and five buying less than 500m³ of FCNSW logs, were interviewed. Several of these were recommended by the interviewed primary processors.

Table 3 Post-survey assessment of hardwood processors population

FCNSW log sale group m3	Nil	<500	500-1,000	1,000-3,000	3,000-6,000	6,000-12,000	12,000-24,000	24,000-48,000	>48,000	Total
Data collected	5	5		6	2	5	8	1	1	33
Didn't refuse but didn't complete	1		1	1						3
Refused		2	1	1	2		1	1		8
Small, unable to contact by phone, did not complete postal	3	1		1						5
Excluded - export, Qld, haulage, softwood	3	2		3						8
Excluded - small (less than 3,000m ³ , usually less than 1,000m ³)		2	1	1						4
Excluded – mobile sawmill	14									14
Excluded – out of business	5	1	1	1		1				9
Excluded – small & unable to contact		6	1	1						8
Unknown prior to survey		8	2	2	1					13
Total	31	27	7	17	5	6	9	2	1	105

3.1.2. Survey population buying both private and public native forest logs

The following criteria were used to determine the survey population presented in table 2:

- Businesses that were interviewed or responded to the postal survey. These businesses accounted for 67% of the population and represented 86% of the larger processors and 43% of smaller processors (<3,000m³).
- Businesses where there was no response from more than two postal surveys and five phone calls or phone messages, were deemed un-contactable but potentially still in business as they had an ABN and so were included as part of the population.
- The eight businesses that declined to be interviewed for various reasons, principally privacy. Three of these businesses are expected to be large processors (>5,000m³ per year) of private property native timber.
- The three smaller businesses that did not refuse, but did not respond to multiple requests for interview.

3.1.3. Survey bias

There are four survey biases present in estimating the usage of private native forest logs.

1. Smaller processors were excluded.
 - 1.1. Size was assessed by the type of equipment used. Mobile sawmills were excluded as a group, however, some of these could process more than the expected maximum of 2,000m³ per year
 - 1.2. Producers of split fencing and firewood merchants were not targeted, as the survey also served the residues project. The production of lower quality and small logs from private property is not represented in the survey.
2. The discovery process relied in large part on public sources including sales by FCNSW. Those processors exclusively processing private native timber who did not advertise through the Yellow Pages or have a web presence would not have been discovered and were not surveyed. Only four of the 33 processors surveyed exclusively used private native timber, while seven used exclusively State forest timber.
3. Those processors who declined to participate (8), did not participate (3), or were not able to be contacted (5), represent 33% of the known population of larger processors. These processors could represent a large portion of private native timber usage. Three are expected to process in excess of >5,000m³ per year of private property timber.
4. There were 13 processors not known prior to the survey process. They were discovered in the analysis phase from FCNSW native log sales.

3.2. Survey process

The survey had four phases:

1. A face-to-face survey, which concentrated on businesses processing more than 3,000m³ per year.
 - a. Letters introducing the project and the survey were sent to prospective face-to-face interviewees asking for their assistance in gaining an interview (appendix 1) from January to August 2016.
 - b. Interviews for the larger processors started in February 2016, following phone arrangements and concluded in February 2017
2. A postal survey, which focused on smaller processors, included an introductory letter and project briefings (appendix 2)
 - a. 38 letters and survey forms sent out in April 2016
 - b. 32 reminder letters and survey forms sent out in May 2016
3. Follow-up interviews captured some of the smaller processors who had not responded to the postal survey via:
 - a. Phone arrangements prior to travel.
 - b. Ad-hoc drop in as travel took the interviewer past the mill location, with a preceding phone message to say that this would be done
 - c. For those not responding to phone calls, phone messages or the postal survey, drop in to see if they were operating and to arrange an interview in person, with a phone message to say that interviewer would be dropping in.
4. As a double check on the accuracy of the data, respondents were sent a summary of the data collected. Missing, unclear or incorrect information was highlighted. Only two processors responded to these checks. Where no response was received and data was missing, follow up phone calls were made. One company did not respond to requests for turnover and employee numbers.

Prior to the survey, Timber NSW wrote to members asking for their assistance and cooperation in the survey.

Data was gathered at interview either on computer during the interview or on paper and entered later.

3.3. Privacy

All collected data was considered confidential and not to be disclosed to any party other than the interviewer. The data is not to be used or presented in any way that could identify individual businesses. It is aggregated to give an overall picture of the private native timber processing industry on the North Coast of NSW. The paper interview forms will be shredded at the end of the project and the electronic data securely archived and protected.

3.4 Private native timber processors survey analysis process

3.4.1. Conversions to uniform measurements

Many processors used generic terms such as 'truckloads' and different measurement units for their inputs and outputs. The following conversion factors were used to allow aggregation and direct comparison of data for analysis.

Log inputs were all converted to cubic metres, and all residue outputs to tonnes.

Table 4 Hardwood timber and other conversion factors used

Measurement unit	Conversion factor
Log tonnes to m ³	1.2 tonnes/m ³ for green timber ¹⁴
Truck load – dependant on truck	27 tonnes for standard log truck
Per month	Calculated based on reported working days per year
Per week	Calculated based on reported working days per year
Per quarter	Calculated based on reported working days per year
Firewood tonnes	Green 1.6m ³ /tonne, dry 2m ³ /tonne ¹⁵
Wood chip ¹⁶	2.55 m ³ /tonne green
Sawdust ⁴	3 m ³ /tonne green
Fines ¹²	3 m ³ /tonne green
Planer shavings ¹²	10 m ³ /tonne dry
Hearts/ rotten	1.5 m ³ /tonne green
Diesel	\$1.20/litre
Working days per year where not stated	236

¹⁴ Pers.com, residues project weighted mean

¹⁵ www.eco-firewood.com.au/faq

¹⁶ SEFI biomass fuel study 2011

3.4.2 Data accuracy

Respondents very rarely referred to any documentation, except when asked about energy use, when reporting inputs and outputs. There were only two measures that could be used to check accuracy:

- reported log purchases from FCNSW compared to actual FCNSW sales in 2014/15 and 2015/16
- residue production as a percentage of log inputs, though this very variable. For sawmills, this has some commonality.



Figure 2 North Coast NSW residues project in field weight and volume measurements

Both these measures showed that the overall variance was + or - 6.1%. There was no relationship between the variance on log purchases to residue production. All data in the rest of the report is unweighted by any accuracy compensator.

3.4.2.1. Variance of log inputs to sales from State forests

Forestry Corporation of NSW provided data on 2014/15 and 2015/16 hardwood log sales to its customers. This allowed analysis and was the only third party data available to the survey

to check accuracy. Interviewees were asked for log inputs for the 2014/15 year, however, many quoted their current year inputs. Some interviewees referred to the allocation made to them by FCNSW or included recent spot purchases not in the sales data.

The variance is calculated from the reported purchases from FCNSW by processors, compared to FCNSW sales to the same processors. Despite some individual large variances, the mean variance is 665m³ and the total variance to logs sold is +6.1%.

3.4.2.2 Variance of residue outputs from log inputs

The other assessment of data accuracy was residue outputs from log inputs. Variance of residue outputs from log inputs is assessed on a tonne basis as residue products have very large density variation, as seen in the conversion factors in table 4. Cubic metres could not be used.

Residues outputs are naturally very variable and dependent on log quality used and the products produced. For example, logs cut for large dimension beams with few other fall-down product markets will have a low conversion of log to product and so a high percentage of residue. Conversely a company processing logs into poles, piles or firewood will produce minimal residues. A sawmill producing kiln dried floor boards from lower quality logs will have a high residue production per cubic metre of log input compared to a green mill producing a wide variety of small dimension products such as fencing and battens and selling off-cuts as firewood. If measured on a tonne basis, kiln dried products also lose up to half their weight as the product is dried.

Smaller processors generally do not produce sufficient residues nor have the residue handling or commutation systems for commercial sale, other than to very local markets. Residues are still burnt on site to waste by a number of processors. Though the survey asked about residue disposal, volume estimates for disposal were essentially guesswork.

A weighted mean was used as the basis for reporting variance to allow for poor quality reporting from smaller sawmills and account for the large scale differences between processors. The weighted mean residue production per tonne of log input is 49%. Processors that reported no or minimal residue production were removed from the assessment together with one erroneous report. The assessment excluded firewood and poles but included bought-in products.

This assessment of data accuracy gave a mean variance of -6.1% across all the businesses. However, as Figure 3 shows, there were large individual variances.

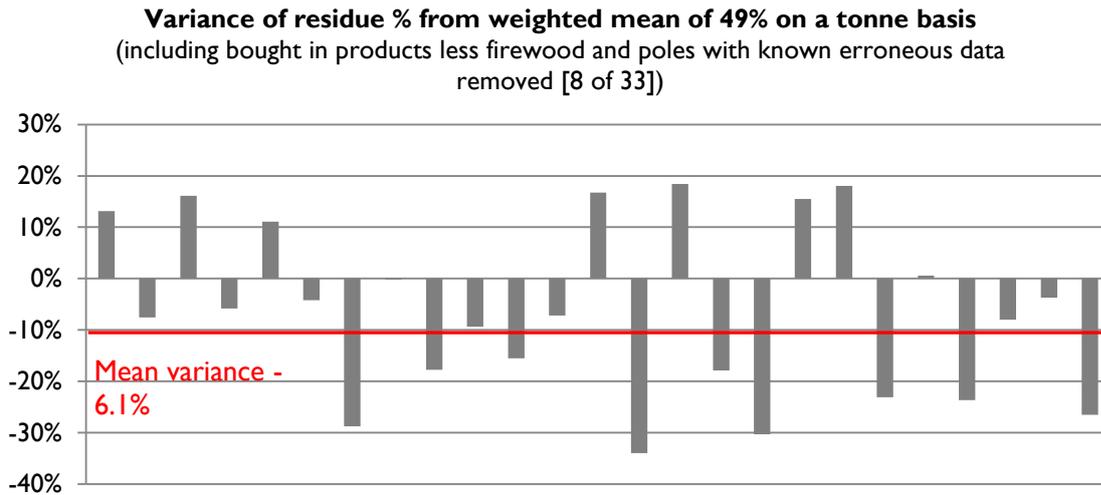


Figure 3 Variance in reported residue production to the weighted mean

4. Results

4.1. Private property log purchases

Of the 33 native wood processors surveyed, seven processed logs originating from State forests through the FCNSW and four processed logs from private sources. Of all those surveyed, 25%¹⁷ of the weighted mean (figure 4) of log purchases came from private property sources. Table 7 shows that when only those buying private property logs are assessed, the mean rises to 40%.

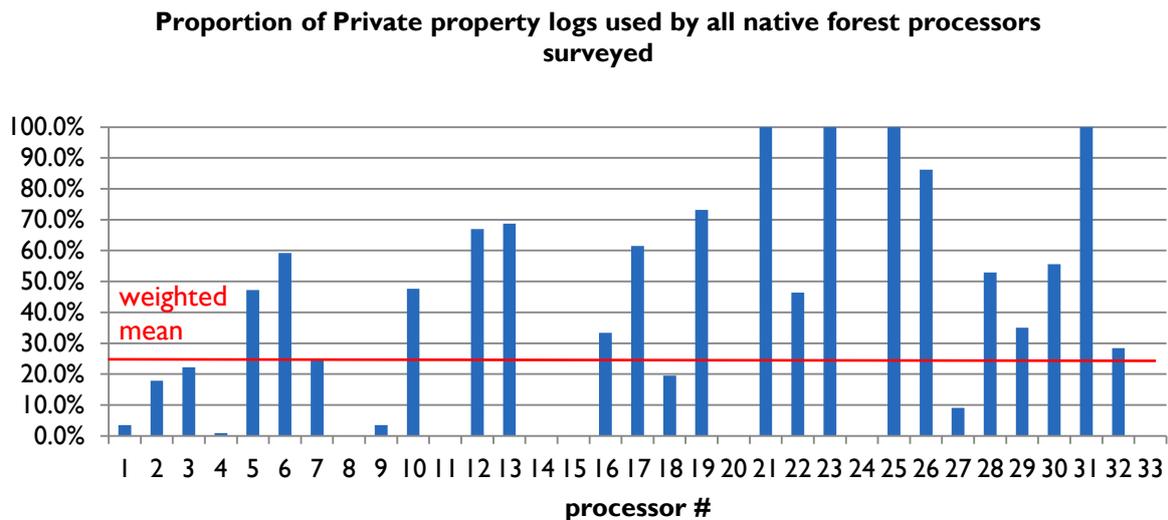


Figure 4 Proportion of private property logs used by all native forest processors surveyed

Of the 26 processors using private property logs, 12 processors had more than 50% of their intake from private property.

A total of 132,025m³ per year of logs were reported by respondents to have been bought, an average of 4,890m³ per year per processor.

¹⁷ Note - figure 4 shows a mean weighted average private property log purchases of 25% whereas table 6 shows 40%. The difference is due to figure 4 using data from all interviewees, including processors who only bought logs from FCNSW, whereas table 6 and figure 6 excludes those only buying logs from FCNSW.

Table 5 Surveyed private property log purchases on the NSW north coast

Log grade group - private Property	Purchases (m ³) reported by respondents	%	Mean m ³	No. of respondents*
High quality private property	94,460	72%	4,294	22
Poles private property	9,848	7.5%	4,924	2
Salvage private property	27,217	21%	1,814	15
Other private property	500	0.4%	500	1
Private property total	132,025	100%	4,890	26

*Number of respondents does not tally as respondents may purchase more than one grade of log

The survey captured 83.7% of FCNSW sales of hardwood logs as in table 6. Interestingly, respondents reported buying larger volumes of pulp and 'other' grade logs than was sold to them by FCNSW. One processor was also known to be purchasing a small amount of logs from FCNSW that likely originated from outside the study area. Survey capture of poles and piles was poor due to processors declining to be interviewed.

Table 6 Surveyed capture of FCNSW hardwood log sales on the north coast

Log grade group	Purchases (m ³) reported by respondents	Annual volume (m ³) sold by FCNSW (av. June 2014-June 2016)	Percentage surveyed
HQ FC native (large & small sawlogs, veneer grade and girders)	213,486	201,200	106%
Poles FC (poles and piles)	5,620	27,403	21%
Salvage grade FC	126,338	201,204	63%
Pulp FC	22,708	14,634	155%
Other (miscellaneous, unknown & firewood) FC	15,028	13,223	114%
Total	383,181	457,665	83.7%

Forestry Corporation of NSW provided data on hardwood sales that included logs from plantations (11%) and private native forest (1.2% - 5,374m³ per year).

4.1.1. Estimating the production of private native forests on the NSW north coast

Estimates of private property log production on the north coast of NSW is based on FCNSW logs sale capture – multiplying the survey reported total private native forest logs purchased, by the proportion of FCNSW not captured. This suggests that 153,512m³ per year of private property logs¹⁸ are sold each year to larger processors on the NSW north coast.

The survey was biased toward larger known processors and excluded small processors, firewood and fencing processors. Eight processors declined to be interviewed.

The survey of private property contractors¹⁹ estimated a production of 274,950m³ of logs per year, some 121,000m³ per year more than found in this survey. The next section also highlights potential sources of difference.

4.1.2. Log grades sold from private native forests on the NSW north coast

Table 5 shows that 72% of logs sold from private property were high quality logs, compared to 51% of FCNSW logs bought by surveyed processors (table 6). The low percentage purchase of salvage logs from private property could be due to:

1. The bias of the survey. Excluding firewood and fencing and very small processors may account for a lower capture of salvage logs sold by FCNSW and bought from private property.
2. Salvage logs may not be harvested in private forests to the same extent as in public forests. FCNSW sells as much salvage logs as high quality logs. As FCNSW has wood supply agreements for salvage logs, this ensures a known market of willing buyers. Private property sales do not have the same marketing benefit. The survey of private property harvesting contractors provides more information and clarification.
3. Private native forests could be harvested mainly for high quality logs. Jay et al (2009)²⁰ indicates 'high grading' of private native forests in north east NSW due to lack of markets for defective (salvage) and small diameter logs.

The low number of respondents buying private property poles and 'other' grades in table 5 reflects the number of respondents who declined to be interviewed and not including firewood processors in the survey.

¹⁸ 132,025 m³/yr x 116.3% = 153,545m³/yr

¹⁹ Jamax Forest Solutions (2017) Survey of North Coast NSW PNF harvesting contractors.

²⁰ Sustainable private native forestry: a review of timber production, biodiversity and soil and water indicators, and their applicability to northeast NSW, Alex Jay.I. [et al.] RIRDC publication ; no. 09/022

4.1.3. Number of private properties reported harvested and average volume produced by these properties per year

Fifteen respondents estimated the number of private properties from which they bought logs, representing 72% of the total private property log purchases surveyed. This averaged 702m³ per year per property harvested from an average of eight properties each.

There is a huge variation in property size and commercial log volumes per hectare. This is dependent on when the property was last harvested, the tree species and timber qualities as well as the biophysical or growing conditions of the forest. This variation is reflected in the minimum number of properties harvested at two and the maximum of 30. The variation is also evident in figure 5, the minimum quantity of logs bought at 53m³ per year per property and the maximum bought at 2,131m³ per year per property.

Private property harvest volumes per year per property

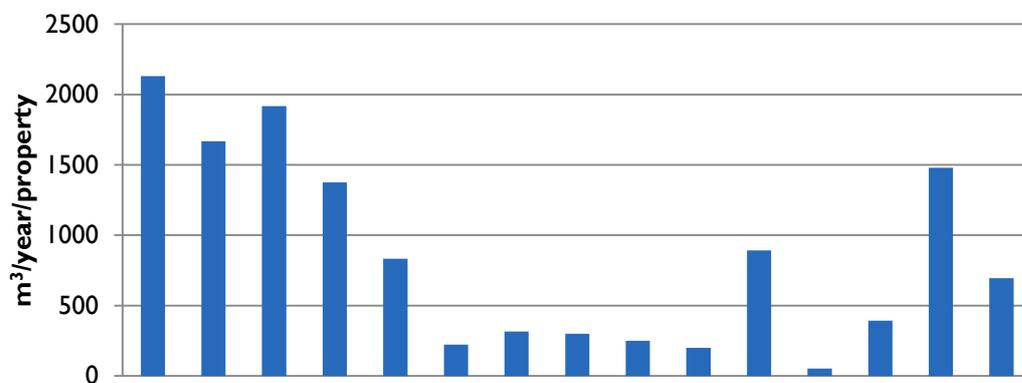


Figure 5 Primary processor reported private property harvest volumes

As might be expected, the processors who represented the lowest harvest rates per property were the smaller private property processors, whilst the largest private property processors were those who had the highest harvest rates per property.

4.2. Processors buying private property logs

Fifty-eight per cent of all private property logs were bought by the five largest private property processors, all processing over 10,000m³ of logs and representing 55% of their total log inputs (table 7).

For the 12 processors buying 1,000 to 5,000m³ of private property logs, these logs represent 64% (table 7) of their total log input. The smallest mills interviewed (<1,000m³) had the lowest proportion of private property logs in their total log purchases. This could be as a result of survey bias to purchasers of logs from FCNSW.

This survey of primary processors, when compared to the private property harvesting contractors' survey, captured 80% of high quality logs.

Table 7 Private property log purchase by log quality - primary data

Private property purchase group	High Quality m ³	Poles ^a m ³	Salvage & other m ³	Total m ³	% of total PP logs processed	Average % of PP logs bought of total log purchases
<1,000	1,027		1,150	2,177	2%	22%
1,000 - 5,000	20,126	3,000	10,067	33,192	25%	64%
5,000 - 10,000	12,000		8,500	20,500	16%	49%
>10,000	61,308	6,848	8,000	76,156	58%	55%
Total	94,460	9,848	27,217	131,525 ^b	100%	40% ²¹
%	72%	7%	21%	100%		

^a known to be an under-representation due to refusals to be interviewed

^b 'Other' PP logs omitted

% of Private property logs consumed by processor log intake group

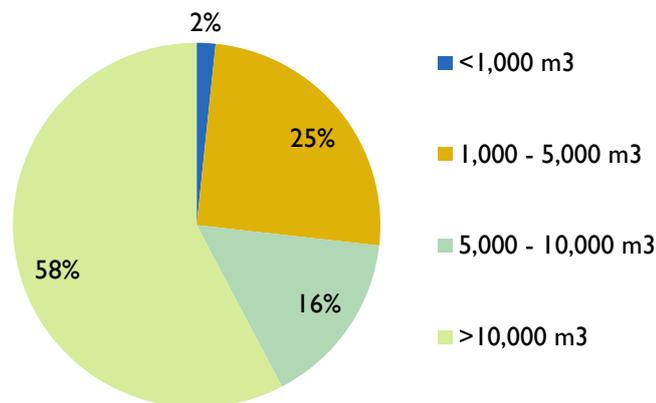


Figure 6 Percentage of total private property logs bought by grouped private property processors

Table 8 shows that 50% (7) of the largest processors (>10,000m³ total log) buy more than 5,000m³ of private property logs each, and 21% (3) don't buy any private logs. As table 7

²¹ Note - figure 3 showed a mean weighted average private property log purchases of 25% whereas table 7 shows 40%. The difference is due to figure 3 using data from all interviewees, including processors who only bought logs from FCNSW, whereas table 7 and figure 5 excludes those only buying logs from FCNSW.

showed the five processors buying over 10,000m³ represent 58% of the processor market for private property logs.

Table 8 Number of processors buying private property logs against their total log purchases

Private property log purchase group	Total log purchase group				Total PP
	<1,000	1,000 - 5,000	5,000 - 10,000	>10,000	
Nil		3	1	3	7
<1,000	1	3	1	1	6
1,000 - 5,000		6	3	3	12
5,000 - 10,000			1	2	3
>10,000				5	5
Total All log	1	12	6	14	33

Green sawmills, those producing undried solid timber products, were the largest survey group with 20 respondents (figure 6), buying 43% of all the private property logs sold. They bought 40% of the high quality logs and 66% of salvage logs supplied from private property on the north coast of NSW. The majority of green mills bought between 1,000-5,000 m³ of private property logs each.

Dry sawmills, producing kiln-dried floorboards, was the next largest buyer of private property logs taking 37% of high quality private property logs.

Table 9 Private property log quality group by purchasing processor type

Processor type	Dry sawmill	Green and dry sawmill	Green sawmill	Other ²²	Sawmill & other	Total m ³
HQ PP m ³	34,500	6,700	37,952	-	15,308	94,460
Poles PP m ³	-	-	-	-	9,848	9,848
Salvage PP m ³	-	900	17,917	8,400	-	27,217
Other' PP m ³	-	-	500	-	-	500
Total m³	34,501	7,604	56,395	8,404	25,161	132,065

Processor type and their private property log purchase group (n = 33)

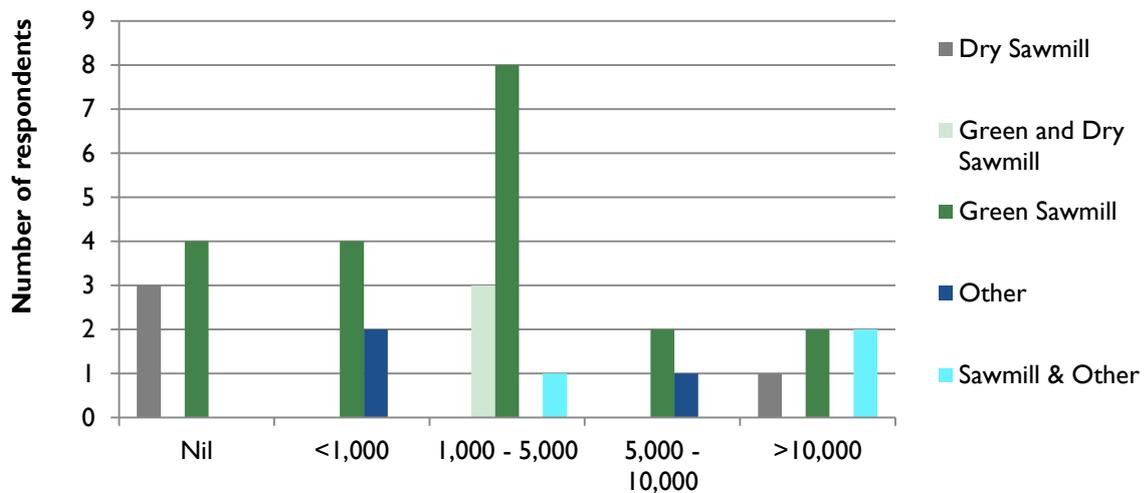


Figure 7 Processor types and their purchase of private property logs

²² 'Other' refers to native timber board manufacturers, as well as processors supplying electricity and telephone poles and wharf and building piles

4.2.1. Products

Some processors were not able to give accurate volumes or value of products sold, therefore only a list of products produced is available:

- Board products
- Big end section timbers and bridge timbers
- Cross arms for electricity poles
- Decking
- Electricity and telecommunication poles
- Fencing materials
- Flooring blanks for secondary processing
- Garden pegs
- Kiln dried flooring
- Kiln dried timber for building and furniture
- Mining timbers
- Pallet timber
- Parquetry
- Railway turn outs
- Sawn timber for building
- Sleepers
- Transoms
- Wharf and jetty materials

The largest products by end value are kiln-dried floorboards, poles and board products.

4.3. Socio-economics of north coast native forest primary processors

4.3.1. Turnover in regional primary processors

Turnover is generally a well understood term in Australian business as it is used in calculating the GST, as required by the Australian Taxation Office²³, for all but very small businesses. Turnover consists of all money that comes into a business through charging for products, services or labour, before any deductions. It is the revenue of the business.

²³ <http://law.ato.gov.au/atolaw/view.htm?DocID=GST/GSTR20017/NAT/ATO/00001>

Table 10 NSW north coast native forest primary processing turnover and jobs, all log sources

Survey results	Collected data	Number respondents	Conversion factor	Conversion factor value	Estimated for region (@ 83.7% capture from FCNSW volume)
Turnover (\$/year)*	\$ 295,444,780	30	\$ turnover per m ³ log	\$ 573	\$ 343,527,757
Employees FTE*	1,104	28	FTE per 1,000 m ³ log	2.14	1,284
FCNSW log volume (m ³)	383,181	29	% of FCNSW log of all processed	74.4%	457,665 [#]
Private property log volume (m ³)	132,025	26	% of PP log of all processed	25.6%	153,512

* includes estimate for a large processor who did not provide information, based on the rest of the industry

[#] actual volume sold

The surveyed businesses turned over more than \$295 million dollars each year, equating to a turnover of \$573/m³ of log processed. With the survey capturing 83.7% all the logs sold by FCNSW, it can be estimated that the hardwood primary processing sector on the north coast of NSW turns over a minimum of \$343 million per year.

Table 11 shows that private property native timber created a minimum turnover of \$85 million per year. This was calculated from each processor's turnover and purchases of private property logs. Each cubic metre of private property log processed created \$556/m³ of turnover to regional businesses.

Table 11 Private native forest turnover

PP log volume (m ³) purchased*	153,512	Conversion factor	Conversion factor value	Conversion factor	Conversion factor value
Processor turnover from private property logs	\$ 85,349,174	\$ turnover per m ³ log	\$ 556	\$ turnover per FTE	\$ 296,114
Processor employees FTE from private property logs	288	FTE per 1,000 m ³ log	1.88	FTE per \$1,000,000 turnover	3.4

* Volume of private property native log volume calculated from survey results modified by capture of 83.7% of logs sales by FCNSW

Private property logs created slightly lower turnover per cubic metre (\$556/m³) than the combined private and FCNSW logs per cubic metre (\$573/m³). This may be because the processors buying private property logs are less likely to value add and more likely to be green timber processors. Green timber processors had an average turnover of \$1.0 million per year from private property logs, against an average turnover of all private property log processors²⁴ of \$2.8 million per year.

4.3.2. Jobs in primary processing

Table 10 showed that the native timber primary processing sector on the NSW north coast employs at least 1,284 people. The share derived from private property in table 11 is 288 people. This was calculated from each processor's reported employee full time equivalents and relative purchase of private property logs.

Table 11 also shows that for each 1,000m³ of private property logs processed, 1.88 people are employed. It also shows that each employee equates to \$296,114 of regional business turnover.

Private property logs create slightly lower jobs per 1,000 cubic metres (1.88/1,000m³) than the combined private and FCNSW logs per cubic metre (2.14/1,000m³). This may be because the processors buying private property logs are less likely to value add and more likely to be green timber processors. Green timber processors had an average of 4.2 employees deriving from private property logs, against an average of 9.5 employees for all private property log processors.

4.4. Primary wood processors views on the future and private property native timber

4.4.1. Private property log sourcing

Of those buying private property logs, 65% of primary processors (19) bought from multiple private property harvesting contractors or forestry consultants. 35% (7) undertook harvesting themselves on private property or bought from contractors and harvested too.

²⁴ Tables are not shown for this information due to low respondent numbers in some groups, potentially leading to privacy breaches.

Though not asked directly in the survey, it was discovered that a number of processors have their own private property²⁵ acting as a log supply buffer. A couple are actively harvesting their properties, with the rest keeping them as a reserve.

Most processors are approached by landowners wishing to sell native timber from their property. Most processors refer them onto harvesting contractors or forestry consultants. Some processors appraise the landowner's property for potential products before either referring on to harvesting contractors, or the 35% organising harvesting themselves.

Many processors made comments such as 'most properties are too small to make it worthwhile' (to bring in the harvesting equipment, organise the PNF PVP and haul out the logs) or 'some landowners think they are sitting on a pot of gold but there is a lot of rubbish'. Only a handful of primary processors actively search for private properties with logs. (Note: A separately reported survey of PNF harvesting contractors provides much greater information on the process of harvesting private property.)

Of those survey respondents processing private property native timber, 38% gain or assist landowners to gain a PNF PVP²⁶.

4.4.2. Future of log supplies from private property and FCNSW

Survey respondents were asked what they thought the future supply of native timber would look like. Figure 8 summarises these views, with more views provided in boxes 1, 2 and 3.

Generally a decrease in log volume was seen, particularly from FCNSW, where the log supply 'quotas' or agreements cease after 2023 for all processors except 2. Processors' comments in boxes 1, 2 and 3 speak to the lack of control they have on their principal input to their business.

This lack of control is reflected in a general unwillingness to invest in equipment or processing techniques for the changing log types and qualities being harvested. Chief among the cited lack of control was political or policy influences on log supply.

²⁵ with a Private Native Forest Property Vegetation Plan (PNF PVP) approved by the EPA in place

²⁶ <http://www.epa.nsw.gov.au/pnf/>

Views of primary processors on future log supplies (n PP = 27, n FCNSW = 29)

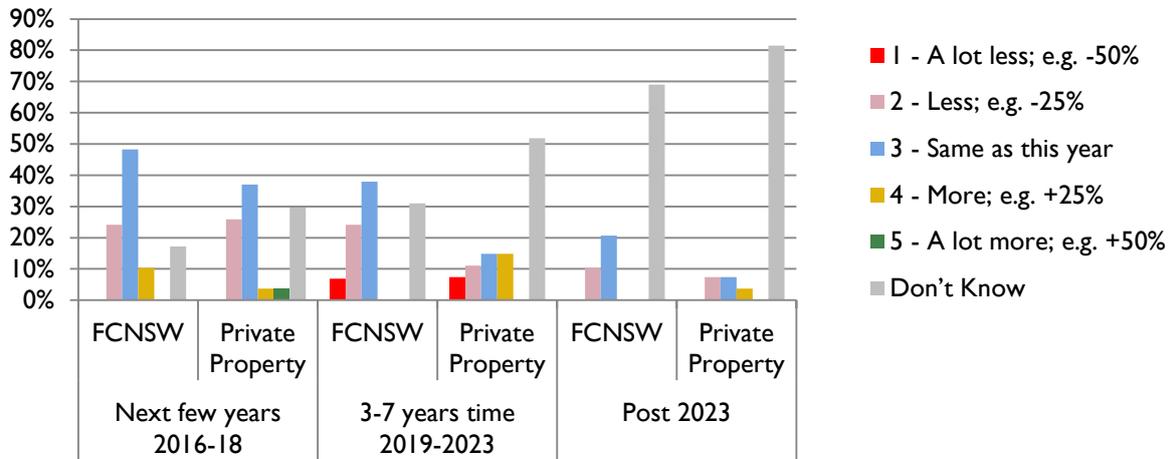


Figure 8 Views of primary processors on future log supplies

Eighty-three per cent of processors were able to give an answer to the next couple of years log supply from FCNSW, 24% overall thinking that it would decline, 48% it would stay the same and 10% that it would increase. Though only 70% respondents answered, 26% thought private property logs would decrease whereas 37% thought it would stay the same and 7% increase.

In three to seven years' time, most processors were more pessimistic of FCNSW log supplies, than from private property, though less than half respondents answered for private property. Post 2023, the proportion of 'don't knows' was too large to make a judgement.

Key to boxes 1, 2 and 3:

FC = FCNSW

PP – Private Property

HQ = High quality

LQ = Low quality

Box 1 Selected comments by respondents about the next few years' log supplies

Next few years 2016-18 – comments edited to exclude information that could be seen as identifying or private

SF (FCNSW) sustainable into the future - logs getting smaller, dry forests not as sustainable, not as productive and lots of residue left

Decreased from FC – can't anticipate or see forward, FC hasn't given any indication

FC been over logging for a long time. (FC held a) seminar, no growth plan in place, more access to bush, what percent of bush logged per year.

PP hard to get what (we) want off - blocks few and far between, lots of competition, lots don't want to log their bush anymore, tax issues, newcomers,

FC - hard to say - at moment don't know, say they are sustainable into future

PP diminishing - harder to get in to properties - millers trying to get PP, cycle is 1 in a lifetime, fewer people in the industry

Use smaller grade lower grade log - suit future log supply

Same - species mix changing 23% now highland species - stinging silver top, new England - messmate - species not regular amounts of same species

Hope it will be stable - trust species mix will stay same - spotted and BBT wanted by market, iron bark and brush box 2% of forest output. Market seems to want blonds and browns. PP - on selling - other people in market have different species requirements - appearance for - industrial and structural markets don't mind non-appearance market. Turned from a resource driven business to a market driven and their competencies - where they add value. Not seeing a change but competition in logs is high - housing market strong so more demand.

Quota continue; won't be taking C&D unless changes at FC - species. PP - not progress as we planned - species specific, difficult to just get these - - working through two consultants

Increased request with FC 110% supply for up to 4 years. Potentially back into private - likely to be purchased delivered

SF NSW- logs getting smaller & lower quality

PP - continue on

PP HQ a lot less, PP low quality same

PP same

Species demanded royals and BBT decline - class 2 have to replace - change demand in market place

FC less - consistency of logs poor, delivery patchy

Box 2 Selected comments from respondents about their 2019-2023 log supplies

Three to seven years' time 2019-2023– comments edited to exclude information that could be seen as identifying or private

Have to change whole system - smaller mills with lower grade logs of dryer species have problems. XXX dominates BBT market

Don't know - meeting four months ago with FC - uproar allocation had been increased and species

FC should be the same - gut feeling will be less - XXX tied to the best

Dependant on demand - FC parcel hope to increase

Fine tune supply a bit to meet new technology

Feel if demand for logs go down - because of products they supply - bridge sections and railways

Contract 2023 (log supply agreement with FCNSW) - contract halves - don't know when going to negotiate

Major players going to have problems with deal with XXX

Expecting market to stay hot next three years not expecting dip after; only certain species

SF - push bottom end of specification

PP - taper volume and quality taper as been hammered

plantation - not much about, HWD not good quality often grown too quick breaks on saw

PP HQ a lot less, PP low quality same

PP HQ same, LQ a lot more

PP HQ higher

FC lower Quality same

Box 3 Selected comments from respondents about post 2023 log supplies

Post 2023– comments edited to exclude information that could be seen as identifying or private

After 2023 - if believe FC nothing will change

Long-term decrease from FC, PP increase

FC - pole allocation difficult -

PP-don't know

Will know then - could be tender rather than allocation

Contract with FC to 2026

Hopefully continue on same level - own property - buffer if supplies go poor

Still feel confident - downsized processing log in low demand

Would like to be renewed - great backup know the logs are coming in

Don't invest - waiting for decision on 2023

Hope FC wood supply agreement would go on - planting own planation's, supplementary resource not replacement, provides some comfort. PP hard to get a read on post 2023, - government policy how much stays available - or excluded - biodiversity and off-sets. - only exclusion of access is conservation agreements bio banking and carbon off sets. Up side is large underperforming forest that with silvicultural intervention (*would benefit*). Laws don't allow much silvicultural intervention - high graded - best to 'reset'. have done some reset & planted trees. Old soil con DPI type (*in EPA are*) fine but fresh people not.

Retired. Board market bad thing for industry - smaller logs so can't get building and other products - FC move to this set up

Only need another Bob Carr, don't agree with some of FC practices

Crystal ball

Same contract with FC to 2028

Very concerned - cliff coming needs addressing soon

Too many people chasing logs and in industry

Retired

4.4.3. Future investment in primary processing

Twenty-nine of 33 businesses responded to the question about their business future. The question was sequenced soon after a bank of questions about residues from processing, hence residues or energy is mentioned a number of times in box 4.

Generally, there was a three-way split between (1) investing, (2) staying the same or potentially investing, and (3) not investing in the future. The main reasons for not investing were log supply uncertainty, markets (including for residues), and retirement plans. The main reasons for investing do not follow a pattern.

Processors grouped into 'green and dry sawmills' and 'sawmill & other' were much more likely to invest (figure 9). 'Dry sawmills' were least likely to invest, while 'green sawmills' were relatively evenly spread on investment decisions.

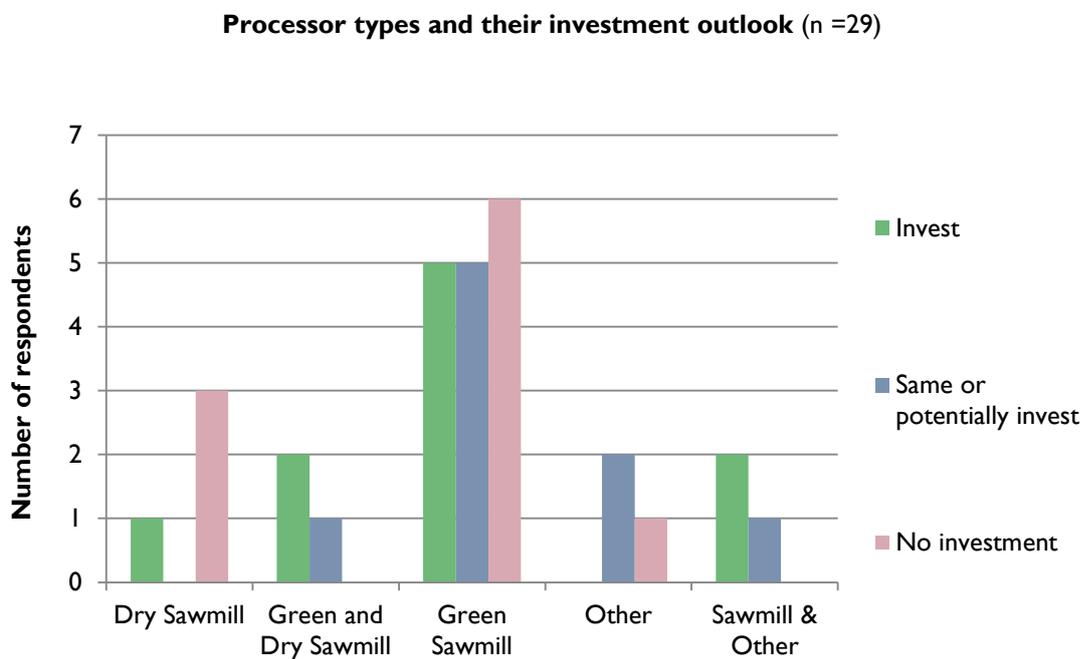


Figure 9 Processor types and their investment outlook

The largest processor group was much more likely to invest in the future (43%) than the smaller total log purchase groups, although at least 25% were also going to invest in the future.

Forty per cent of the 1,000-5,000m³ and 50% of the 5,000-10,000m³ groups had no investment plans.



Figure 10 Processor total log purchase groups and their investment outlook

Looking at those buying private property logs by their purchase grouping (figure 11), no obvious pattern emerges as to their investment views, with the same numbers investing staying the same or not investing as for total log consumption groups, though the distribution in purchase grouping is different.

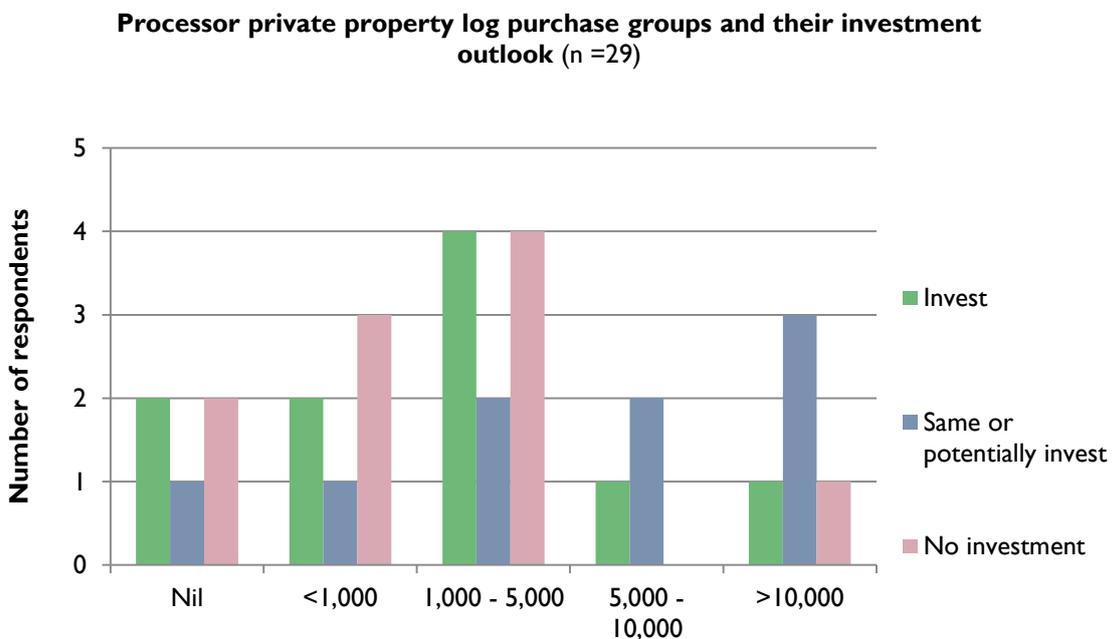


Figure 11 Processor private property log purchase groups and their investment outlook

Box 4 Selected comments from respondents about the future of their businesses including any investment

Future of business including likely investment – comments edited to exclude information that could be seen as identifying or private

Biochar at the mill, still thinking. Setting up a biomass hub, including trials with farmers of biomass mixed with fertilizer.

Roughly remain the same, maybe twin edger and big docking line

Have had to install a chipper, new electrical wiring, also one new bench. Loaders are new.

Just put in new bench. May consider energy (*from residues*) if not too expensive

Pumped \$ into mill last year - from eight blokes to six

Plans on dried products with joinery side, meeting demand as it comes. If costs involved, I weigh it up always looking at opportunities. Every 10 years I have made an investment.

If power generation worked (*it would be great. Otherwise,*) we would need to put in briquette plant

Residue - no immediate plans - if energy price went up a lot maybe

No more, would gear up capacity if (*there was*) market demand. Residue production matches increased product and log through put

Stay the same - may retire

No - uncertain future supply

Security of supply in 2023, seven-year count down, not many things can purchase. Until issue of RFA is resolved won't be (*investing*). May do in wholesaling or plantations.

Third time bought it (*a sawmill*), to refurbish. Log supply not issue, could buy more out of SF if wanted to. Location and (*mill*) size (*mean I*) could scale back to 5 blokes, (*with the*) profit margin staying the same. Double production 15 years ago, but profit margin gone down due to costs

Reducing salvage logs and increasing PP HQ, no more investments

Currently in the midst of \$11 million capex on NC - going strong – (*as the company has*) certainty of wood supply

Investments - otherwise good dependant on log supply - plenty of work

Moving mill to (*buying a*) docker for firewood

Keep as is

Install second bench and increase log intake by about 1500m³

Power factor correction units (*for mains electricity supply to reduce peak costs and network charges*)
Refurbishment (*of mill*)

Could sell three times what we cut

Out of the way from Grafton (*log purchasing*) pressure

New automatic system (*for handling sawn material*), reduced staff and increased production

See government interfering, so no (*investment*)

No - not worth it

Potentially a chipper

Unstable log supply, (so) won't invest
Need to value add in Australia, not export logs

Had two mills, closed one down, (as) too many headaches and difficulty in managing (the second mill)

Winding down

No expansion, (heading for) retirement

Maybe if opportunities arise

4.4.4. Assisting or gaining a PNF PVP for landowners

Primary processors were asked whether they assisted or gained NSW EPA issued PNF PVPs on behalf of landowners.

Primary processors assisting or gaining a NSW PNF PVP (n = 29)

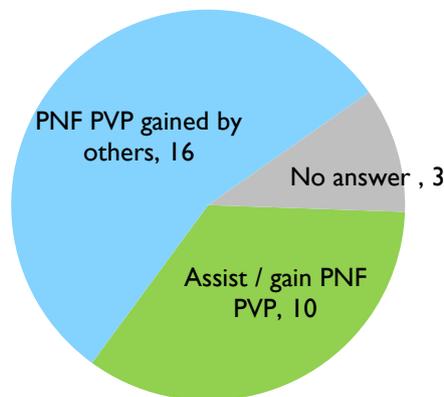


Figure 12 Primary processors assisting or gaining a NSW PNF PVPs

The dry sawmills were most likely to assist or have gained a PNF PVP (table 12).

Table 12 Processor types and their assistance in gaining a PNF PVP

Processor type	Assist / gain PNF PVP	PNF PVP gained by others	No answer	N/A	Total
Dry sawmill	2	1		1	4
Green and dry sawmill	2	1			3
Green sawmill	5	10	2	3	20
Other		2	1		3
Sawmill & other	1	2			3
Total	10	16	3	4	33

Table 13 Processor total log purchase groups and their assistance in gaining a PNF PVP

Total log purchase Group	Assist / gain PNF PVP	PNF PVP gained by others	No answer	N/A	Total
<1,000	1				1
1,000 - 5,000	1	8		3	12
5,000 - 10,000	3	2	1		6
>10,000	5	6	2	1	14
Total	10	16	3	4	33

Larger processors were more likely to have assisted or gained a PNF PVP for landowners (tables 13 & 14).

Table 14 Processor private property log purchase groups and their assistance in gaining a PNF PVP

Private property log purchase Group	Assist / gain PNF PVP	PNF PVP gained by others	No answer	N/A	Total
Nil	1	2		4	7
<1,000	1	3	2		6
1,000 - 5,000	4	8			12
5,000 - 10,000	1	1	1		3
>10,000	3	2			5
Total	10	16	3	4	33

The 10 processors who assist landholders to gain or themselves gain PNF PVPs, reported that a PNF PVP can take between two weeks to a year to approve. Six weeks was commonly reported, unless there was disagreement with the EPA in relation to the mapping of old

growth or rainforest. Where these mapped areas were disputed it was reported that it generally took between 6 and 12 months to resolve.

The maps of old growth areas²⁷ were reported to contain many inaccuracies, with respondents reporting areas mapped as old growth often having evidence of several past harvesting events.

These last two aspects are explored in more depth in the separately reported private property harvesting contractors' survey, which will be made available of the NSW Department of Primary Industries website.

4.4.5. Importance of private property logs to surveyed processors

Of the 22 processors answering "How important is the private property resource to your business?", 18 responded it was critical, one that it was very important, one that it was important and two that it was somewhat important.

When asked "Are PP logs more or less important than your Crown log allocation?", of the 14 respondents taking both private property and FCNSW logs and responding to the question, 43% thought they were more important, 36% of the same importance and 21% less important.

Importance of private property logs to processors (n = 22)

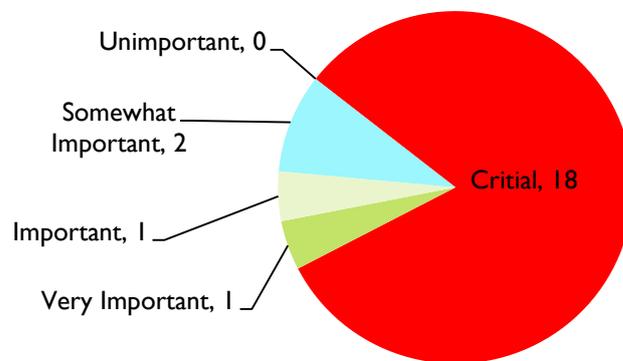


Figure 13 Importance of private property logs to processors

²⁷ Webster M (2010) Independent Quality Assurance of DECCW Old Growth & Rainforest review

4.4.6. Landowners long-term supply of private property logs to surveyed processors

Primary processors were asked, "Of the business supply relationships you have with PP landholders what proportion would be long-term (repeat) suppliers (as opposed to one-off arrangements)". Of the 13 that answered, some had long-term relationships with landowners, but many were one-off harvest events.

Table 15 Interpretation of long-term supply relationships between landowners and primary processors

Most repeat	Some repeat	Usually one-off	Don't buy PP / only from contractors	Total
5	4	4	20	33

4.4.7. Quality of private property logs compared to logs from FCNSW

Of the 20 processors responding taking both FCNSW logs and private property logs, seven thought the private property logs were better, eight thought they were the same and five believed they were of poorer quality.

Harvesting contractors and consultants tend to use the same grading as FCNSW and so it would be expected that the quality would be similar. Comments made by respondents included some mentioning the greater availability of preferred species, as this is a free market compared to the FCNSW quota system where species are often part of the contract specification. Other comments mentioned the large volumes of salvage and lower quality logs from private property.

Quality of Private property logs compared to FCNSW (n = 20)

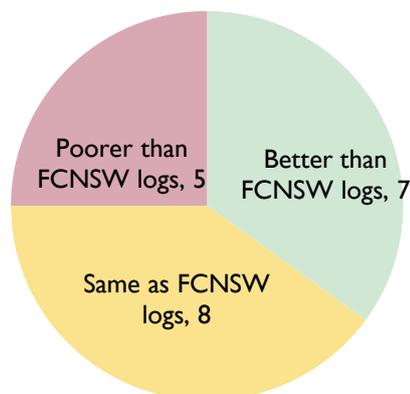


Figure 14 Quality of private property logs compared to FCNSW logs

4.4.8. Views of changes in private property logs in the past 10 years

21 respondents answered “Over the past 10 years have you noticed any changes in the availability, quality and or size of the logs that you obtain from private property (e.g. less or more available, better or worse, larger or smaller)?”

Six could be said to think they have stayed the same and 10 that they have declined in one or more aspect. Five gave responses that did not actively address change.

Box 5 Changes in private property logs in the past 10 years

Over the past 10 years have you noticed any changes in the availability, quality and or size of the logs that you obtain from private property (e.g. less or more available, better or worse, larger or smaller)?

Similar to SF - some of the properties been logged hard in past - been stuffed by previous harvest - BA prescriptions not helping make forests better - need to knock more down

less available - not many big properties

PP logs are similar over the time

same

not to us because buying to specification

same - grade

No

highly variable generally,

got bit lower quality,

up and down

better - don't have to go out to look for PP timber & FC mill door sales suits

More available but lower quality

size and quality reducing

decrease in all and fairly considerable

bigger places cut out

quality the same

size a little smaller

size dropped a bit , quality not much

smaller and more faults . Not enough rubbish removed when harvesting high value logs

if logged before, then often only Z & T logs

last six years the same

yes - but don't cut small trees - got to let grow

obtaining different species of logs is hard but quality of logs the same

4.4.9. Primary processors views on government encouragement of landowners to manage their forests for timber production.

To the question "Do you think that the government should be encouraging landholders to manage their forests for timber production?", 79% (26) of primary processors said yes, 9% (3) said no, 6% (2) were unsure and 6% (2) did not give an answer.

Processors view on government encouraging landowners to manage for timber production (n = 33)

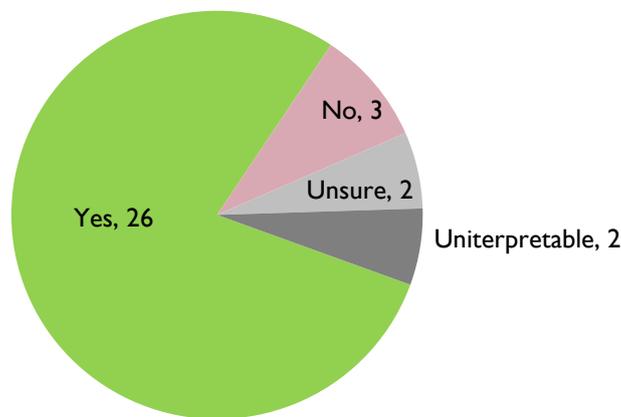


Figure 15 Processors view on government encouraging landowners to manage for timber production

When asked what government could do there to encourage landowners to manage their land for timber production, four common themes emerged:

1. A related group of extension services, forestry advice, education and information to landowners
2. Easing the complexity of the PNF PVP process, including for smaller forest areas
3. Silvicultural treatment to improve timber growth
4. Promotion of private native forestry

Box 6 Processor views on potential government roles in encouraging timber production

Do you think that the government should be encouraging landholders to manage their forests for timber production? If so what things do you think they could do?

Yes

Should promote it more, explain to people why forest management is good - jobs fire , socio-economic

Yes

Fire hazard legislation to manage forests from a risk perspective then timber would result. Incentive to

manage weeds similar manage for fuel loads. Small property only a few logs doesn't justify expense - bring properties together with accredited harvester .

Yes.

Don't know.

Not sure - wrong species (*interpreted as unsure*)

Don't know - log national parks sensibly

Yes

Entice them to log their land - pvp what coming from where - doesn't effect income - tax free. Gain more access to bush.

Yes

Easier ways of regulations - the prescriptions relaxed, sometimes too hard - e.g. drainage creek so cant access timber

Absolutely

Pvp constraints are OK, bureaucracy involved in gaining them very different, paperbark - need 5% - sometimes classified as EEC's - red tape -

Yes

\$ how to go about getting pvp and made easier then - simpler streamlined process for smaller properties - 400-500 acres. .

Yes

Educate another revenue stream for farmers - economic opportunities

Yes

Relax laws for pvps - terrible injustice had asset taken off them, incentives to eradicate invasive weeds.

Yes

If landowners could do it properly - e.g. plantations on PP, companies walked away from. Unmanaged PLANTATIONS COULD HAVE BEEN GOOD SAWLOGS. Farmers are not foresters - need help to manage to do works.

Yes.

Old extension and education fine is ok as far as it goes; for it to really get traction need markets for bioproducts - hazard reduction - understory for regen; CFI planting trees first 10 years could encourage, to get silviculture in own forest - market for low quality for cost neutral .

Yes

A little bit wiser on silviculture practices - looking at logs not right on quality of logs. Growth of bbt, need to have space. Public have the belief that old trees don't die, Have to take defective ones including bent - someone in 20-30 years will benefit from silviculture undertaken on own forests.

Yes

No idea

Yes

Not sure, forest advisory service,

Yes

Better education of how forest regrows, lack of understand of how forests work - greens put out contrary message - while have forests on coast been harvested before - some beautiful stuff in places. Should go through NSW DPI forestry. EPA job to stop things - handbrake isolated pieces with good timber gov. could lean on them to sell it - encouraged to do so.

Yes

Cut red tape - council planning permission
- greens problems - koala corridor

Yes

go to buyers to show how to log properly so go back later
Educate PP owners

Yes

Encourage markets for lower quality logs

Yes

Reduce paperwork hoops. Educate landowners and enable them to remove forest pockets to improve land usage - still improving environment

Few landowners have an idea what good logs look like (*un-interpretable*)

Yes

advertising , let landowners know what they can do with forest

Yes

Some manage for other values - wrong encouragement could lead to poor outcomes. Landowners can't manage a PVP - dependant body do it? Who ? Government? Local respected operating on their level with field experience

Yes

Make sure have the timber country to do it
Remove complicated pvps and set a side on sale of property

Government suffers from sexy finger syndrome (*interpreted as no*)
at the moment you cant cut old trees but can bulldoze young trees - no good for future timber growth
old trees in grazing country will die and so nothing left.

Don't know - suppose - farmer owns land, should be able to do what he wants (*interpreted as unsure*)

Gov. no right to tell landowner what to do. (*interpreted as no*)
Logging practices needed - logging in riparian areas if fall out should be able to take them = best timber
- logging contractors gov. regulated

Yes

Natural timber not plantation (*un-interpretable*)
Someone like himself / locals who know the country talk to landowners to encourage them. Lots of people think they know

Do as they are (*interpreted as no*)
Incentive carbon farming
Money for lock up but not forever
Careful of new plantations such as bulldozed MIS - talk to people get advice on species
The more the gov. or FC (*FCNSW*) involved the less would go to smaller mills as its easier to deal with 1

or 2 big mills than dozens of smaller ones

Yes

Making landowners aware of the opportunity with their forest products

Yes

Need PNF PVP - best interest of resource, got to be used and sustainable and accessible, gov. involved to make sure its not cleared

Yes

Waste from FC terrible years ago. Farmers just want to flatten trees. Greens shouldn't make decisions - think everything is tourism - got to have raw material

5. Discussion and interpretation of results

5.1. Volume of private property timber harvested annually

The processor survey only captured the known larger businesses that agreed to be interviewed.

The exclusion of small processors and refusals to be interviewed may account for an estimated 110,050m³ per year of logs from private property (table 16), not including exports and interstate sales. This could bring the private property timber captured in the processor survey (adjusted 153,512m³ per year) and the harvest contractors' survey (274,950m³ per year) difference down to 11,388m³ per year. Firewood and fencing processors in the contractors' survey amounted to 29,443m³ per year.

The five uncaptured log-processing groups from table 3 provide the estimate of 110,050m³ per year of logs from private property not surveyed as in Table 16

Table 16 Estimation of private property timber processor volume not surveyed

Primary processor non-interviewed group from Table 3	Assumed average processing of private property m ³ /year	Total estimated private property m ³ /year
26 small processors excluded group (Excluded -mobile sawmills [14], Excluded - small and unable to contact [8], and Excluded -small [4])	1,500	39,000
Small and unable to contact, did not complete postal survey group [5]	1,500	7,500
Unknown prior to survey group [13]	1,500	19,500
Refused to be interviewed group [8] contains a number of large processors	5,000	40,000
Didn't complete [3]	1,500	4,500
Total		110,050

5.2. Jobs and regional economy

This study found that for every cubic metre of private property log bought by primary processors, \$556/m³ of turnover is generated. For every 533m³ processed, one job is created.

If the volume of private property harvesting by contractors is used, this means the private property primary processing sector on the north coast of NSW directly creates \$153 million turnover for regional economies and 516 jobs.

5.2.1. Flow-on and region wide economic impacts

Flow-on effects generated by the primary processing sector is a measure of the economic activity of businesses associated or supplying processors. The associated businesses often have a high reliance on the processing sector, even if supplying other sectors of the economy. As a supply business, the employment and economic activity generated in this business due to primary processing is considered a 'flow-on' effect.

In 1995, Margules Groome Pöyry²⁸ undertook a comprehensive economic impact study. If the multipliers they found (table 17) still hold true, then, on average, over the region for every dollar of output from the native hardwood primary processing sector, \$0.14 is also generated in other sectors of the regional economy from production effects and \$0.48 from consumption effects. The output effects derive mainly from business supplying the processing sector such as trucking companies supplying processors products to markets, fuel supplies, saw blade sharpening, mechanical repairs and so on.

The value add is the addition to region, mainly from further value adding of the timber products such as builders, furniture makers and other fabricators. Margules Groome Poyry assessed their direct contribution as adding an extra \$0.63 for every dollar output of the hardwood-processing sector, with a further \$0.08 from production flow on-effects and \$0.26 consumption flow-on effects.

The income multiplier is an assessment of the household income earned in other sectors of the economy from the wages paid in the primary processing sector. Margules Groome Poyry indicates that every dollar from the hardwood-processing sector adds another \$0.35 directly plus \$0.04 from production flow-on and \$0.19 from consumption flow on.

Table 17 Multiplier for hardwood processing summarised from 'The Economic Impact of the NSW Timber Industry 1995 Margules Groome Poyry' for the north coast of NSW²⁹

Hardwood processing Multipliers	Direct	Production flow-on	Consumption flow-on
Output	1.0000	0.1370	0.4792
Value added	0.6294	0.0757	0.2617
Income	0.3474	0.0402	0.1852

²⁸ Margules Groome Pöyry Pty Ltd. 1995, The Economic Impact of the New South Wales Timber Industry. State Forests of New South Wales, 1996

²⁹ These multipliers include the effects on forestry and harvesting contractors. When the whole sector is examined, those associated with forestry and harvesting have to be excluded to avoid double counting.

The translation of these multipliers to the \$153 million turnover estimated for primary processors from the private property contractors survey of log outputs suggests that an additional \$330 million (\$482.4-\$152.9) is created in the region's economy from private property native primary processing. Of this, \$94 million was from output flow-ons, \$148 million from value adding, and \$88 million from household income.

Table 18 Application of Margules Groome Poyry multipliers to assess the economic impact of private property log processing on the north coast of NSW

Hardwood processing	Direct (million)	Production (million)	Consumption (million)	Total (million)
Output	\$ 152.9	\$ 20.9	\$ 73.2	\$ 247
Value added	\$ 96.2	\$ 11.6	\$ 40.0	\$ 148
Income	\$ 53.1	\$ 6.1	\$ 28.3	\$ 88
Total	\$ 302.2	\$ 38.7	\$ 141.6	\$ 482

It is recommended that future research focus on generating updated estimates of the economic multipliers used in this study to in turn allow the estimated industry flow-on employment, value adding and household income benefits to be updated.

5.2.2. Flow-on and regional employment impacts

Flow-on employment effects mirror the economic effects in that the businesses supplying and using the outputs from private property hardwood primary processors employ people.

Margules Groome Poyry calculated their multipliers for employment based on the number of employees and direct output (\$) in 1995, creating a multiplier of jobs per \$1,000 output. As there have been significant changes in the multipliers basis since the report, the data on job numbers in the appendixes was used to estimate the production flow-on and consumption flow-on ratios. The number of jobs estimated using these calculated ratios is shown in table 19.

This study found that private property logs generate a job for every 533m³ processed. If the volume discovered by the survey of private property harvesting by contractors is used, this means the private property primary processing sector on the north coast of NSW directly employs 516 people. The production flow-on and consumption flow-on is likely to create a further 344 jobs regionally.

Table 19 Ratios for hardwood processing calculated from data in 'The Economic Impact of the NSW Timber Industry 1995 Margules Groome Poyry' for the north coast of NSW³⁰

Hardwood processing of private native forest logs	Direct	Production flow-on	Consumption flow-on	Total
Employment calculated ratios	1	0.1130	0.5039	1.6170
Employment numbers	516	58	260	835

5.3. Industry views

5.3.1. Processors' perspective on their purchases of private property native timber

Primary processors saw the private native timber resource as critical to their businesses.

Although some private properties supplied processors over multiple years, many processors rely on new properties coming to harvest to maintain supplies. Two-thirds of processors using private property timber source it through harvesting contractors or via forestry consultants. About a third undertake some harvesting on private property themselves. The survey discovered that a number of processors have their own private property acting as a log supply buffer.

Most processors are approached by landowners wishing to sell native timber from their property. Those not undertaking harvesting themselves refer them onto harvesting contractors or forestry consultants for assessment.

When asked about future log supplies, primary processors think the log supply from private property is most likely to remain the same or increase. Log supplies from FCNSW were seen as likely to stay the same or decrease, though many were not able to answer more than a few years forward.

Of the 20 processors responding taking both FCNSW logs and private property logs, seven thought the private property logs were better, eight thought they were the same and five thought they were of poorer quality.

³⁰ These multipliers include the effects on forestry and harvesting contractors. When the whole sector is examined, those associated with forestry and harvesting have to be excluded to avoid double counting.

5.3.2. Processors' experience of PNF PVPs

Forty per cent of primary processors buying private property timber assist landowners to gain a PNF PVP. They reported that a PNF PVP can take from two weeks to a year to approve. Six weeks was commonly reported, unless there was disagreement in relation to mapping of old growth or rainforest. Where these mapped areas were disputed with the EPA it was reported that it could take from 6 to 12 months to resolve.

Disputing rainforest or old growth mapping despite contrary on-site evidence was seen as a serious impediment to maintaining business and timber flow, leading some to accept the mapping just to enact the PNF PVP sooner.

5.3.3. Primary processor investment plans

Worryingly, the future investment plans of primary processors had an even split between investing, staying the same or potentially investing, and not investing in the future at all. Economic forecasts of business investment in NSW³¹ are positive including for manufacturing, with growth expected to continue. The main reasons for not investing were log supply insecurity, market demand change, and retirement plans.

5.3.4. Views on government encouraging landowners to manage for timber production

Eighty per cent of primary processors surveyed thought that government should be actively encouraging landholders to manage their forests for timber production. Suggestions on what the government 'should do' included:

1. A related group of extension services, forestry advice, education and information to landowners
2. Easing the complexity of the PNF PVP process, including for smaller forest areas
3. Silvicultural treatment to improve timber growth
4. Promotion of private native forestry

Government extension services to private landowners are common in many parts of the world, though in Australia only Tasmania³² does so. These extension and information services are designed to empower landowners to gain income, manage their forests sustainably, encourage fair markets for timber, and provide environmentally sustainable natural resources for the wellbeing of the nation.

³¹<https://www.parliament.nsw.gov.au/researchpapers/Documents/NSW%20Economic%20Update%20Summer%202017.pdf> and https://webapps.stgeorge.com.au/market-reports/economic-outlook/resources/downloads/April_2017.pdf

³² Private Forests Tasmania <http://www.pft.tas.gov.au/home>

The PNF PVP documentation, which includes the 45-page code, seven guidelines of nine pages, a 115-page field guide, multiple endangered ecological communities field identification guidelines and 15 advisory notes, is seen as impossible for landowners to navigate without professional input.

The EPA ran training programs for PNF PVPs when they were introduced in 2007. The 2010 INCA Consulting report³³ said the TAFE approved courses and field days were well received by landowners and contractors, but that relatively small numbers were involved. There are no current training programs, which may explain why processors are asking for less complex PNF PVP documentation.

Silviculture is the practice of controlling the establishment, growth, composition, health, and quality of forests to meet diverse needs and values. A recurring theme in literature³⁴ which was re-iterated by primary processors was the issue of 'high grading'. 'High grading' is taking only the best timber trees and leaving those of poor form, with defects and consequently leaving the forests with a high stocking density. The un-thinned stands of poor quality trees prevent the growth of healthy vigorous and good quality timber trees. 'High grading' is a function of poor forestry practice and advice as well as undeveloped or absent markets for lower quality timber and thinnings. Landowners and contractors wishing to maximise income will be unlikely to invest in thinning and removal of poor quality trees.

Primary processors of native timber see it as a sustainable natural resource that promotes the ecosystem and Australia's native animals and plants, and is better than any other material used by man. The native 'forest wars'³⁵ and associated political denegation of native forestry is seen as somewhat of a mystery. The suggestion of government 'promotion of private native forestry' is a call to counter the negative views, 'fake news' and misguided hyperbole around sustainable native forestry, and promote the industry and timber products as a sustainable, ecologically beneficial and a carbon neutral material the public should use above all others.

³³ <http://www.epa.nsw.gov.au/resources/pnf/pnftrainingevaluationreport.pdf>

³⁴ V. Alex Jay & Alison Dillon (2016): Modelling the outcomes of different silvicultural approaches in the private native forests of north-eastern New South Wales, *Australian Forestry*, DOI: 10.1080/00049158.2015.1123392; Jay, VA, Nichols, JD & Vanclay, JK 2007, 'Social and ecological issues for private native forestry in north-eastern New South Wales, Australia', *Small-Scale Forestry*, vol. 6, no. 2, pp. 115-126. <http://dx.doi.org/10.1007/s11842-007-9008-0>

³⁵ <http://www.theland.com.au/story/4725577/the-forest-wars-did-they-ever-stop/> and <http://www.abc.net.au/radionational/programs/breakfast/battle-lines-drawn-in-new-round-of-the-forest-wars/8254230>

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<http://www.epa.nsw.gov.au/resources/pnf/OGRFreviewGeneral.pdf>

Appendix 1

Paper survey form and letter types mailed out to prospective respondents

Forest Science
Locked Bag 5123
Parramatta NSW 2124
2016

Dear

Assessment of private property log use on the north coast of NSW

I'm writing to ask for your or a member of your staff's time to assist NSW Department of Primary Industries (DPI) assess the volume of private property (PP) native timber processed on the north coast of NSW.

Your answers are very important for the NSW Government's up-coming review of private native forestry. The termination of the NSW Native Vegetation Act and its replacement by the Biodiversity Conservation Act has led to the Government's commitment to review private native forestry.

Could I ask you to fill in the enclosed questionnaire so I can collect the information to help inform this change, so that the consequences to rural economies and jobs are known in any change to PVPs.

All the information will remain confidential.

So I ask you to give your time and knowledge in completing the questionnaire and returning it in the reply paid envelope. If you have any questions on this project you can contact me on 0447 445 601 or by email john.samuel@dpi.nsw.gov.au

Yours

John Samuel

Forest Science
Locked Bag 5123
Parramatta NSW 2124
2016

Dear

Assessment of wood residues on the north coast of NSW

I'm writing to ask for your or a member of your staff's time to assist NSW Department of Primary Industries (DPI) to assess the volume and location of native timber residues on the north coast of NSW.

Could I ask you to fill in the enclosed questionnaire so I can collect the information required for the development of a viable bioenergy / high-value chemicals industry based on the use of existing native harvest and wood-processing residues available on the NSW north coast.

As you know, the lack of markets for harvest and processing residues is a major issue impacting the north coast timber industry. All information will remain confidential, and the information you give will be combined with other timber processors on the north coast.

The key aim is to assess the volumes of different types of residues produced and forecast to be produced as a result of wood processing activities. I will also ask other questions such as your current use and markets for residues and sources of logs.

Your help in giving this information is critical for an accurate assessment to assist any potential investment using wood residues that may end up helping your bottom line too.

I am also undertaking an assessment of the potential of private property logs in supplying the industry. Could I also ask that you answer these questions as little is known about the sector? Again all the information will remain confidential.

I ask you to give your time and knowledge in completing the questionnaire and returning it in the reply paid envelope. If you have any questions on this project you can contact me directly on 0447 445 601 or by email john.samuel@dpi.nsw.gov.au

Yours

John Samuel

NSW north coast log processor residue survey

You are being asked to complete this survey to provide resource information needed for the development of a viable bioenergy / high-value chemicals industry based on the use of existing native forest residues (harvest and wood-processing residues) available on the NSW north coast. I can email this form to you if you prefer.

All the information gathered in this questionnaire will remain confidential. It will not be used in any way that would identify your business's data. It will only be used to give an overall picture of residue production and consumption.

If you have any questions call John Samuel on 0447 445 601 or email john.samuel@dpi.nsw.gov.au

Name

Business

Address

Phone

Email

Your business - this provides vital information on how wood processing contributes to the economy and employment in the region and the state.

1. What is the wood processing business turnover (\$) per year?

2. How many staff are employed full time by the business?

3. How many staff are employed part-time by the business?

4. How many working days or weeks or months per year are worked in the business?

days weeks months
(please circle)

5. **Please could you tell us the wood volumes you process?**

Another study I am working on is looking at the potential for increasing private property log supply on the North Coast, so please help this work by indicating who these sellers are. I will likely contact them, not mentioning your business, to ask about private property (PP) harvesting. There are more questions on PP at the end of the survey. All the information gathered in this questionnaire will remain confidential.

Log grade (FC = Forestry Corporation; PP = Private Property)	Main species or species group (leave blank if mixed)	Volume m³ (please indicate if per week, month or year)	Any comments? Private source? (please indicate the top 2-3 who you mainly buy them from - it is confidential)
High quality FC native			
High quality FC plantation			
High quality private			
Poles / piles FC			
Poles / piles PP			
Salvage FC			

Salvage PP			
Pulp / firewood FC			
Pulp / firewood PP			
Other FC			
Other PP			
Other			

6. **This residue study needs to look into future log supply and residue production, so please use a number between 0 and 5 for your expected log volume inputs into the future.**

I recognise this is not easy to do, but from your experience and views what is your estimate?

- Scoring**
- 0 = No volume at all**
 - 1 = A lot less** (e.g. 50% less)
 - 2 = Less** (e.g. 25% less)
 - 3 = Same as this year**
 - 4 = More** (e.g. 25% more)
 - 5 = A lot more** (e.g. 50% more)

Year or groups of years	Log grade and source	Score 0 to 5	Any comments about future log supply?
Next few years (2016-18)	Higher quality - <i>Forestry Corporation</i>		
	Higher quality - <i>private property</i>		

	Lower quality - <i>Forestry Corporation</i>		
	Lower quality - <i>private property</i>		
3-7 years' time (2019-2023)	Higher quality - <i>Forestry Corporation</i>		
	Higher quality - <i>private property</i>		
	Lower quality - <i>Forestry Corporation</i>		
	Lower quality - <i>private property</i>		
After 2023	Higher quality - <i>Forestry Corporation</i>		
	Higher Quality - <i>private property</i>		
	Lower quality - <i>Forestry Corporation</i>		
	Lower quality - <i>private property</i>		

7. Please state the volume of total green rough sawn timber produced and, if relevant, the total volume of dry and dressed timber produced.

Product type	Volume m ³ (if tonnes please say)	Over period (year, month, week)

8. To encourage markets for residues we need to know your current production, who buys, and price received for the residues.

Please fill in the black box and circle the correct unit of measurement and time period in the coloured boxes. All information is entirely confidential.

How much **sawdust** do you produce? Tonnes Year Month

Who is the sawdust sold to?

What price is paid for collected sawdust? \$/Tonne

How much **chip** do you produce? Tonnes Year Month

Who buys the chip?

\$/Tonne

What price is paid for collected chip

How much **finer** do you produce?

Who buys the finer?

What price is paid for collected finer

How much **firewood** do you produce?

Who buys the firewood ?

What price is paid for collected firewood ?

How much **planer shavings** do you produce?

Who buys the planer shavings?

What price is paid for collected planer shavings?

How much **other residue** do you produce?

Other name

Who is the other sold to?

\$/Tonne

What price is paid for collected other?

9. **Any comments on your residues?** For example are there any opportunities for increasing the price you receive?

10. **To assist with our understanding of the residue market, please indicate any wood residue costs for those you sell.**

Residue type	Storage costs	Loading costs	Negotiation & sales of residue (hours /week or month or year)	Other sales cost	Any comments?
Chip					
Sawdust					
Fines					
Planer Shavings					
Firewood					
Hearts / rotten					

Unprocessed off-cuts					
Other					

11. How much of the residue produced was consumed in your own business?

Residue Type	Amount (tonnes or m³ and per year, month or week)	Any specifications?	storage cost	other costs

11b Any comments? E.g. What do you use it for; any cost savings

12. If you burn off any residue or dispose of it in landfill, could you fill in the table below?

Residue type	Amount (tonnes or m³ and per year, month or week)	Disposal fee /cost	Transport costs	other costs and type (e.g. licence)

Any comments? E.g. EPA / Council requirements, pile burning or other.

13. Is any wood residue bought or given to the mill? If yes what type and amount?

14. Do you have any storage issues for the wood residue you create?

15. Would you tell us about the bought in energy for last year? This will allow us to understand the business energy profile. This is a vital piece of the study as energy costs can potentially be offset by residue energy generation, so please let us know.

Energy bought	\$ amount	Time period (year, quarter, month)	Units used (e.g. kwh, litres)	Price per unit	Notes inc. opportunities / considerations for reduction using wood waste
Electricity					
Gas					
Diesel for wood processing					

Other					
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16. Did the lack of markets for wood residue restrict your company's production in any way?

17. Did the cost of disposing of residue restrict your company's production? If so in what way?

18. Overall views on wood residues and opportunities

19. Future of the business, including any likely investment

20. Future of wood processing industry regionally

21. How aware are you of the opportunities in the bioenergy market under the Renewable Energy Target and Emissions Reduction Fund (previously Carbon Farming Initiative)?

I'm also involved in a project looking at the potential for increasing private property log supply. I would like to ask a number of questions on your views. *As before, all answers are completely confidential.*

22. When sourcing private native logs do you go out looking or do people come to you?
Please explain

23. Do you assist private native forest owners in property vegetation plans, buy at stump, finding contractors or other? Please say what you do.

24. How many different properties was last year's private property volume sourced from?

25. What was the volume of PP logs you processed last year & was this volume above or below what you normally purchase?

26. How important is the PP resource to your business (e.g. somewhat important, important, critical)?

27. If applicable, are PP logs more or less important than any Crown log allocation?

28. Of the business supply relationships you have with private property landowners, harvesting companies or log suppliers, what proportion would be long-term (repeat suppliers (as opposed to one-off arrangements).

29. Over the past 10 years have you noticed many changes in the ownership of PNF resources?

30. Do the people wanting to sell logs usually have a private property vegetation plan in place?

31. In your experience, how long does it normally take to obtain a property vegetation plan?

32. Do you think the PVP application process is working okay?

33. Over the past 10 years have you noticed any changes in the availability, quality and or size of the logs that you obtain from PP (e.g. less or more available, better or worse, larger or smaller)?

34. If applicable, how do you rate the quality of logs from PP compared with State forests?

35. Do you think that the government should be encouraging landholders to manage their forests for timber production?

If so, what things do you think they could do?

36. **Any additional comments you would like to make**

Thank you for undertaking the survey

Appendix 2

Outlines of the Private Native Forest and Residues projects



Department of
Primary Industries

Private native forest timber resources on the NSW north coast

Project Overview

NSW DPI is funding a two year project that will undertake a detailed assessment of the private native forests on the NSW north coast. The project will focus on the timber values of the forests in the context of their existing governance framework.

Context

On the NSW North Coast there are 2.8 million hectares of private native forests spread across thousands of individual holdings. Information about the state and socio-economic significance of these forests has not been quantified at a scale that is useful for forest policy makers or those with an interest in forest management.

Method

The project will seek to collate existing knowledge and draw on extensive spatial datasets to reveal the state of the forests and their socio-economic significance. The project will include a qualitative survey of the people who own private native forest and the people who draw an income from it.

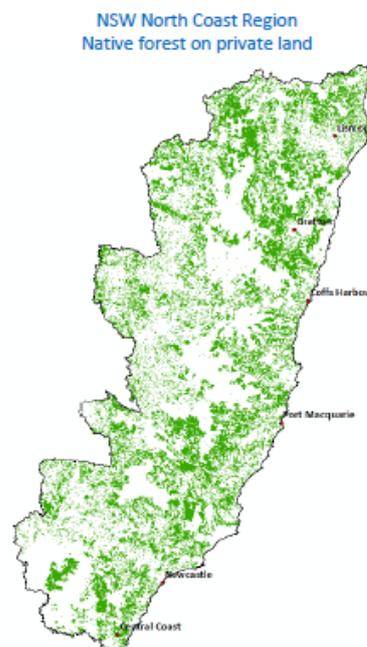
Project Outputs

- Information about the extent and character of private native forests on the NSW north coast and their multiple-use values.
- Information about existing timber resources and current and future production levels.
- Insight into local perspectives and perceptions about timber production in private native forest.
- An example of the application of new remote assessment technology and techniques for estimating timber resources at the catchment scale.
- A report identifying opportunities and constraints on the future management of north coast private native forests for timber production and other values.

End Users

The outputs and findings of this project will be relevant to:

- Forest policy makers
- Local Government and Local Land Services
- Owners and managers of native forest
- Timber industry bodies, native wood processors, and forestry consultants
- The Commonwealth's State of the Forests Report and its national carbon inventory





North coast forestry and wood processing residues:

Availability of resources and sustainability of extraction

Purpose

This project will provide resource information required for the development of a viable bioenergy / high-value chemicals industry based on the use of existing native forest residues (harvest and wood-processing residues) available on the NSW north coast.

Background

The lack of markets for harvest and processing residues is a major issue impacting the NSW north coast timber industry, resulting in increased operational issues and a reduction in profit margins.

However, recent developments may provide impetus for alternative markets to be developed. These include:

- The change in legislation in NSW allowing the burning of native forest wood waste for electricity generation
- The recent change to the Renewable Energy Target (RET), reinstating native forest wood waste as an eligible renewable energy source
- The previous clause that precluded Carbon Farming Initiative projects from using native forest biomass has been removed under the Emissions Reduction Fund (ERF).

In this project, NSW DPI will be systematically developing the required information required by prospective investors in bioenergy and high-value chemical facilities. The aim is to work in close collaboration with industry to ensure the data faithfully reflect current operations and future residue generation. Key activities include the quantification of:

- Volumes of different types of harvest residues produced in the NSW north coast
- Level of forest biomass that could be sustainably supplied from NSW north coast native forests without having a significant impact on forest nutrition and biodiversity values
- For wood-processing facilities: volumes of residues generated and their current use;
- Spatial availability of residues about key regional centres.

Outputs and potential impacts

- A range of publications, including a project report aimed at potential investors detailing quantity, location and characterisation of harvest and wood-processing residues.
- Creation of a new market for residues will have socio-economic benefits for the relevant regional centres.
- Greater understanding of any potential impacts of forest harvest residue extraction on biodiversity, future nutritional needs of the forest and fire risks.
- Information generated will be useful in the development of methodologies under the Emissions Reduction Fund that reward the generation of bioenergy from biomass.

Project duration and contact details:

September 2015 – September 2017