

Unsustainable Logging of State Forest Managed by Forestry Tasmania

Submission to the investigation of PEFC's complaint concerning
'unsustainable harvesting' by Forestry Tasmania (certificate No. 14647
certified by the Australian Forestry Standard, PEFC certified)

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Abbreviations

AFS	Australian Forestry Standard
FIAT	Forest Industries Association of Tasmania
FT	Forestry Tasmania
IGA	Intergovernmental Agreement on Tasmanian Forests
IVG	IGA Verification Group
PEFC	Program for the Endorsement of Forest Certification Schemes
RFA	Tasmanian Regional Forest Agreement 1997
TAT	Ta Ann Tasmania
TCFA	Tasmanian Community Forest Agreement 2005
TFFIS	Tasmanian Forests and Forest Industry Strategy 1990

The author:

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1. Brief Summary

Recent reports commissioned by the Australian and Tasmanian governments show that Forestry Tasmania (FT) has been cutting the native forests under its control at well above rates that can be sustained in the long term.

Forestry Tasmania claims that its level of cutting (at or above 300,000 m³pa of high-quality sawlogs) is sustainable because its maturing plantations will provide the same key products in the medium to long term. But relevant industry bodies such as the Forest Industries Association of Tasmania say that the forthcoming plantation resource is not acceptable because unsuitable species make up 75% of the plantations, and because of inadequate management of those plantations. This means the assumption underpinning FT's rate of cutting native forests is invalid and has been invalid for the past 14 years.

This means:

- The productive capacity of Forestry Tasmania's native forests has been significantly diminished through having been severely overcut;
- The productive capacity of the land on which Forestry Tasmania established plantations – particularly *E. nitens* plantations – has been significantly diminished through having replaced native forests with a resource that industry has deemed to be unacceptable.

This is a breach of Australian Forestry Standard (AFS) criterion 4 – ‘Forest management shall maintain the productive capacity of forests’ (4.4) and, in particular, criteria 4.4.1 and 4.4.2. It is also a breach of PEFC criterion 3 – ‘Maintenance and encouragement of productive functions of forests (wood and non-wood)’, particularly criteria 3.1 and 3.6 (see 5.3, 5.3.1 and 5.3.6).

In addition, Forestry Tasmania has been instrumental in establishing a new industry that is reliant on peeler logs. Major contracts with the relevant company (Ta Ann Tasmania) have been signed despite an apparent lack of work in determining long-term sustainable yields for peeler logs. Forestry Tasmania’s stated assumption that peeler logs are merely ‘arisings’ from sawlog-driven logging is contradicted by a recent government-commissioned report and by Forestry Tasmania’s cutting regime. Other reports commissioned by government indicate that the current and contracted cutting rate for peeler logs cannot be sustained into the long term unless plantations augment the supply of peeler logs. But Ta Ann Tasmania says the existing plantation supply cannot be relied upon to sustain its operations. This means that Forestry Tasmania is logging for peeler logs at a rate that cannot be sustained, a breach of PEFC and AFS criteria.

In short, Forestry Tasmania has logged native forests under its management at unsustainable rates and based on invalid assumptions. It has signed contracts that cannot sustainably be met. Forestry Tasmania’s certification under AFS and PEFC should therefore be withdrawn.

2. Forestry Tasmania, the AFS and PEFC

Forestry Tasmania is a government business enterprise tasked with managing approximately 1.5 million hectares of publicly owned forest in the island state of Tasmania, Australia.

FT says it is certified by the AFS (AS4708)ⁱ and PEFCⁱⁱ. FT must therefore comply with the standards and criteria of the AFS and PEFC. These include:

AFS 4.4 Criterion 4—Forest management shall maintain the productive capacity of forests

4.4.1 The forest manager shall identify existing productive uses of the defined forest area to support the maintenance of the land’s long-term productive capacity and ensure it is not compromised by wood production.

4.4.2 The forest manager shall plan forest operations to ensure the productive capacity of the land, (see requirement 4.4.1) is not compromised.ⁱⁱⁱ

PEFC Sustainable Forest Management (PEFC ST 1003:2010):

5.3 Criterion 3: Maintenance and encouragement of productive functions of forests (wood and non-wood)

5.3.1 Forest management planning shall aim to maintain the capability of forests to produce a range of wood and non-wood forest products and services on a sustainable basis.

5.3.6 Harvesting levels of both wood and non-wood forest products shall not exceed a rate that can be sustained in the long term, and optimum use shall be made of the harvested forest products, with due regard to nutrient off-take.^{iv}

Meeting the above requirements means logging at or within sustainable-yield levels.

3. Sustainable yield and Forestry Tasmania’s cutting rates

The AFS defines sustainable yield as follows ‘the yield that a forest can produce continuously at a given intensity of management’.^v FT defines sustainable yield as ‘the level of commercial timber (or product mix) that can be maintained under a given management regime, without reducing the long-term productive capacity of the forest’^{vi}.

FT claims that its cutting rates are determined by the sustainable yield. In fact, Forestry Tasmania's cutting rate is determined by legislation. By law, Forestry Tasmania must provide industry with 300,000 cubic metres per annum of high-quality eucalypt sawlogs and veneer logs. This is stipulated by the Forestry Act 1920.^{vii} FT's calculation of sustainable yield is therefore carried out against the backdrop of this legislative requirement.

FT describes its means of calculation of sustainable yield in and 'Calculating the sustainable yield of Tasmania's State Forests' by S.B. Whiteley, 1999^{viii}. FT's most recent such calculation is presented in the document 'Sustainable High Quality Eucalypt Sawlog Supply from Tasmanian State Forests, review no. 3 2007'^{ix} (FT's reviews of sustainable yield are carried out every five years, with another review due in 2012). The review 'confirms the ongoing availability of 300,000 m₃ per year of high quality eucalypt sawlogs on a sustainable basis, together with the capacity to provide a stable supply of pulpwood over the next 20 years.'^x

It also says:

This review of sustainable high quality eucalypt sawlog supply from Tasmanian State forest is consistent with the production policy specified in Section 22AA of the Forestry Act 1920:

(1) Each year, from multiple use forest land, the corporation must make available for the veneer and sawmilling industries a minimum aggregate quantity of eucalypt veneer logs and eucalypt sawlogs that meet the prescribed specifications.

(2) In subsection (1), "minimum aggregate quantity" means -

(a) 300 000 cubic metres;

(b) if another quantity is prescribed - the prescribed quantity.^{xi}

The review therefore purports to validate Forestry Tasmania's stated management strategy in the above and many other documents to meet its legislated obligation to provide industry with 300,000 cubic metres per annum of high-quality eucalypt sawlogs and veneer logs. In meeting this target, FT describes pulpwood and peeler logs as 'arisings', despite the vastly greater quantities of pulpwood produced.

Forestry Tasmania manages state forests to make available an ongoing annual supply of 300 000 cubic metres of high quality eucalypt sawlogs to local industry. This level is specified in the FT's Forestry Act 1920 and confirmed in the Tasmanian Regional Forest Agreement (Commonwealth of Australia and State of Tasmania 1997). Other wood products, such as pulpwood and peelers, are secondary products arising from sawlog harvest. (FT, June 2011)^{xii}

In its presentations of sustainable yield and cutting strategies, FT confirms that it has been logging at a rate producing 300,000 m³pa of high-quality eucalypt sawlogs and veneer logs, and sometimes exceeding that rate. Extraction of pulpwood and other 'arisings' has been at a level of about 2.5 million tonnes per annum. (Cutting rates in the last 2-3 years are greatly reduced because of market conditions)

Over the last decade, annual high quality eucalypt sawlog production has averaged 300,000 m₃ per year. Associated pulpwood and related product arisings have averaged 2,500,000 green metric tonnes per year.^{xiii}

And

The actual harvest of high quality eucalypt sawlogs for the five years to 2006 has averaged 334,000 m³ per year.^{xiv}

And

The main features of this strategy are:

- *An initial level of sawlog cut (320,000 m³ per year) for the first six years, which slightly exceeds the longer-term requirement of 300,000 m³ per year. This initial level of cut meets current contractual wood supply agreements.^{xv}*

FT has therefore stated that it has been cutting, and/or planning to cut, its forest estate at a level at or above 300,000 m³pa of high-quality sawlogs and veneer logs. FT also states that it has had contracts with industry whose aggregate level exceeds 300,000 m³pa. Yet FT also makes it very plain that this level of cutting cannot be sustained without a major contribution from as yet immature plantations in the medium to long term.

4. The crucial contribution to Forestry Tasmania's cutting rates of its as-yet immature plantations

The 1997 Regional Forest Agreement (RFA) and 2005 supplement to the RFA protected areas of State forest from logging. Forestry Tasmania's response to this loss of resource was to develop new plantations as a substitute. Crucially, these plantations were for primarily for the production of high-quality sawlogs, with pulpwood as an arising.

This strategy is outlined by Whiteley 2007:

*The RFA includes new Intensive Forest Management initiatives that have been designed to provide for the FFIS sawlog targets from public land. Intensive forest management practices include regrowth thinning, to promote more rapid growth on the remaining trees, **and the establishment of plantations managed to grow sawlogs.**^{xvi} (Emphasis added)*

The strategy was repeated and elaborated on in the 2007 review:

*Thinning of native eucalypt forest and **establishment of plantations for production of high quality eucalypt sawlogs** have previously been identified as essential elements of the forest management strategy to maintain sustainable yields.^{xvii} (Emphasis added)*

And

*An Intensive Forest Management (IFM) strategy seeks to produce more high quality eucalypt sawlogs from a land base that has been progressively reduced by transfers of land from production to reservation. IFM includes thinning of wet eucalypt regrowth forests, potential sawlog retention in highland eucalypt forests, **and hardwood plantations based on solid wood production.**^{xviii} (Emphasis added)*

And

*The reduction in standing volume limits the options for meeting wood yield requirements, and maintenance at pre-existing levels requires the growth of wood resources at a rate higher than relatively unmanaged forest will produce. Maintenance of supply levels thus requires more intensive management to improve forest growth and productivity. This can be achieved through thinning native eucalypt forest **and establishing and tending plantations, on parts of the remaining productive State forest land base.** In the TFFIS and RFA wood reviews, assumptions on more intensive management have been incorporated to improve productivity and maintain long-term wood production to support the Tasmanian forest industries. The TFFIS included thinning options,*

and the RFA provided for a **plantation program**, as well as additional regrowth thinning, to augment future production.^{xix} (Emphasis added)

And

The 1998 post-RFA review (*Forestry Tasmania 1998*) recognised **that the creation of a eucalypt plantation estate was necessary to maintain high quality sawlog supply**.^{xx} (Emphasis added)

To implement this strategy, FT established a large plantation resource by clearing native forests and replanting seedlings of *Eucalyptus nitens* (not native to Tasmania) and *Eucalyptus globulus* – mostly the former. This was done largely using public funds provided by government after the 1997 RFA was signed.

Since 1998 about 30,000 hectares of hardwood plantation have been established, and about 6,000 hectares of native eucalypt forest have been thinned, on State forests. (2007 review)^{xxi}

In 2011, FT said that the plantation resource available for producing sawlogs occupied 36,674 hectares.^{xxii} Estimates of the quantity of high-quality sawlogs that would eventually be available from these plantations have varied. In 2011, FT presented a document to signatories in the ‘forest peace deal’ negotiations occurring in Tasmania, which said:

By 2030 about half of the legislated annual supply of 300 000 m³/y of high quality eucalypt sawlogs from state forests will be available from eucalypt plantations.^{xxiii}

This was accompanied by the graph on page 15, showing the same approximate quantity – that plantations were being relied on to produce a high-quality sawlog cut of approximately 150,000 m³pa. Prior to 2030, projected yields of plantation-grown high-quality sawlog are lower but still significant:

These plantations could supply an average of about 28,000 m³/y of high quality eucalypt sawlogs from 2016 to 2020, increasing to an average of about 82,000 m³/y from 2021 to 2030.^{xxiv}

In 1998, FT therefore based its long-term cutting strategy on a resource which did not at that stage exist. Even today, much of that plantation resource remains immature and untested. Yet in the meantime, FT embarked on a program of cutting its native forests at greater than 300,000 m³pa of high-quality sawlogs. This high cutting rate lasted over 10 years, even though it was well in excess of the sustainable rate for those forests, as reports produced in 2011 and 2012 illustrate.

5. The sustainable yield of the native forest production-areas managed by Forestry Tasmania

In 2010, negotiations between the conservation movement and the logging industry for a resolution to the Tasmanian forests debate commenced. In August 2011, the Intergovernmental Agreement on Tasmanian Forests was signed between the Australian and Tasmanian governments. One outcome of this was the IGA Verification Group, or IVG, which was established to provide expert advice on issues pertaining to Tasmanian forest management.

Two major reports on the sustainable yield of Tasmanian State forest arose from these processes:

- A report by FT to the signatories (referred to above) entitled *Evaluation of Wood Resource Scenarios relevant to the Tasmanian Forests Statement of Principles to lead to an Agreement – Final Report to Signatories, June 2011: ‘the 2011 FT Evaluation’*; and

- The Review of Tasmanian Forest Estate Wood Supply Scenarios, by Mark Burgmann and Andrew Robinson of the University of Melbourne, March 2012 – ‘Burgmann’.

The 2011 FT Evaluation made the following assessments of the sustainable yield of high-quality eucalypt sawlogs and veneer logs from Tasmanian native State forest:

- From 2011 until 2030, the figure is 204,000 m³pa;
- From 2031 until 2050, the figure drops significantly to 166,000 m³pa.^{xxv}

(Note that these are figures for FT’s ‘base case’, which assumes no new reserves of production forest)

Each of these figures is significantly below the actual cutting rates in the early 2000s and the legislated volume of 300,000 m³pa. FT is effectively admitting that it has overcut the Tasmanian State forest on the assumption that the as-yet immature and untested plantations would make up a future shortfall.

The results of the scenarios assessed by Burgmann are even more disturbing. Burgmann has very good credentials for this sort of resource modelling. He is an ecologist from Melbourne University who worked as a consultant ecologist and research scientist in Australia, the United States and Switzerland during the 1980s before joining the University of Melbourne in 1990. He has received research grants from the Australian Research Council, government agencies, industry and private foundations. He has published four authored books, two edited books, over 140 research papers, and more than 50 reviewed reports and commentaries. His research has includes models on a broad range of species including giant kelp, Orange-bellied Parrots, Leadbeater's possums, bandicoots, and Banksias in a range of settings including marine fisheries, forestry, irrigation, electrical power utilities, mining, and national park planning. He was the winner of the 2005 Eureka Prize for Biodiversity Research.

The Executive Summary of Burgmann said:

Broadly, the analyses show that if no new reserves are established, minimum Intergovernmental Agreement (IGA) wood supply guarantees for high quality sawlog supply (155,000 m³/yr) can be met from native forests until 2030 if headroom values are 30% or less (Figure 12). However, total demand including contracted sawmills (163,000 m³/yr) and regional (‘country’) sawmills (up to 25,000 m³/yr) cannot be met, even if headroom allowances are as low as 20%.^{xxvi}

‘Headroom allowances’ refers to the discount applied to available wood volumes to take account of various hard-to-predict occurrences (such as discoveries of endangered-species habitat) or because of operational constraints (such as the necessity to disperse logging coupes). FT used a headroom discount of 10%; Burgmann 2012 presented a variety of headroom scenarios, but said that 20-30% was generally appropriate. More discussion of ‘headroom’ and its implications will follow.

Burgman’s specific figures for high-quality eucalypt sawlogs and veneer logs for the ‘base case’ (no new reserves) are as follows:

- 120,000 to 180,000 m³pa depending on the decade and on the amount of headroom applied. At 20% headroom, the figure was 180,000 m³pa to 2030, and about 150,000 m³pa to 2050;^{xxvii}
- The long-term non-declining yield is 137,000 m³pa.^{xxviii}

Recent assessments of the long-term sustainable yield from Tasmanian native State forest managed by FT therefore vary from 137,000 m³pa to 204,000 m³pa depending on assumptions used. It is

therefore clear that Forestry Tasmania's cutting rates of over 300,000 m³pa (overwhelmingly from native forest) have been well in excess of recent assessments.

Burgmann, like FT, refers to the essential role that presumed future yields from plantations play in Forestry Tasmania's cutting strategy:

Under the RFA and TCFA outcomes, FT was required to adopt a strategy of sustained yield that relied on both native forests and plantations. Contracted peeler and sawlog harvests cannot be sustained from native forest alone. The RFA and TCFA agreements were designed to be sustained from both native forests and plantations.^{xxix}

It has therefore been recognised by expert analysts that FT's cutting rates rely on the future acceptability of its plantation resource. Unfortunately, the intended users of that resource have expressed deep reservations about – and in some cases outright objections to – having to utilise those plantations.

6. The unsuitability of Forestry Tasmania's plantations in meeting sustainable-yield requirements

In 2011, the Forest Industries Association of Tasmania (FIAT) made a submission to a forestry inquiry being carried out by Tasmania's upper house of Parliament, the Legislative Council. FIAT represents several of the major remaining hardwood sawmillers remaining in Tasmania following the exit of Gunns Ltd from native-forest logging.

This 'FIAT Submission' was scathing of the qualities of Forestry Tasmania's plantation resource for producing sawlogs. Its view of the findings of several studies by a university/industry research organisation and some of FIAT's own members into the use of the species grown in plantations by FT was that *Eucalyptus nitens*, which makes up the majority of Forestry Tasmania's plantations, is an unsuitable, unacceptable resource:

The E. nitens plantation estate does not currently provide a suitable or viable substitute product for native forest timbers and a new species grown on a significantly changed silvicultural management system will be required to underpin any successful transition.

^{xxx}

The FIAT submission goes on to say:

It has been clearly and unequivocally established by research that E nitens cannot at this stage be considered to represent a viable alternative for the production of high value appearance grade sawn products due to a number of inherent difficulties encountered in the processing of this species.^{xxxi}

This is a devastating critique. It is not a temporary quibble about the age of the plantations. The representative body for Tasmanian sawmillers – the major intended end users of the 300,000 m³pa of sawlogs – says that Forestry Tasmania has planted the wrong species of tree!

E. nitens make up the majority of FT's hardwood plantations. As FIAT says:

As noted earlier the breakdown of species being grown by Forestry Tasmania on public land is very heavily weighted in favour of E. nitens in a ratio of approximately 75:25 and whilst more recently Forestry Tasmania have announced their intention to try to reduce this ratio to 50:50 this will by definition take many years to accomplish.^{xxxii}

FT's recently published data shows that *E. nitens* make up over 75% of the corporation's plantations that are available to industry for solid-wood products (27,744 ha out of 36,674 ha).^{xxxiii} FT says:

The great majority of the plantation sawlog supply will be Eucalyptus nitens.^{xxxiv}

FT also concedes that industry has, at best, serious reservations about using the FT's plantations:

The first twenty years broadly equates to the period to which current supply contracts will apply. The Industry signatories have insisted they will require access to logs from native forest over this period because they are not confident of their ability to produce sawn timber and veneer from eucalypt plantations.^{xxxv}

And

Although not deemed suitable by the native forest processing industry, eucalypt plantations, wholly or partly owned by Forestry Tasmania, could yield an average of about 28 000 m³/y of high quality eucalypt sawlogs from 2016 to 2020, increasing to an average of 82 000 m³/y from 2021 to 2030.... However, the willingness and capacity of the current sawlog and domestic peeler processing industries to process and market plantation wood is still uncertain.^{xxxvi}

And

The native forest sawmilling and veneer industry has indicated it is uncomfortable about its ability to process logs from existing eucalypt plantations and to meet the requirements of current customers.^{xxxvii}

Forestry Tasmania's plantations have clearly been deemed an unsuitable resource for industry and an unsuitable contributor to the sustainable yield of high-quality eucalypt sawlogs and veneer logs.

7. Peeler logs – 'arisings' or a driver of logging?

Between 2006 and 2008, a new wood-products industry was set up with government support in Tasmania. The company was Ta Ann Tasmania. It built two mills (one in the Huon valley in Tasmania's south and one in Smithton in the far north-west) to process logs into veneer. From the outset, government MPs described the Ta Ann operation as using low-quality logs ('peeler logs') that would otherwise be exported as woodchips (pulpwood). FT made similar claims:

Arising from the strategy is also a flow of pulpwood (Figures 13 and 14). Included in the native forest pulpwood are related products like low quality sawlogs and regrowth peeler logs. Pulpwood arises as a secondary or residual product from the sawlog and solid wood strategies; however, these flows are managed to provide stable supply to industry.^{xxxviii}

And

*Forestry Tasmania manages state forests to make available an ongoing annual supply of 300 000 cubic metres of high quality eucalypt sawlogs to local industry. This level is specified in the Forestry Act 1920 and confirmed in the Tasmanian Regional Forest Agreement (Commonwealth of Australia and State of Tasmania 1997). **Other wood products, such as pulpwood and peelers, are secondary products arising from sawlog harvest.***^{xxxix} (Emphasis added)

FT therefore made no apparent attempt to calculate a sustainable yield for peeler logs, seemingly regarding them as in the same category as pulpwood, supposedly derived from logging driven by contracted demand for sawlogs. Nevertheless, FT says it has contracts with Ta Ann Tasmania for quantities of at least 226,000 m³pa of peeler logs for approximately 15 years. FT also says that, because of these contracts, it is now treating the peeler logs as a separate category from ‘arisings’:

In this report (as distinct from the RFA Review), the yields are from native forest only. **The yield of domestic peeler logs from native forests is identified separately, rather than being considered as part of the pool of arisings (which comprise mainly pulpwood and low quality sawlogs).** Forestry Tasmania has supply contracts to Ta Ann’s rotary peeled veneer mills for a combined requirement of 265 000 m³/y of peeler billets until 2027.*

**Except for a supply of 39 000 m³/y of peeler billets from plantations and/or private native forest, as recognised in the contract for the rotary veneer mill at Smithton.^{xl} (Emphasis added)*

Suddenly, the peeler logs were elevated to a more favoured status. In fact, it has become apparent that Ta Ann’s demand for peeler logs is now driving the logging of native forests, including areas of high conservation-value. In late 2011, when discussions about a moratorium on logging of 430,000 ha of forest were occurring, the Tasmanian and Federal governments commissioned ‘independent schedulers’ to report on whether the moratorium would adversely impact on FT’s contracts. The reports made it quite clear that peeler logs, far from being ‘arisings’ generated automatically by logging for sawlogs, were now a new major driver of logging.

*Executive Summary ... we examined the rationale behind the current Forestry Tasmania harvesting schedule and coupe selection(which, as a result of the loss of pulpwood sales to Triabunna **is now driven substantially by the need to provide a sufficient volume of merchandising logs and peeler billets**) to meet supply commitments... (p. 2)*

And

*... **supply of peeler billets is an important driver in coupe selection.** (p.5)*

And

*4/ **“Peeler billets” is the limiting log product in South and North West**
... **The current limiting product for District harvest schedules is predominantly peeler billets.** (p.7)*

And

***Peeler billets is an important driver for the harvest schedule as described above.** (p.9) ^{xli}*

(Emphases added)

The report also points out that the proportion of peeler billets in overall total production has increased from 8% over the past five years to 20% of estimated current sales. ^{xlii}

(Note that peeler billets are simply peeler logs that have been cut to appropriate dimensions^{xliii})

This very recent document makes it crystal clear that peeler billets are not just an ‘arising’. Ta Ann’s contracted demand for these logs is actually driving the cutting of the forests in FT’s forests in the north-west and south of Tasmania. And this has led to a significant increase in the proportion of the

total native-forest cut that is occupied by peeler logs. These developments seem to have occurred in the absence of detailed, publicly available calculations of the sustainable yield of peeler logs. This has occurred only very recently, with new reports driven by the IGA process.

8. Peeler logs and sustainable yield

The signing of contracts committing FT to providing Ta Ann with between 226,000 and 265,000 m³pa of peeler logs preceded the publication of the following reports and has created a whole new driver of contentious native-forest logging. Consideration of the sustainable yield of peeler logs has occurred largely in reports published in 2011 and 2012.

The 2011 FT review says the following about sustainable peeler-log yields.

The Base yield of 265 000 m³/y of peeler billets matches the supply required by current contracts. This yield includes a supply of 39 000 m³/y from plantations and/or private native forest in northern Tasmania, as recognised in the contract for the Smithton peeler mill ³. It also assumes an increase in the utilisation of regrowth pulpwood as peeler billets at the Huon and Smithton peeler mills. This yield can be maintained, primarily from native forest, for the period 2011-2030 (which includes the supply contract period until 2027), but then reduces to 34% of the previous level for the period from 2031-2050. One means of meeting the shortfall in native forest supply will be through the use of maturing eucalypt plantations for future peeler supply. However there is considerable uncertainty around the acceptability of plantation material to the domestic peeler mills.^{xliv}

FT therefore conceded that it is stretched to meet the Ta Ann contracts and that these contracts cannot be maintained beyond 2030 without using plantations of (at best) uncertain acceptability.

Burgmann also assessed sustainable yields of peeler logs. His most telling calculation states the long-term non-declining yield for peeler logs as 'about 89,000 m³pa'. (Page 71)

He therefore concludes:

Native forests alone cannot satisfy wood supply guarantees for peeler billets under any headroom assumptions. The results of this scenario illustrate that significant volumes will have to be sourced from plantations and / or private land if current demand is to be satisfied. Other examples in the body of the report reinforce this general conclusion. (Executive Summary)

And

The report presents estimates of the wood volumes that could be supplied from native forests, without any new reserves, over a 100 year period. Assuming 30% headroom, the sustainable sawlog yield is estimated to be approximately 137,000 m³ per year. The sustainable peeler yield is estimated to be 88,000 m³ per year. These sustainable yields are much less than the wood supply guarantees in the IGA. Contracted peeler and sawlog harvests cannot be sustained from native forest alone. The existing Regional Forest Agreements (RFAs) and Tasmanian Community Forest Agreement (TCFA) were designed to be sustained from both native forests and plantations.^{xlv}

Burgmann, like FT, says that plantations are essential to meeting contracted demand for peeler logs. The problem is that industry's enthusiasm for plantation-grown peeler logs matches its attitude towards plantation-grown sawlogs.

9. The unsuitability of Forestry Tasmania's plantations for meeting peeler-log demand

In 2011, Tasmania's one major company processing peeler logs for veneer, Ta Ann Tasmania (TAT), made a submission to the Legislative Council saying the following.

For TAT, the Transition involves a change over time to the mix of regrowth and plantation wood, the speed of which is dependent on the availability of suitable plantation timber as a substitute for regrowth veneer. TAT is not averse to the use of plantation billets, is open to innovation, and has already explored the use of plantation billets. Unpruned plantation veneer is not suitable.

And

*Some pruned plantation is suitable - with *E globulus* (Blue Gum) having good veneer density characteristics (over 700 kg/m³), but pruned *E nitens* plantation billets give mixed results. Some *E nitens* has low MOE (bending) properties of less than 15 GPa, has low veneer density (less than 550 kg/m³), has poor sheer (pulling apart) properties, and behaves more like *Pinus radiata* than regrowth billets. Some pruned *E nitens* appears to be OK. Product resource mapping would help identify suitable pruned *E globulus* and *E nitens* for the Huon and Smithton mills and allow TAT to include this material as part of TAT's billet supply.^{xlvi}*

Ta Ann clearly states that it has problems with much of the plantation resource, particularly the *E. nitens* plantations, which occupy 75% of FT's plantation resource. Given the company's statements, FT's plantations cannot be relied upon to meet peeler-log demand in the future, when supplies of appropriate peeler-log resource from native forests have been largely cut out. It therefore follows that FT's native forests are being cut unsustainably for peeler logs.

10. Varying allowances for 'headroom'

According to Burgmann 2012, 'headroom' refers to a percentage of the predicted harvestable resource that is excluded as a buffer against unexpected changes in future conditions, spatial constraints, and the like (p. 27). In the FT 2011 Evaluation, a 10% figure for headroom was adopted, while acknowledging that this could be insufficient.

*As a consequence, the initial results represent an overstatement of operational supply capability. This has been partially addressed by applying a notional "headroom" discount of 10% for each product in the reported volumes... The 10% headroom may be insufficient, given the many factors listed above, but a better estimate is difficult to determine within the very limited time available for this evaluation... **In the meantime it should be noted that there is a significant risk that the 2012 RFA Review will conclude that the 10% "headroom" discount applied herein may not be sufficient.**^{xlvii}* (Emphasis added)

An auditor on FT's reports on sustainable yields, Vanclay and Bracks, indicated that 10% headroom was probably insufficient:

A more precise estimate of the discount requires detailed simulation studies, but it is our considered opinion that it may be prudent to increase the 10% headroom discount.^{xlviii}

Burgmann made clear his preference for headroom levels of between 20 and 30%.

Anecdotally, 10% headroom was considered by most experts to be insufficient. These calculations support that intuition. If advice from the Forest Practices Authority extends beyond the Forest

Practices Code 2000 and is applied as it has been implemented in these scenarios, headroom close to 30% is more realistic, based on the two analyses above. However, the need for additional constraints is likely to be reduced if further areas of native forests are reserved. In the scenarios developed below, this report assumes that if no new reserves are proclaimed, then headroom calculations ranging from 20% to 40% will encompass future forest management changes. If new reserves are proclaimed, headroom calculations from 10% to 30% are more appropriate.^{xlix}

FT's assumptions regarding 'headroom' therefore appear insufficient. This has contributed to the overcutting of the resource under FT's management.

11. Forestry Tasmania's significant negative impact on the productive capacity of the forest it manages

The unsuitability of FT's plantations to industry means that they are not a legitimate contributor to the sustainable yield of high-quality eucalypt sawlogs. They cannot fill the gap when the yield from native forests diminishes, as predicted by FT's resource modelling in about 10 years time (ie when the native-forest yield falls to approximately 220,000 m3pa).¹

The logging of the native forests at levels between 300,000 m3pa and 330,000m3pa of high-quality sawlogs and veneerlogs therefore means that the native forests have been overcut by:

- 80,000-100,000 m3pa according to the Forestry Tasmania's 2007 review figure of approximately 220,000 m3pa;
- 96,000-126,000 m3pa according to the 2011 FT evaluation yield figure of 204,000 m3pa;
- 163,000-193,000 m3pa according to the Burgmann long-term non-declining yield.

These are over-cutting rates of between 36% and 140%, depending on whose figures and assumptions are used.

FT's failure to establish a suitable plantation resource for its industry clients (despite having received well over \$100 million of taxpayers' funds for this purpose) therefore has the following implications that relate directly to its AFS and PEFC certifications:

- The productive capacity of Forestry Tasmania's native forests has been significantly diminished through having been severely overcut;
- The productive capacity of the land on which Forestry Tasmania established plantations – particularly *E. nitens* plantations – has been significantly diminished through having replaced native forests with a resource that industry has deemed as mostly unacceptable.

This situation is incompatible with the AFS and PEFC criteria:

AFS 4.4 Criterion 4—Forest management shall maintain the productive capacity of forests

4.4.1 The forest manager shall identify existing productive uses of the defined forest area to support the maintenance of the land's long-term productive capacity and ensure it is not compromised by wood production.

4.4.2 The forest manager shall plan forest operations to ensure the productive capacity of the land, (see requirement 4.4.1) is not compromised.

PEFC Sustainable Forest Management (PEFC ST 1003:2010):

5.3 Criterion 3: Maintenance and encouragement of productive functions of forests (wood and non-wood)

5.3.1 Forest management planning shall aim to maintain the capability of forests to produce a range of wood and non-wood forest products and services on a sustainable basis.

5.3.6 *Harvesting levels of both wood and non-wood forest products shall not exceed a rate that can be sustained in the long term, and optimum use shall be made of the harvested forest products, with due regard to nutrient off-take.*

Clearly, the productive capacity of the forest has not been maintained by over-cutting it. The productive capacity of forest under FT's management has been compromised by replacing it with defective plantations that industry is rejecting. Harvesting levels have exceeded rates that cannot be sustained in the long term, and the extraction of wood products from Forestry Tasmania land cannot be sustained.

This is a severe breach of Forestry Tasmania's obligations under PEFC and AFS and warrants withdrawal of FT's certifications.

In addition, it appears that FT failed to develop or publish considerations or calculations of sustainable yield pertaining to peeler logs before that industry was established. Instead, FT assumed that the peeler-log resource could be obtained from 'arisings'. Contracts with veneer company Ta Ann are now a major driving force of logging. Peeler logs are therefore not just 'arisings'. The relationship between providing contracted high-quality sawlogs and contracted peeler logs does not appear to have been adequately explored, with the result that at least part of the peeler-log harvest is additive, rather than an arising. That is, the advent of the peeler-log industry has increased exploitation of the forests rather than consuming a by-product of existing levels of use. This has the capacity to impact (and may already have impacted) negatively on the productive capacity of the forests under Forestry Tasmania's management when it comes to peeler-log production. This is a further breach of the AFS and PEFC obligations above.

In short, Forestry Tasmania has logged native forests under its management at unsustainable rates and based on invalid assumptions. It has replaced native forests with defective plantations. Its PEFC and AFS certifications should therefore be withdrawn.

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