

**Subject:** Submission to Extreme Weather Inquiry

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I work as a solicitor sole practitioner in Sydney having returned to legal practice full time in April 2010. I have a science (zoology) degree from ANU.

I also have experience living on rural land for 1 year at Cattai in the Hawkesbury in 2008-9 including building my own bushfire bunker in a concrete tank with earth roof, and executing multiple pile burns in the autumn and winter months.

This submission is necessarily brief.

In particular I note I was NSW projects and advocacy coordinator for The Wilderness Society in 1993 to 1994. This covered the extreme bushfire threat with over 700 bushfires in that summer. 4 people died from memory in the urban bush interface. I was involved in an enormous degree of public debate and media regarding bushfire safety during this period.

I was called for TWS to give evidence to a (NSW) Parliamentary and coronial inquiry. The latter did not require me to take the stand.

The upshot of all of the above was that wilderness management received a clean record as did TWS in relation to safety of property and people. Other issues and institutions were addressed regarding resourcing, land management at the town bush interface, extreme weather etc.

I am writing because I have tracked the bushfire safety issue ever since not least the sobering responsibility one feels in public discourse when fatalities occur. You might say the potential allegations against me personally left a scar and I have been intensely interested in the truth of bushfire/wildfire/megafire causes ever since this time, from my own home district of south west Victoria (1983), NSW (1994), Canberra, South Australia, Victoria 2009.

My conclusions are as follows based on academic findings gleaned over the years, and personal observation, regarding the forest estate:

1. Much less than 10% or less of the forest estate on the coastal fringe - say 50 km inland, public and private, park and production area - is original old growth forest (OG). Prof Tony Norton as far back as 1992 wrote academic papers on this distribution after 200 years of industry and clearing (agri, logging, mining, settlement etc). I have witnessed this type of forest in Coolangubra and East Gippsland with 300+ year old stems of 8m+ circumference;
2. By definition the biggest oldest trees grew in wet areas necessary for high wood volumes, characterised by high humidity, moist micro climates, closed canopy, fairly sparse undergrowth;
3. These OG areas were highly bushfire resistant given their moisture and age of viable trees.
4. Interesting academic studies in the last 2 years reveal far higher charcoal deposits in forest landscapes since colonisation compared to indigenous firing - suggesting forest landscapes were older and wetter.
5. The logging industry for a hundred years, and the agri industry before that, targetted the biggest oldest forest in the wettest areas. Not least because these were the highest volumes of timber per unit effort, and best agri land rainfall profile.

6. Predominantly wet OG has been converted to 50 to 100 year dry sclerophyll regrowth (DSR) across most forest landscapes. This forest is uniformly characterised as dense undergrowth with 'fire weeds', thin stemmed and dense eucalypt regrowth, low humidity, low moisture substrates. This is the megafire scenario landscape in extreme weather conditions.

6A. Bushfire expert Phil Cheney has been widely quoted - especially by me - as identifying the regrowth fire risk scenario as in point 6, in a Tasmanian forestry technical journal.

7. Point 6 outlines the challenge now in terms of fire safety on forest landscapes but not the solutions.

8. The best idea for a solution with ecological integrity is to reverse the process of conversion of wet OG bushfire resistant forest to dry regrowth (DR) high bushfire risk profile. How?

9. My recent online production forestry research/academic papers reveals that pre commercial thinning (PCT) of DR accelerates stem growth at 75% and 50% reduction of basal area. Therefore my proposition is to pursue accelerated re-establishment of OG via ecologically sensitive PCT (ESPCT).

10. What I mean by ESPCT would include:

- selective removal of stems of DSR over 50%-75% basal area;
- indefinite retention of dominant eucalypts and non eucalypt tree species over a certain diameter (my guess is say 15 cm);
- retention of diverse non eucalypt tree species;
- retention of diverse undergrowth and herb layer species as far as possible;

11. The PCT stems would be a significant but arguably marginal economic resource. I understand Tas Forestry simply poison rather than harvest. A far better use, and critical to removal of dry fuel load, would be collection and use of the cellulose perhaps for use in regional industry for industrial ethanol production. The job creation implications of such ESPCT would also be very significant.

12. I am aware that loaded into the above analysis is a symbolic and politically sensitive concession from the native forest logging lobby (companies, CFMEU, politicians of both major parties ALP and LNP) that they have actively contributed to the DSR forest profile over the last 50 to 100 years now prone to megafire in extreme weather conditions. That's just the way it is, regrettably. The task and moral imperative now is to return water into 'the green dams' that constituted the original OG forest profile for a moist high humidity bushfire resistant forest landscape. A parallel concept of locking up water in agri landscapes via amateur hydrology (eg the now famous Peter Andrews) is apt.

13. Targetting conversion of DSR via ESPCT for the most vulnerable and strategic bushfire threat locations near people and property would appear to be the highest and urgent priority. I leave to others to generate a genuine synthesis to be made between my proposed ESPCT (and removal), and hazard reduction burning (HRB) in the same strategic and high priority areas. It may be that ESPCT may be more significant than HRB in lowering bushfire threat.

Please contact me with any questions. I request the opportunity to present the above in person to the Senate Select Committee and to take questions for instance on the academic papers I have referred to above.

Kind regards,

Thomas McLoughlin, solicitor in NSW