

## **Submission in respect of**

### **The Draft Native Vegetation Regulation 2012, the Regulatory Impact Statement, the Draft Revised Environmental Outcomes Assessment Methodology and the revised Private Native Forestry Code of Practice** **By Ian Mott, President, The Landholders Institute. 24/08/2012**

#### **Overview.**

The facts are capable of establishing that, of the three options available under the review, the only option that does not constitute an improper exercise of power, as defined under the grounds for judicial review, is to postpone this review of this regulation and its subordinate instruments until the Native Vegetation Act 2003 (NVA2003) itself has undergone proper review. The other two options, of retaining the old regulation or adopting a new one, will entrench the fundamental breaches of legislative standards and statutory obligations that are embodied in that Act.

It is fundamental to this review framework that each instrument is assessed in terms of its contribution to achieving the objects of the NVA2003. But those objects were drafted on the basis of gross misrepresentation of the essential facts that were used to determine the objects and justify the legislation. And the variance between the circumstances used to justify the legislation and reality is of such character and scale as to render that Act a totally disproportionate measure.

We hold grave concerns that any delay in addressing these breaches could cause landowners serious, entirely foreseeable, and accumulating detriment and the Minister has a duty of care to take all reasonable, practical and timely steps to prevent or minimise that harm.

#### **The situation on the ground.**

The original State Environmental Planning Policy 26 (SEPP26) and the Native Vegetation conservation Act 1997 were presented to the voters of NSW and the Parliament as a response to an annual clearing estimate of 150,000 hectares. This much publicized estimate was provided to the NSW Vegetation Forum by Dr John Benson of the NSW Botanic Gardens. And to arrive at this total, Benson took detailed information on the clearing of Brigalow regrowth (now the subject of the Draft Invasive Native Vegetation RAMA) for the expanding Cotton industry on the Moree Plain and extrapolated to the entire state. The fact that most of the state had neither Brigalow nor interest from cotton growers (or any other expansive agriculture) was ignored. Indeed, much of that extrapolated clearing total would have been applied to districts that had been almost totally under cropping or pasture for decades.

And despite the fact that SEPP26 specifically exempted the clearing of native regrowth, and despite historical aerial photographic evidence presented to the Forum by Mr. David Lovell, (pers comm.) a member of it, to the effect that native regrowth had taken place on a massive scale, no attempt was made, by either the NV Forum or those drafting the NVCA 1997, to determine a net flux in native vegetation cover.

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There was not the slightest interest at the executive level in obtaining a “true and fair view” of native vegetation change in NSW. All through this period I was a member of the Steering Committee for the Qld Statewide Land and Tree Study (SLATS) which analysed the satellite clearing data for that state from Landsat7. It is a matter of record that NSW was offered the use of excess computer capacity to conduct the same analysis of NSW vegetation at a fraction of the cost but this was declined. It is my understanding that such a scan was eventually run on behalf of the Commonwealth which revealed an annual range of all clearing between 8,000ha and 16,000ha with a sub-decadal average in the order of 12,500ha. I do not have the reference but it is my recollection that approximately 50% of this total was regrowth on private land with another 25% being clearing by power utilities.

Only the remaining 25% (3,125ha/pa) was of the kind of mature forest that the public and the Parliament had been led to believe was under threat and almost all of it was already subject to some sort of assessment and approval, either as clearing for housing and infrastructure (most of which is in the Sydney Basin and not covered by the NVA2003), or as protected land under the Soil Conservation Act 1934, or harvesting of State Forests.

We are in receipt of correspondence from then NSW Minister for Land and Water Conservation, Aquilina, dated 19 August 2002, that referred to a figure of 14,000ha/pa for the period 1997-2000 provided by the Environmental Research and Information Consortium (ERIC).

In contrast, internal DLWC data that fell from the back of a truck indicated that the 2003 wildfires destroyed 700,000ha of forest in NSW public parks and reserves, some 70,000ha of NSW State Forest and only 7,000ha of private native forest. Each of these three tenures have similar areas of resource so one must also conclude that in private native forests the overall context of adverse impact is only a fraction of the pressure that public tenure forests are exposed to. The largest, most intense and concentrated adverse impacts occur in national parks with mostly old growth forest while the smallest, least intense and most dispersed adverse impacts occur in regrowth on private land.

The amazing disappearing regulatory impact assessment prepared for this review noted that well over 90% of the native vegetation in the state was either substantially modified (a.k.a. regrowth on previous pasture) or of a class consistent with an existing use for forestry. I would have been glad to go into more detail if it had not been snipped. It was an extraordinary insight into the problems that private foresters have endured over the past 35 years.

Mr. Dick Condon, former NSW Western Lands Commissioner has estimated that there is 12 million hectares of invasive regrowth in the western lands district alone. There would certainly be another 3 million in the rest of the state, not all of it invasive, and most of this is less than 30 years old. From this one can only conclude that the average annual increase has been in the order of 500,000ha ( $15m/30=0.500$ ). At the very least, the 2004 regrowth total was in excess of the 777,000ha of forest that was burned out by wildfires in 2003.

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**It is in this context that parliament was misled:**

1. The case was fabricated to mislead both the parliament and the public to believe that the NVA 2003 was a proportionate measure. The NVCA 1997 was drawn up in response to an assumed clearing rate of 150,000ha per annum. But if that Act was a proportionate response to 150,000ha of annual clearing, then the new more stringent Act can only be a disproportionate response to an actual clearing figure that is more than twelve times smaller and off-set by forest expansion more than three times larger.
2. The case was fabricated to mislead both the parliament and the public to induce them to implement a “zero net loss of native vegetation” policy when the evidence is overwhelming that there had been no net loss of native vegetation in the state for decades.
3. The case was fabricated to mislead both the parliament and the public to induce them to implement a “zero net loss” policy that only recognized additions to native vegetation cover after the fact, not before it. A farmer who may have overseen the addition of 10,000 trees or more since he last cut down a tree is given no credit for them, required instead to provide punitive additional off-sets for any subsequent removal of a single tree.
4. The case was fabricated to continue misleading both the parliament and the public to believe that the objects of the act were only served by the retention of stems or the maintenance of canopy cover. The evidence is overwhelming, from RG Florence down, that the continued retention of all stems when growing trees collectively reach the limits of growth accorded by their spacing leads to significant decline in the entire leaf, sap, flower and seed based food chains.
5. The case was fabricated to continue misleading both the parliament and the public to believe that the “cutting down, felling, thinning, logging or removing ” of a single tree, or the “killing, destroying, poisoning, ringbarking, uprooting or burning” of a single tree amounted to an activity (broad scale clearing) which was of a character, scale and intensity that rendered it a material change in the lawful use of all development units. This is unlikely to be the case on any vegetated private property that is subject to the Act, i.e., not listed in Schedule 1 as Urban.
6. The case was fabricated to continue misleading both the parliament and the public that the removal of a part of a tree (a branch or one of two or more leaders) resulted in the death of the tree. The propensity of the overwhelming majority of non-mature trees to continue growing through coppice growth after even single stem removal, and thereby produce a very rapid recovery of ecological values, is a highly relevant matter which was completely ignored in the formulation of the objects and definitions of the NVA2003.
7. The case was fabricated to continue misleading the parliament and the public that the entire native vegetation resource was of a climax nature, or equilibrium old growth, which makes up only a very small proportion (circa 2%) of the vegetation subject to the NVA2003. Climax is the only vegetation class that will suffer no adverse ecological outcomes if all forms of tree removal are excluded. All other classes are responses to past disturbance which involve a progression of increasing size and spacing that produces significant degradation of growth rate and habitat

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quality if human intervention in the form of regular proportionate tree removal does not take place.

8. The case was fabricated to continue to mislead both the parliament and the public to believe that a duty of care on landowners was necessary to maintain native vegetation at stem numbers and levels of canopy cover that were significantly greater than that which the resident wildlife species had evolved and adapted to suit since the last ice age (i.e. 10,000 years).
9. The case was fabricated to mislead both the parliament and the public to believe that the significance of threats posed to wildlife, and threatened species in particular, in static or contracting habitats were of equivalent scale, character, frequency and intensity to those found in consistently expanding habitats.
10. The case was fabricated to mislead both the parliament and the public to believe that a measure that actively discourages the continued expansion of native vegetation onto former forested land that is now pasture is consistent with the principles of ecologically sustainable development, the objects of the NSW EPA Act 1979, and the objects of the NVA2003 itself.
11. The case was fabricated to mislead both the parliament and the public to believe that the adverse impacts being inflicted on a supposedly severely degraded landscape were in need of such urgent remedy that legislative standards, regulatory impact assessments and the proper exercise of power could be ignored.
12. The case was fabricated to mislead both the parliament and the public to believe that imposed measures that deprive a forest owner of the central attribute of a lawful use over part of his land falls within the meaning of a regulation, rather than “a taking”, or “the deprivation of the thing of it”.
13. The case was fabricated to mislead both the parliament and the public to believe that the character, scale and intensity of an activity, like tree removal, that is normal and necessary for the maintenance of a pasture for grazing purposes is not derived from, and determined by, the rate and scale at which those trees accumulated there in the first place. Trees that grow in a paddock as an attribute of an existing lawful use cannot be regarded as a material change in use if or when they are removed.
14. The case was fabricated to mislead both the parliament and the public to believe that a farmers decision to allow a number of small trees to remain in a paddock for shade purposes etc, amounts to an undertaking to allow or accept all possible additional shade that might be produced if those and subsequent trees were to grow to full maturity. Both the initial discretion to add shade and any subsequent discretion to prevent additional shade or to reduce shade are fundamental attributes of the same lawful grazing use and cannot separated or treated as a material change of use.
15. The case was fabricated to mislead both the parliament and the public to believe that an arbitrary date, like 1990 or 1983, was appropriate for determining when a future intention to remove a regrown tree in a paddock has been abandoned. This is an arbitrary exercise of power, the adverse impacts of which are not remedied by the provision to modify this date under PVPs.
16. The case was fabricated to mislead both the parliament and the public to believe that the sole discretion of a parliamentary majority to define the nature and extent of their power to govern

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“for the peace, order and good governance” of the state, and to determine what the “interests of the state” that native vegetation is to be managed for under the objects of the NVA 2003, extended to misleading the parliament itself and the voters. The oath of office, “to well and truly serve”, and every other parliamentary convention, clearly demands honesty as the first and only recourse.

17. The case was fabricated to mislead both the parliament and the public to believe that the acquisition of rights, powers and privileges over land by way of the NVA2003 fell within the meaning of a “just cause”, the only grounds, other than as a corporation in trade or commerce, on which a state may acquire property of any kind.
18. The case was fabricated to mislead both the parliament and the public to believe that the agreements called Property Vegetation Plans that may be entered into under the Native Vegetation Regulation were not entirely voidable by the landowner. These agreements are negotiated under duress, and in a context that does not respect the landowner’s right to exercise fully informed consent. If it were not for the shield of the crown they would be in breach of the Trade Practices Act 1974, as the product of unconscionable conduct in the assignment of an interest in land, being the rights, powers and privileges over land that are embodied in the existing uses to which land may lawfully be put.
19. The case was fabricated to mislead both the parliament and the public to believe that the removal of the “minimal clearing exemptions” that had been carried forward from the Soil-Con Act of 1934, through SEPP26 and into the NVCA 1997 were justified on the basis of fact and validated assumptions. These exemptions ensured that any conditions attached to clearing approvals did not deprive a tree owner of the ultimate right to dispose of any tree, provided the impacts were dispersed in sufficient space and time, and of a scale that ensured they were subsumed within the normal range of climatic variation. The serious errors, omissions and totally groundless extrapolations made by the Independent Scientific Group (ISG) in its analysis of the actual and potential impact of these exemptions is outlined in the formal complaint lodged by the Regrowth Foresters Association in 20<sup>th</sup> May, 2002. It is attached as Appendix I. No action was taken and the matters mentioned were completely ignored in the drafting of the NVA2003

The facts outlined above are capable of establishing that the justification for the act and the drafting of the Native Vegetation Act 2003 are so tainted by fraudulent and negligent misrepresentation that the act itself, let alone the regulations under review, nor even the proposed revision, is incapable of serving its own objects.

**Indeed, the dissonance and inconsistency between the entirely laudable objects of the act and the content of the legislation and the regulations is of such magnitude and materiality that the very objects of the act itself constitute a gross misrepresentation of fact to both the parliament and the public.**

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The only reasonable and informed conclusion is that the NSW Native Vegetation Act 2003 was specifically designed to obscure the fact that both the legislation and the regulations are still Environmental Planning Instruments (EPI) under the Environmental Planning and Assessment Act 1979.

Any breach of NVA 2003 provisions or of the regulations becomes a “development offence” under Part 4 of the EPA Act and it is worth noting that this act has a very curious but deliberately uninformative definition which states that “an environmental planning instrument is (wait for it) an environmental planning instrument”. It goes on to list SEPPs and council Local Environment Plans (LEP)s as EPIs while specifically excluding Development Control Plans (DCPs), and leaving the reader to assume that the absence of a mention of the NVA2003 excluded it from this category. The clear intention is to defeat or diminish the existing use protections accorded to all existing lawful uses under Division 10, Part 4 of the EPA Act 1979. These can clearly attach to farming and forestry purposes with trees that predate the arbitrary 1990 cutoff between regrowth and remnant native forest under the NVA 2003. The continuation of such existing lawful uses may not be subjected to any requirement for development consent so the only way the PVPs could be implemented was by deliberate deception through misrepresentation by omission in the legislation itself.

This squalid exercise in venal malgovernance has managed to single out the landowners who have spent the past 50 to 100 years and more furthering the objects of both the EPA Act and the NVA 2003 and subjected them to “very special treatment”. They have ‘maintained or improved environmental outcomes’, they have ‘protected water quality and biodiversity’ and ‘prevented salinity and land degradation’, they have continually ‘improved the condition of (their) existing native vegetation’ and they have ‘revegetated land’ and ‘rehabilitated land with appropriate native vegetation’.

Indeed, they have done so throughout a period when there was active encouragement by government to do the direct opposite. And they generally did so with the intention of managing their native forest resource for multiple uses IN PERPETUITY! And for their trouble they were deprived of the existing use protections that all other lawful uses, even porn shops and brothels, enjoy. And under the guise of providing “certainty” their multi generational lawful use was offered an “agreement” under duress that allowed them continued access to only part of their forests FOR ONLY 15 YEARS (less than 25% of a single growth cycle)!

The previous government had adopted a business model that epitomizes the classic approach of the down market shonks and spivs, who market their “certainty” exclusively to gullible new entrants and those short term landowners who simply want as much return from their forest as they can get before selling up. The prospect of “repeat business” from multi-generational family forests, with intergenerational equity a foremost consideration, is completely outside their business model. The future accumulated value of a healthy productive forest has been reduced to zero.

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## **How the Private Native Forestry Code operates counter to the Objects of the NVA 2003.**

The PNF Code appears to have been drawn up under the delusion that all forests that are not post 1990 regrowth are climax equilibrium old growth. As mentioned in point 7 above, the only forest type where the setting aside of 'exclusion zones' and 'buffers' where no disturbance may take place will not result in serious degradation is climax forest. All other age classes involve some sort of growth response to past modification. And as long as there are growing trees there will be a need to cull some of them to ensure that the remaining trees can continue to grow. To not do so produces a reduction in growth rates as an increasing portion of plant energy is diverted to defensive competition with other stems.

But this is not merely a timber production issue as the uninformed have concluded;

- Increased competition depletes soil moisture at a faster rate between rainfall events and the resulting moisture deficit means that less of each rain event runs off into creeks.
- The wider window of depleted soil moisture reduces soil microbial activity and resulting nutrient supply to the tree.
- The wider window of depleted soil moisture produces sap deficits and leaf moisture deficits of equally extended duration which, in turn, reduces nitrogen (protein content) of leaves.
- For Koalas the critical points are 65% moisture and 1.5% nitrogen, below which nutritional value is zero and the tree produces defensive polyphenyls to render the leaves completely indigestible.
- In the same way, excess competition for soil moisture can reduce the scale and duration of flowering events with obvious implications for wildlife in the pollen, nectar, flower and seed food chains.
- Similar degradation is inflicted on the under-storey vegetation and dependent species.
- And on a seasonal scale the volume of food supply, its quality and its reliability is all reduced with obvious impact on wildlife health, reproduction, survival, stocking capacity and diversity.
- It reduces the benefits of good years, turns average years into below average years and turns bad years into worst case years and thereby significantly increases their frequency.
- Left untended, it is the equivalent of moving the forest 10km inland every year for a decade.

The routine forest practice is to thin growing forests before they have gone too far into this state of "lock-up". The standard approach of 50% stem removal is seen by the ill informed as a 50% reduction in habitat value but the continually exacerbated rate of soil moisture depletion will have already decimated the wildlife population in that forest. Population declines of 80%, like that reported for Squirrel Gliders by Sharpe at Bungawalbin are not uncommon and are becoming more widespread and frequent.

So when a competent forester removes 50% of the stems he produces an immediate doubling of available soil moisture for the retained stems and depleted under-storey. And the forest will then

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enjoy a period when soil moisture lasts longer, is replenished faster, produces more than normal run-off, and with shorter and less severe dry spells. The food supply will be in excess of the needs of the now rapidly recovering wildlife populations.

If the forest surveyed by Sharpe at Bungawalbin had been thinned at any time in the previous six years then the population collapse that was recorded there would have been nowhere near as severe. Each of the 50% retained stems would have had double the soil moisture that was available to each of the 100% of stems. The interval between rain events would have been the same but soil moisture at the start of that dry interval would have been higher and its depletion would have taken longer. And the complete failure of the flowering that the Gliders depended on would have been a partial flowering that would have sustained the young and adolescent cohorts.

The rainfall data for nearby Broadwater Sugar Mill also explains the story.

[http://www.bom.gov.au/climate/averages/tables/cw\\_058065\\_All.shtml](http://www.bom.gov.au/climate/averages/tables/cw_058065_All.shtml) The August, September, October and November First decile monthly rainfalls are 8.1mm, 10.9mm, 23.1mm and 16.6mm respectively. So even without the full range of decile figures, we can see that a recent thinning would double the water available to each of the remaining trees to replicate conditions in a 2<sup>nd</sup> or 3<sup>rd</sup> decile year. A doubling of available moisture further up the scale produces a more significant improvement, where a median (5<sup>th</sup> decile) 65.9mm event in August, for example, lifts the available moisture of a 50% retained stand to the equivalent of a 131.8mm event, which is 85% of the 9<sup>th</sup> decile value of 154.8mm.

So it is in this context that one must ask; what on earth makes anyone seriously think that the minor impacts of marginal soil erosion, or temporary disturbance, from thinning in regrowing rainforests, steep slopes, within 20 metres of a wetland or rocky outcrop, or within any of the species exclusion zones, are greater than the benefits of a sustained recovery from, or prevention of, a statistically certain 80% decline in wildlife populations from a 1<sup>st</sup> or 2<sup>nd</sup> decile event in a 'locked-up' forest sometime in the next 6 years?

The current denial of the certainty of exacerbated adverse impacts from lock-up in unthinned growing forest is in direct contradiction of every one of the objects of the NVA 2003. Does anyone seriously believe that ignoring the impact of an 80% decline in animal density in a regrowing Core Koala Habitat is consistent with the objects of the act?

Does anyone seriously believe that leaving a Koala feed tree exposed to ruthless competition for soil moisture from every other tree in a 20 metre radius is actually helping the f@%& Koala?

Does anyone seriously believe that the Koala feed tree has any hope of surviving in the long term when it's own capacity to compete is also impaired by Koalas eating every fresh leaf it produces while the competition has no such burden?

Any exclusion zone in a growing forest is in direct variance with the objects of the NVA 2003.

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### **Alternative forms of forestry in sensitive areas.**

The totally perverse use of exclusion zones in growing forest is made all the more worse by the fact that there have always been forms of the forestry purpose that are well suited for minimizing disturbance in sensitive areas. The smaller the harvested product the less disturbance is created by its removal. So the code is correct in determining that snigging large sawlogs out of creek banks can cause damage. But the damage caused by snigging a pole from the same location will be much less than proportionate to the weights involved. And the use of overhead cables will reduce impacts even more.

Coppicing for house poles, posts, stays and firewood produces a harvested product that can be carried by hand to the point outside the exclusion zone where it can be sledded out by winch. Coppicing on a topped 2.4m or 3.6m "standard" can add strainer posts, yard posts and billets for post splitting to the mix on a longer rotation. And all forms of coppice management ensure that there is full root system maintenance at all times, especially when conducted in partial harvests.

Simple flanged wheel trolleys on wooden rails over the short distances in sensitive zones are very cheap and easy to install and remove and they leave zero footprint at all. Narrow gauge 50mmx50mm wooden rails can take an axel load of 1.5 tonnes at 650mm cross member (small sleeper) spacing, And that load, distributed to a 10cm wide sleeper of 75cm length produces a maximum ground pressure of only 2kg/cm<sup>2</sup>. Four metre sections of this rail have a weight of only 30kg for each and a material cost (at retail prices) of only \$10/metre. So 20 metres of temporary rail costing only \$200 can provide safe on-ground extraction from any sensitive part of a forest with zero footprint.

Any provision of the PNF Code that fails to allow modifications to the forestry purpose that would both protect the key ecological values in sensitive areas, AND allow some form of forestry to continue in them, can no longer claim to be only a regulation because it refuses to regulate. The exclusion of all forms of forestry renders the Code an instrument of partial acquisition. And it is an unlawful one at that.

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## **Habitat hollows.**

The need for appropriate shelter for hollow dependent species is self evident and entirely consistent with the objects of the NVA 2003. And the retention of existing hollow bearing Trees (HBTs), and the provision of future replacements for them is also entirely appropriate in any native forest where such trees already exist. For in such cases existing HBTs are clearly part of the existing lawful forestry use to date.

However, the PNF code does not distinguish between such forests and those forests that have been re-established on former pastured land. In such cases there were no habitat trees to begin with, and, in theory at least, there will be no wildlife to supply them to. If the required number of HBTs is as essential for the presence of viable hollow dependent populations and diversity of species, as the current doctrine insists, then regenerated forests without HBTs must be assumed to have no current need for HBTs because there must be no population there to use them.

And in such cases the requirement for an additional 10 recruitment trees /2ha, on top of the 10 that are in lieu of absent HBTs/2ha, is not only unnecessary, it is downright punitive. All 20 are likely to start forming hollows some time after 70 years. And as such recruitment trees are expected to be amongst the largest in the stand, they will all be aged around 60 years already. So it logically follows that the appropriate cohort for any subsequent batch of HBTs to yield hollows another 60 years later is only just emerging as seedlings.

Of far more relevance is the fact that the PNF Code takes the needs of hollow dwelling species so seriously that they can sit back waiting for 70 years to give them the housing that some of them might actually appreciate today. Waiting 70 years for a perfectly healthy tree to rot would have to be the least effective means of delivering the service.

More importantly it is also by far the most wasteful and expensive means with the least certainty about the quality of the eventual product and the least management input into the standard of that product.

Last month I actually milled up a typical recruitment tree, a Blackbutt of 62cm DBH and 18m of 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> log, with the 5<sup>th</sup> log still to be done. It has already yielded \$2100 worth of timber at retail (green off saw). So the retention of 10 such trees for future HBT service requires me to forego \$21,000 per hectare, on every hectare I own. The first thing I would do with spare cash is to pay off my mortgage which costs me 7% in annual interest. And that means my foregone revenue will cost me and my family 7% per annum for the next 70 years until the habitat service is actually delivered.

According to Warren Lucas of Lucas Portable Mills, (pers comm.) there are in excess of 2000 portable mills in NSW and many of those will have a network of properties that they mill for in respect of both commercial harvesting and RAMA products. So there is absolutely no basis for

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valuing foregone timber harvesting volume at any other rate than the full retail value (green off saw).

For the record, those 10 sawlogs will be worth \$58,000 by year 15, \$160,000 by year 30, \$441,000 by year 45 and \$1.217 million PER HECTARE by year 60.

And if I happen to have a listed Brush Tailed Phascogale in my forest I will need to increase this contribution by another 5 trees/ha which will increase my current contribution to \$31,500/ha and take the total at year 60 to \$1.82 million/ha.

But wait, it gets worse. That Phascogale has a home range of 78ha (a 500m radius) and each of those hectares is supposed to have the extra 5 trees which comes to 390 sawlogs worth \$819,000 today and a massive \$47.5 million by the time a hole is actually produced. The 78ha will support 1 male territory and 2 female territories for an average of \$15.8 million for each adult.

And if that doesn't blow your mind then you should reflect on the fact that these little guys only live for a year. The males literally bonk themselves to death. And as they spend their first 6 months in the Den they only have about 180 days to wander over their 78ha home range, which means they will only spend 2.3 days on each hectare or 0.46 of a day in each of the \$121,700 HBTs that is set aside for them.

For the record, these animals have a body length less than 10cm and a similar length tail. The pregnant females prefer a hole between 40 and 45mm that will allow them to squeeze through while keeping the smaller gliders, who compete for similar size holes, out. The males can use smaller holes.

So we are effectively talking about a hole that could be drilled in less than a minute, with a hand drill and a standard spade bit, in just about any rough barked tree on the hectare. Any lower branch of more than 75mm diameter and higher than 3 metres could be lopped off just 50cm from the trunk and a hole drilled straight down the core of it. But of course, lopping that branch would qualify as broadscale clearing under the NVA 2003, and you will need a PVP to do it, just once.

If there are no convenient lower branches a similar hole can be drilled into any 40cm length of 75mm diameter wood and attached to any appropriate tree. Or one can be extra clever and cut the length into two 20cm lengths and drill most of both lengths at 45mm with a narrower drill at one end to form an entrance and then join the two halves back together again.

There was never any need nor desire among private forest owners to have their forests debased with the squalid array of little plywood "dunnies" that urban Australians seem to think is the only way to produce an artificial hollow. These are the products of people who are quite alien to forest landscapes and seek the reassurance of their familiar little boxes whenever their minds turn to animal housing.

Forestry historians like HL Edlin, "Woodland Crafts of Britain" 1948, has identified a whole range of traditional crafts and techniques that are capable of producing exactly what each hollow dwelling

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species requires, and in the numbers required, and at the time they are required, from materials that are readily available right in the forest where they are needed.

Woodlanders have been making hives for bees, stables for horses, coops for poultry, sties for pigs, hurdles for sheep and goats, putchers for salmon, carts, coracles, barrows, barges and barques and all manner of human dwellings from bodgers hovels to cathedrals but for some curious reason we are excluded from applying our skills for the housing of our own wildlife in our own forests.

My own estimate is that there is enough wasted wood in the head of a single sawlog to produce enough hollows (50) for ten hectares. And they can be sourced from durability class 1 species, like Grey Gum and Ironbark, that are rated as capable of lasting 40 plus years in the ground, let alone up a tree.

The simplest form is to use the same technique that is still used to produce split posts on farms all over the country. A round billet of the appropriate length is sawn full length to a suitable depth at 6 to 8 points around the circumference and a wedge is then driven in the end and along the grain so the post splits easily away from the centre. The only difference when making artificial hollows is that the length is shorter and more easily split and the depth of cut is not as deep. And when all the external pieces are split they can then all be bound back together again to form a hollow in the same way that primitive man first learned how to make a barrel. It is rather ironic that departmental experts are yet to make the leap into the 7<sup>th</sup> century BP.

The requirement to use the most ineffective and costly option to produce HBTs is a serious deterrent to the assisted expansion of native forest because no such obligation is placed on planted forest expansion. That means that local genotypes are unlikely to be used and the result will often involve a clonal monoculture. That outcome is clearly inconsistent with the objects of the NVA 2003.

More unfortunately, the requirement for ineffective and untimely HBTs in regenerating forests is depriving our culture of a woodland occupation that is unquestionably one of the most sustainable occupations mankind could ever imagine. There are millions of hectares that do not have any form of natural hollows and most of them will not get them for 6 decades or more.

Yet, a properly drafted PNF Code that is consistent with the objects of the NVA 2003 can create the circumstances that justify that occupation on economic and ecological grounds. A single man-week will be required to construct and place a full suite of hollows for two hectares. So each 100ha can be seen as a man-year and just 4000ha becomes what the Buddhists call a "right livelihood", a life well spent, for gentle souls who whistle well and listen better, working with their hands in the shadow of the trees that grew to form the stuff of their trade, and among the wee folk who know no other home.

**But are you equal to the task?**

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*Far from the madding crowds ignoble strife, their sober wishes n'er leaned to stray. Along the cool sequester'd vale of life, they kept the noiseless tenor of their way.* Thomas Grey.

The objects of this Act are:

(a) to provide for, encourage and promote the management of [native vegetation](#) on a regional basis in the social, economic and environmental interests of the State, and

(b) to prevent [broadscale clearing](#) unless it improves or maintains environmental outcomes, and

(c) to protect [native vegetation](#) of high conservation value having regard to its contribution to such matters as water quality, biodiversity, or the prevention of salinity or land degradation, and

(d) to improve the condition of existing [native vegetation](#), particularly where it has high conservation value, and

(e) to encourage the revegetation of land, and the rehabilitation of land, with appropriate [native vegetation](#),

in accordance with the principles of ecologically sustainable development.

**Ian Mott, 24/08/2012.**

[REDACTED]

[REDACTED]

*If you aren't regenerating native forest, please don't discourage someone who is.*