

SUBMISSION TO THE INDEPENDENT BIODIVERSITY LEGISLATION REVIEW PANEL

This submission has been prepared by [REDACTED]

My initial comments relate to the three dot points in the introduction.

- *Facilitate the conservation of biological diversity*

This aim is being regularly compromised with numerous proposed developments in NSW in areas listed as State Conservation Areas, which have been nominated for commercial activities. These currently include the Nandewar and Brigalow SCA's.

- *support sustainable development*

This feature is regularly compromised by the generally poor standard of Environmental Assessments, which are also regularly overlooked by those charged with the task of official oversight of such assessments.

- *reduce red tape*

Most thinking people recognise such statements as an attempt to lower standards of assessment as to existing environmental legislation and great care should be taken no to compromise existing standards.

Context:

If indeed Biodiversity is considered vital, why do we see proposals to hunt in national parks when the method currently by the NPWS which employs professional hunters in helicopters is more efficient and cost effective? This method also has greater safety advantages as the particular sections of national parks are closed to the public during such exercises. I strongly agree with the five dot points in this section but these aims can best be achieved by a stronger and better financially supported workforce within the NPWS.

The next nine dot points are also vital and most will be answered below.

- Direct government action should not be limited to the establishment of national parks and reserves as these are inadequate without ongoing financial support through proper staffing levels, which can provide on-ground oversight and management.
- Threatened species listings and associated recovery and threat abatement are of themselves necessary, however the recognition of either recovery or threat abatement can sometimes only be undertaken by the provision of a financial outlay. Further into this submission I will outline efforts where such action can be of assistance to these ideals.
- Regarding regional and property vegetation plans. The main problem with vegetation retention is the issue of Private Native Forestry (PNF) and the serious and widespread damage it is inflicting upon the landscape. As this panel will be aware PNF can be undertaken by a landholder who is not required to undertake an

Environmental Assessment prior to the operation and if any threatened flora or fauna is noted during the PNF operation the landowner is not required to recognise any find. I have been involved with more than one PNF operation and both have destroyed endangered orchid species and as PNF is lawful, no action can be undertaken. I have undertaken more than one meeting with EPA representatives at Goulburn Street and Mt. Rae on the Southern Tablelands regarding PNF.

- Covenants whether altruistic or financially supported should be encouraged and supported by the occasional visit by OEH/NPWS staff, as these visits will ensure a better understanding and appreciation of landholders.
- Strategic land use planning should be targeted to ensure protection/survival for a particular species of flora or fauna which may be rare in a specific area or within the state.
- Education and persuasion should be recognised as only part of the overall problem regarding biodiversity conservation and must be supported by legislation. This legislation currently exists in the form of penalties for environmental damage but is rarely used even when abuses are obvious.
- Market based mechanisms regarding biodiversity conservation can only work with those features which can provide a financial return for the government body concerned. In my experience this applies only to the cute and cuddly or fierce and venomous. As my concerns are with orchids and terrestrial orchids in particular, I have never encountered any endangered orchid which can return an investment in time spent in its conservation. However I believe this is the very reason such species must be preserved.
- Biodiversity offsets are in themselves a good initiative, however those developers and other bodies (local councils) which are usually the proponents of offsets must be made to understand the like-for like component.
- I am yet to understand the value of self-assessment as opinions frequently differ regarding environmental values and the idea that any person or commercial entity should be able to self-assess or self-regulate is a recipe for conflict and environmental damage.

The following comments are based on almost 30 years of personal experience, some of which has been of a professional nature by the undertaking of Environmental Assessments for private entities, local government and NPWS. Some of these EA's have been conducted without charge and my consultation with local government and NPWS/OEH is extensive. Further comments on the points regarding the Guide to making a submission are solely focussed on environmental surveys and the method used for many.

The method of preference for EA's is known as the Random Meander Technique (RMT) and when referenced in a report is usually followed by these bracketed words, "as described by Cropper 1993" and in this context I will refer to surveys for orchids only. The method, which

I have often referred to in several written and personally presented submissions, is a method designed not to find orchids. It requires a random walk over the area proposed for development with usually one or more target species and in the Shoalhaven area this means only terrestrial orchid species, as there are no endangered epiphytic or lithophytic species in this local government area which are listed under the TSC or EPBC Acts. I believe when conducting a survey for a deciduous terrestrial orchid species the only viable method is to walk five metre transect lines as this distance is the total angle of view of the human eye. Any greater transect width is a guarantee that species will not be located. The RMT also requires a list of species located during the EA, a feature often noted by its omission in EA reports.

Reference to the NSW Wildlife Atlas is necessary to determine which species should be targeted and when said species should be in flower, however no cognisance of seasonal weather conditions is ever a feature. One local example of this flawed technique is a development of 537 ha and as per the RMT requires the establishment of several "control plots" to determine the occurrence or non-occurrence of the target species. In this case six 20 m x 20 m control plots were established and these amounted to 1.29% of the total development area. Therefore I believe, coupled with a random meander, the total area surveyed would not exceed 10%. I ask the panel to consider the effectiveness and morality of such surveys and consider a recommendation for the refusal of acceptance of an EA conducted in this manner.

Further reference to this EA notes the location of two individuals of the vulnerable species, *Cryptostylis hunteriana* (leafless tongue orchid). However this survey was undertaken during an extremely dry summer where the emergence of this and many other summer and autumn flowering species ranged between minimal and none and it is obvious the rainfall requirements of these species was not a consideration. It should also be noted that the two individuals located were considered to be expendable in favour of the development and of no loss to the overall population of this vulnerable species. However I contend if the next season is more amenable to flowering, many more plants would be located.

One other orchid species was not subject to survey and this was the endangered species *Genoplesium baueri* (Brittle Midge Orchid). Ten plants of this orchid occur within the distance imitations for survey from the proposed development site. Further to this at the same location and on the same day in February 2012, 21 individuals of the endangered *Neophema pulchella* (Turquoise Parrot) were also located. This species also was not subject to survey.

I have many concerns with the morality of some environmental assessments which have been conducted in the general Nowra area and the findings are listed below. All quotes are

from reports from experienced professional people. The first quote provides the name of the firm responsible for the work.

Apart from using a vehicle in an attempt to locate deciduous terrestrial orchids, the same person was unable to identify a common evergreen terrestrial species from leaf examination. There are only four evergreen terrestrial orchid species within the Shoalhaven Local Government Area; all are quite common and easily identified by a brief examination of the rear side of the upright leaf or by reading one of many books on native orchids, or accessing a native orchid website.

The specific field investigations for the Gunningah 2001 investigation (Appendix D) included:

- walked and driven flora surveys throughout the land which was the subject of that investigation (Figure 6), including the identification of plant community boundaries and dedicated surveys for threatened plant species known to occur in the general locality;
- dedicated and intensive fauna surveys including:
 - the use of Elliot traps, cage traps and pit traps for terrestrial fauna;
 - the deployment of Elliot traps in trees for arboreal mammal species;
 - spotlighting surveys throughout the Culburra UEA study area (*ie* the "subject land");
 - the deployment of harp traps and Anabat recorders for microchiropteran bats;
 - call playback and spotlighting surveys for nocturnal fauna species; and
 - diurnal surveys for birds, reptiles and other native fauna throughout the Culburra UEA site, particularly in areas likely to support threatened species or which contained resources of potential relevance for such species.

Flora survey techniques within the study area have included:

- driven transects through substantial parts of the study area, with the recording and identification of plant communities;
- extensive walked surveys to provide floristic details of plant communities, and to establish a comprehensive plant species list for various sites through the study area; and
- dedicated surveys for individual threatened plant species known to occur in the locality, and which could potentially occur on the subject land.

Those investigations involved a total of 40 person-hours on the subject site, utilising an accurate GPS unit to confirm and/or refine the vegetation types present. The surveys involved substantial walked and driven transects throughout the subject site, recording both vegetation characteristics and fauna habitat types, and opportunistically recording native biota.

The dedicated flora surveys of the study area in 2007-2008 (Tables 1 and 2; Appendix D) included:

- walked and/or driven surveys through most of the subject lands, with the collection of supplementary species lists (Appendices G and H);
- the mapping of vegetation community boundaries by GPS; and
- the undertaking of flora quadrats and surveys at various locations (Appendix D), including dedicated searches for threatened flora species.

Orchidaceae	
<i>Caladenia alata</i>	-
<i>Cryptostylis</i> Sp. (Leaf only)	A Tongue Orchid
<i>Cryptostylis subulata</i>	Large Tongue Orchid
<i>Cymbidium suave</i>	Snake Orchid
<i>Dendrobium speciosum</i>	Rock Lily
<i>Diuris sulphurea</i>	Hornet Orchid
<i>Spiranthes australis</i>	Austral Ladies Tresses

If it is intention of this review panel is to provide some mechanism to ensure biodiversity assurance it must first look at the basic level of environmental assessment and ask if the process is realistic and those charged with the responsibility of undertaking a fair and honest environmental assessment are suitably qualified.

Several matters concerning EA's relates to the identification of epiphytic and lithophytic orchids. It concerns a request for identification of two orchid species located during an EA of a site in the Blue Mountains. The request came to me from the person undertaking the EA who had been provided with my contact details from a person known to me. The orchids I was asked to identify were *Dendrobium speciosum* and *Liparis reflexa*, two of the more common lithophytes in NSW. The person asking the question is the product of a tertiary institution which proves that orchid knowledge is extremely limited in their syllabus. Unfortunately this is a common experience even with those who have a science degree.

Another instance involves the inability of a well credentialed scientist to identify of *Genoplesium baueri* during an EA and another similarly qualified scientist to identify *Cryptostylis hunteriana*. These failures could have led to the destruction of 72 plants of *G. baueri* and 20 plants of *C. hunteriana*, situations which with proper instruction should never have arisen.

Orchidaceae

<i>Acianthus fornicatus</i> †	Pixie Caps
<i>Caladenia picta</i>	Caladenia
<i>Caleana major</i>	Large Duck Orchid
<i>Calochilus</i> sp.	Beardy Orchid
<i>Cryptostylis erecta</i>	Tartan Tongue Orchid
<i>Cryptostylis subulata</i>	Large Tongue Orchid
<i>Cymbidium suave</i>	Snake Orchid
<i>Dipodium punctatum</i>	Purple Hyacinth
<i>Orthoceras strictum</i>	Horned Orchid
<i>Pterostylis concinna</i> †	Trim Greenhood
<i>Pterostylis longiflora</i>	Tall Greenhood
<i>Pterostylis nutans</i> †	Nodding Greenhood
<i>Pterostylis parviflora</i>	Baby Greenhood
<i>Thelymitra ixioides</i> †	Spotted Sun-orchid

The above orchid species list relates to a development valued at \$500M and is to be constructed south of Nowra. The list contains terrestrial species located during the survey. The highlighted species may be endangered with one, the bearded orchid only listed as "Beardy Orchid". However as the plant remains unidentified it may be the endangered species *Calochilus pulchellus* (Pretty Beard Orchid), which is limited to less than 30 individuals, all of which are endemic to the Shoalhaven area. An identification should have been conducted and only ignorance or laziness can be given as a reason. The second species may also have been mis-identified, as another autumn flowering critically endangered species *Speculantha (Pterostylis) ventricosa* exists one kilometre from the subject site. Despite habitat on the subject site being listed in the EA as being suitable for the endangered species, no survey was conducted. I stress, both surveys quoted were assessed by NSW Planning and considered satisfactory. In the same EA report *Galium australe* was listed as an orchid species when it is from the family Rubiaceae. Is this a case of a lack of knowledge or a lack of care?

I recently attended a Saving Our Species event and while the overall program and intent was excellent, any move to save our species must begin with actually learning to recognise those species when they are encountered.

In recent times I have also participated in the PAS programs; however the focus on conservation of some orchid species was diverted simply due to a lack of funding to undertake programs to protect habitat containing these species. In one instance a habitat reduction burn over a small area of 500 m x 200 m was the only action necessary.

Objects and principles for biodiversity conservation:

It is essential there should be a uniform set of conservation legislation, objectives and procedures throughout Australia. During the 2009 Review of the EPBC Act I and others asked for the Review Panel to recommend such action, however this common thread appears not to be a consideration thus far.

This initiative should also be applied to the sharing of scientific knowledge between state and commonwealth environmental bodies and the listing of species on their various data bases. This feature should include the requirement for a state body such as the NSW Scientific Committee to immediately provide the Commonwealth Threatened Species Scientific Committee with submissions for proposed listings. In some cases a time lag of three years lapses before the TSSC is able to begin their assessment process. This in effect leads to a four year wait before a final decision is made, which in some instances can mean the obliteration of a species or its habitat before a formal listing and protection is effected. In my experience the “precautionary principle” is rarely enacted or considered. I firmly believe the general environment can be greatly improved by better communication between all state bodies working with similar legislation and to a similar objective. Aspirational goals can only be realised by formal legislation and be in line with international conventions and obligations. I point to the proposal to log a World Heritage Area in Tasmania.

It is quite clear we are failing our current biodiversity objectives and evidence abounds regarding this and despite references to two other states this principle does apply to all states and territories. The proposal to permit hunting in national parks must rank as an affront to any concept of a biodiversity conservation ethic.

- The proposal to re-introduce cattle grazing into the Victorian Alpine Park, a park nominated by that government as the “Most Pristine Alpine Park in Australia”.
- The destruction of habitat containing endangered orchids near Charmhaven in NSW. The orchids in question were in a protective weldmesh cage and when destroyed by a truck containing concrete the penalty issued was an ineffective written warning which as a deterrent is ineffective . If we are unable or unwilling to enforce current legislation how can any person have confidence in any authority charged with the protection and enhancement of our biodiversity?
- Any biodiversity conservation programs either currently in effect or proposed should have some oversight by and support and advice from the OEH. This will enable a better relationship between official and non-official groups.

Conservation action:

Threatened species programs, particularly those being considered or undertaken on private land require efforts from several fronts. One of course is the official means via NPWS or OEH

personnel. Another is via local council land care groups and another is to involve local orchid societies. Many members of these groups are regular bush walkers and photographers and have a knowledge of *in situ* orchids which is usually in excess of many authorities and this knowledge must be put to its best use. Most would readily take part in surveys or provide information regarding orchids on properties, which by virtue of being privately owned are under normal circumstances not available to them. Again these actions will encourage a greater interest in the values of some properties and give all parties a common interest.

I would envisage these activities to include a range of local "nature reserves" which in many instances have not been fully surveyed for orchids and may have been declared for the purposes of a fauna species or a rare shrub without further knowledge being provided or sought.

Most of the dot points under this heading can be catered for by the above paragraphs and I feel sure the Nature Conservation Trust will welcome these as if habitat is protected, all species within this habitat will continue to thrive. However, with terrestrial orchids and some shrubs, the greatest threat is via the redistribution of water, whether to or from a site. Erosion is always a consideration but the maintenance of hydrology is most important. This is where an authority can be more directly involved with in-house scientific expertise used to the best advantage, with an initial input and subsequent oversight and advice.

Government can best determine conservation priorities by providing a list of the most endangered species of flora and fauna which will already be listed on the NSW Wildlife Atlas but should be provided with advance notice of any development proposed for the area. This should be done regardless of the alleged importance of said development.

I am not enamoured with the general biobanking legislation as too often the like-for-like provision fails to be implemented. This is one area which requires a more hands-on approach.

The effectiveness of conservation programs can be best evaluated by regular monitoring by qualified persons and this will mean the provision of proper funding, as the altruistic means will not be suited to all programs. To ensure these programs are properly conducted a proper recording system should be instituted and these results should be added to local NPWS records.

Tradeoffs should be assessed by determining the environmental values of both the land to be traded and the land proposed for the trade.

It is apparent little forward planning is undertaken as all too often these matters are a last resort. One example of this was the rediscovery of an endangered orchid species not located during an EA but the first consideration of the developer after learning of this

situation was to remove all plants and relocate them to an unknown site despite little information available about habitat and no information regarding the pollinator upon which the orchid relied solely for its survival. At that time no information regarding a specific pollinator was available despite the orchid being known since 1803.

Current practice is poor and begins with the manner of the EA, mentioned regularly in this submission. It also fails when the development project approval can be decided by ministerial discretion. I point to legislation regarding land clearing in favour of the Shooters Party which will destroy habitat for the Eastern Pygmy Possum. While the “ministerial discretion” clause does not apply, this legislation will have the same effect as habitat clearing on the NSW North Coast which will displace Koalas from their habitat and further increase the population density in other areas, some of which are adjacent to residential areas.

Conservation in land use planning:

Current arrangements regarding biodiversity values lack the requirement of a long-term assessment. I am particularly concerned with terrestrial orchid species as almost all are deciduous with many subject to seasonal flowering variations and these two features are rarely taken into consideration by those who undertake EA's. Almost all EA's are undertaken in one season, regardless of whether the season may be favourable. Some genera, Midge Orchids (*Genoplesium*) are known to only flower well 4-6 weeks after a significant rain event. This means 10 mm–5 mm of rain in a 24 hour period. If this rain does not fall then flowering will be either severely limited or non-existent. Furthermore if rain falls later than the known flowering trigger point then the likely outcome will be a series of flower stems from which no flowers will be produced and species identification is therefore not possible. Other genera also have a similar rainfall requirement (*Cryptostylis hunteriana* and other saprophytic species), many *Prasophyllum* species and even some more common *Pterostylis* species.

Therefore it is essential EA's for these species to be conducted within a suitable season and if any forward planning is undertaken to determine what species may be affected, the so-called streamlined approach to planning must be cognisant of these requirements. It is also essential those charged with undertaking surveys and those who read and assess reports for this process should be aware of these requirements. This is the only method which should be used to determine areas of high conservation value at a landscape scale and the only method whereby I would feel confident of a correct result. However given my experience with assessments of this type I will have little confidence if this process is to be undertaken by private certifiers without the oversight of a knowledgeable NPWS or OEH person.

Conservation in development approval processes:

All previous comments should be noted regarding this section. There are several reasons for my cynicism regarding this process as this facet of the development approval process is the most abused, with short cuts, poor orchid knowledge and recording normal features. Proof of this should be evident in this submission and I am constantly dismayed by the lack of morality. The RMT is as mentioned the most used method of survey and is so due to both the time frame required or allowed for a survey and also because it provides the least expensive means to complete said survey. However with some developments being costed at \$500M I feel a greater emphasis should be placed on achieving a correct result and one of which the person responsible for the survey could honestly say it was a job well done.

I am also critical of those in authority who are charged with the task of assessing reports prior to development consent approval being granted. One example was an EA of 31 ha of bush land which was within the required radius of five threatened species. Two were immediately dismissed as habitat unsuitable; however one species at the time was not known to have an accepted habitat type. The 31 ha was surveyed in "three person hours", yet no questions were asked by the determining authority if this was satisfactory. None of the species listed as "target species" would have been in flower or even visible above ground at the time this survey was undertaken.

Abuses of the land clearing legislation can be negated by the initiation of a Private Native Forestry operation and this has been previously mentioned. One operation at Mt. Rae on the NSW Southern Tablelands is being undertaken in an Endangered Ecological Community (EEC), Southern Tablelands Basalt Forest and apart from removal of an EEC and destruction of habitat for an endangered orchid, *Diuris aequalis* (Buttercup Doubletail) the operation is legal and an EEC and some orchids are being destroyed for firewood. If confidence in the environmental approval process is to be a desirable feature, then PNF must be removed as a legal process, as scientific data was never a feature of this or other PNF operations.

I am, aware this process came into being via a previous state government with changes made to the Native Vegetation Act via a minister later found to have acted corruptly but PNF remains a legal operation and is a process which undermines any concept of fairness and attention to any interpretation of environmental responsibility.

Earlier comments should be noted regarding like-for-like in the biobanking process.

I would welcome a single integrated approach to the approval of all forms of development, on the proviso about proper assessments, the time frame in which they are conducted, the validity and credentials of those undertaking the assessment and some form of expert authoritative oversight. If an honest EA is undertaken in the full knowledge of habitat requirements for any and all possible threatened species I would recognise this as efficient and suitable for all threatened species.

To date the regulatory system does not afford adequate protection for all species and the proper tertiary training of persons charged with EA's must become a reality, regardless of species type. A stronger form of licensing must be instituted with rigorous examination to determine suitably qualified persons are undertaking surveys for our threatened species, whether that be orchids, frogs, grasses, trees or EEC's. One feature of licensing which must have a better oversight is the issuing of permits to collect and sell native plants. I have been the recipient of one permit which saw a very large plant of *Dendrobium speciosum* removed from a tree (also removed) in the grounds of Wollongong Hospital to enable the construction of a surgical wing. Sale of divisions of this plant raised \$3500 for the hospital. This plant was placed in the tree by a private person over 50 years prior. However in contrast to this environmental operation I should mention a nursery in Victoria was selling divisions of *Dendrobium speciosum* with NPWS licence tags attached, however this form of *D. speciosum* is only known to occur in Queensland. To the best of my knowledge, no action was taken despite the obvious contradictions and licence abuses. The "caught in the act" policy should not be the only means used for a prosecution and at least ask some questions regarding the origin of these orchids should have been posed to the retailer.

Some impacts are unable to be offset and herein are the dangers of development regardless of the environmental impediments and the risk of an EA to suit the developer. If threatened species and habitat are to receive their legislated protection the impact on the development should not be the prime consideration.

I feel it is not critical that offsets must be located side by side with the development but must be of a similar habitat type and having the capacity to contain the same species which may be lost. By this I mean a required offset to a development at sea level must be at sea level and the same should apply for an offset for a development at altitude. I use the Maules Creek Mine as an example.

Any self-regulatory scheme is doomed to fail as this is when threatened species become expendable in the face of a development.

Wildlife management:

I feel licences should be issued to enable scientific knowledge of native flora and fauna. These are essential for the purposes of determining a possible new species or for the collection of seed capsules for the Millennium Seed Bank and I am been fortunate to be involved in both fields. However I have some reservations with collection for the purposes of recreational activities unless it is controlled, if that is possible. I also feel commercial keeping of flora and fauna should be limited to those species which may be adversely impacted by a proposed development, with the proviso that the species concerned can be collected without increasing the pressure on wild populations.

Wildlife rescue and rehabilitation should be encouraged and is normally undertaken on an altruistic basis by qualified persons and groups and where possible the majority of these rescued animals are returned to the wild with only a few passed on to an institution where re-introduction is unwise or occasionally not possible.

Animal and plant harvesting should not be seen as a commercial activity and should only be permitted as part of a conservation process.

There are several avenues to limit the conflict between wildlife and humans. These are obvious and usually take the form of signs and gates to limit access to certain areas but should be supported by cameras and site visits by NPWS and OEH staff or local council rangers. Another means is to disallow hunting in national parks and NPWS persons should not be asked to monitor this on-ground activity. Control of feral animals with professional shooters in helicopters and targeted baiting are more cost effective and produce quantifiable results.

Threats to biodiversity from collection are currently reduced from what they once were, and one bulldozer can do more damage to a site in 10 minutes than years of illegal collection. I am aware of a federal program to examine the importation of plant matter, which could lead to the introduction of yet another weed species into Australia and of the many existing mainly legal introduced pests, both flora and fauna.

The NPW Act is essential in regard to a positive change with the welfare of native animals and is best supported by publicity. This can be in the form of brochures/posters and a wider distribution of information via advertising throughout the general media outlets and perhaps an occasional visit to a local orchid group, reptile club or similar hobbyist group as a speaker. This form of action will certainly lead to a better understanding between average citizens and NPWS/OEH personnel.

As far as NSW is concerned current provisions for marine mammals is satisfactory.

The current framework for wildlife licensing, offences and defences is satisfactory and understood.

Information provisions:

The provision and sharing of information is essential to inform the unknowing and keep informed those who are already active in the area of conservation. This information can also be provided to various orchid groups by contacting the central bodies, such as the Orchid Society of New South Wales at www.orchidsocietynsw.com.au and the Australasian Native Orchid Society at www.anos.org.au. Both have national conservation officers and informed

members at regional level and would appreciate the opportunity to participate by the provision of and sharing of information.

I am aware of the NSW listing provisions as I have been responsible for several nominations regarding orchids. The only problem with the process is the length of time between a nomination and a final determination. NSW also has the only Environment Hotline in Australia which is specific to habitat clearing, although PNF negates some of the intended objectives with its contradictory and overriding legislation. Most other states have a pollution hotline which is not specific to bush land and Victoria lacks either.

I have previously mentioned the Save Our Species program but feel it would benefit from more authentic EA's in order to provide a greater overall picture of the biodiversity and its contents the program is endeavouring to save and protect. Again this may be an area which will benefit from contact with previously mentioned hobbyist groups.

I am also familiar with the OEH as I have had a personal involvement with that office (Queanbeyan) since 1999 and in more recent time, Hurstville and Goulburn Street, via the PAS programs. I also have a very close relationship with local NPWS offices. Possible problems with the OEH come from a funding reduction and that the department was once a stand-alone department but in recent years became a section of Premier and Cabinet and now is secreted within NSW Planning, which once was the NSW Environmental Planning and Assessment Department. More recent changes have omitted the words "environmental" and "assessment", which to me gave the impression of a reduced level of importance and authority.

- Regarding values either monetary or intrinsic, it is my belief my concerns regarding orchids are not shared by the majority, as orchids (terrestrial species) and their conservation will come at a non-redeemable cost to the authorities. I point to *Wollemia nobilis* (Wollemi Pine) as a classic case where any financial outlay has been returned to the extent the plant has been a profit making addition to the NSW flora list. I know of no terrestrial orchid species could emulate that success but this is the very reason these species should be preserved, simply due to the unique and often endemic nature of many species.
- Any data relative to biodiversity should be maintained by state conservation authorities and can then be distributed to hobbyist groups with some control exercised on what the conservation agencies might sensitive information.
- Contact with previously mentioned hobbyist groups is another way to improve data knowledge on both sides and local NPWS persons should initiate these contacts to

gain this information in the short term and impress upon these contacts the importance of both the provision and controlled sharing of such information.

- The threatened species listing process is of critical importance in guiding conservation action and key threatening processes must receive due attention to enable such action.
- It is important threatened species listing decisions not be decoupled from recovery planning or regulatory processes. Without all available information these undertakings cannot be implemented to a satisfactory degree.
- National and state threatened species list could be amalgamated to show the level of threat within a state or territory by the simple means of adding NSW, Vic, Old etc. Using such a simple system will provide greater information to all interested persons more easily than accessing all state and territory data bases. This feature will require a short time frame to establish but provide long-term ease of access and all states and territories can then agree to use the same qualifications for all listings. This is one area where I would agree with a one-stop-shop approach.
- The recognition and listing of critical habitat is essential for proper conservation of several orchid species and also some mammals and should receive greater importance as the term “critical habitat” implies.
- Any data available from private persons should be collected and as previously mentioned, approaches to hobbyist groups, as members of these groups generally have greater free time to spend to enjoy their interests and approaches to these groups will be of benefit for several reasons.

Conclusions:

I welcome the opportunity to participate in this review and it is obvious there are some areas regarding the recognition, conservation and protection of our biodiversity which require attention. Any attempt to weaken existing legislation in favour of any lobby group will result in further destruction of the already receding wildlife habitat. I also call for a review of the method of environmental assessment and greater attention to the ability of persons undertaking environmental assessment work in specialist areas where they obviously are not qualified.

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