



## Mis-representation of cost – An illegal practice

Be aware, when next you get a quotation for an ecological survey, there are a number of consultants that are making false or misleading representations about the products they supply.

Essentially a potential client approaches a number of consultants for a quotation to conduct a flora and fauna survey suitable to accompany a planning application. The potential client has a reasonable expectation that the consultant is aware of the type of data required and is able to collect it, analyse it and interpret it in accordance with the requirements of the regulatory agencies. It is a bit like asking an electrician to install a power switch. You do not expect to tell him it needs to be connected to the powerboard.

What happens is, the consultant quotes for a substandard job at a cheap price, in order to win the job, knowing that the regulatory agency will pull the clients up and ask for more information. Apart from lengthening the planning process, the client needs to pay for additional work that should have been included in the initial quote.

Although I have suspected that so-

me companies were doing this it wasn't until recently that someone actually admitted it while talking to me on the telephone.

This practice is illegal under the [Trades Practice Act 1974](#). [Section 52](#) states a corporation shall not "engage in conduct that is misleading or deceptive or is likely to mislead or deceive." [Section 53](#) is even more to the point, it states corporations shall not "falsely represent that good/services are of a particular standard, quality, value or grade" or "make false or misleading representation with respect to the price of goods or services."

Why is this important to you? Repeated visits and constant revisions cost you money and delay the time it takes to complete a project.

Why is this important to me? Because although I provide a comprehensive fixed price quotation clearly specifying what you get, I tend to lose tenders, because I am perceived too be more expensive.

Anyone aware of this practice should report it to the [ACCC](#). You can make a [formal complaint](#) by telephone or over the Internet.

## Dangers to outside workers - Lightning

As I sit here for the first time in years, confined to the office due to heavy rain, I decide to collate what I can about a pet hate of mine, lightning. Its not that I am scared of it, it is just that I have a healthy respect for it and consider it a significant risk when working outside.

Last year while monitoring the recovery of a grassland near Werribee I noticed clouds forming to the north over the You Yangs. The day was sunny and there was potential for a storm so I kept a wary eye on them. What had me worried was the apparent churning in what appeared to be relatively small clouds. For people not familiar with the terrain, Werribee occurs on relatively flat basalt plains west of Melbourne. The You Yangs is the

only pimple on the plain and only reaches 352m in height! Yet here I was apparently watching orographic uplift, i.e. where air is forced upward by the topographic features it encounters.

At first I continued working, not considering the rapid cloud formation 10-15 km to my northwest a

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## Dangers to outside workers - Lightning

risk, but progressively as the cloud darkened I began debating about how sensible it was being out in the open. I packed up and walked to the car and waited.

Nothing happened, for what seemed to be a long time, but in reality was probably only 10-15 minutes, so I decided to get back to work. I grabbed my rucksack and started walking back to the quadrat.

About 100m in however, I began feeling very anxious and had the distinct feeling that the hairs on the back of my neck were erect. After 1-2 seconds I capitulated and started walk swiftly back to the car. Within seconds of me getting in all hell broke loose. It was a bit like that scene from Close Encounters when the spaceship breaks through the atmosphere! Lightning everywhere, rain pelting down and a veritable hurricane. I decided to drive away from the on-coming tempest, only to reach a locked gate. I'll be buggered if I was going to get out in that!

Did I mention I am not scared of lightning? Well I lied, I practically @!#& myself there and then. The storm ran straight over my car towards Port Phillip Bay and was gone in minutes.

I got out and looked north in amazement. The sky was clear, the wind had calmed down and everything had that 'just rained' smell. I toyed with going back to work but paused at the sign of new clouds over the You Yangs.

Without dragging the story out anymore I eventually got through all the gates, but only after several more lightning storms blew over me and the weather turned to constant rain. Melbourne weather, four seasons in one day!

Well that's my story. The purpose behind telling it was to reiterate how easy it can be getting caught in the wrong place. I remember clearly checking the Bureau of Meteorology Website that day for weather updates and listening to the radio – in the end it was constant vigilance and trusting my instinct that prevented something more serious from occurring.

### When should you seek cover?

You should seek cover if you see threatening clouds developing, see lightning or hear thunder. A good rule of thumb is seek cover if the time between seeing lightning and hearing the associated thunder is less than 30 seconds – if you don't, you run the risk of being hit by lightning!



## SEEK A SAFE LOCATION

### What to do in a lightning storm

If there is a building nearby get inside quickly. If the time between seeing a bolt of lightning and hearing thunder is less than 30 seconds run don't walk!

If no buildings are nearby and a closed vehicle is available, get inside but avoid touching anything metal and make sure all the windows are shut. Do not drive if you are in the middle of a storm, because if the car is hit you may be temporarily blinded, which could cause you to crash.

If caught outside in a lightning storm, crouch down and tuck your head between you knees to avoid being the tallest object. Do not lie down. If you are in a group, space yourselves out so there is about a metre between each person. Avoid metal objects or isolated trees.

If in a building or car do not go outside for 30 minutes after the last bolt of lightning is seen or thunder clap is heard. If outside do not move until the time between the lightning and thunder exceeds 30 seconds. If possible wait for 30 minutes before standing up.

### First Aid for someone struck by lightning

If someone in your party is struck by lightning attend to them immediately. If they are not breathing, or their heart has stopped, give them Cardiopulmonary Resuscitation (CPR) – treat those people who are unconscious first. Once basic first aid has been given, arrange the injured to be transported to hospital.

This article was based on the following links

- 🔗 [New York State – Lightning Safety Tips](#)
- 🔗 [NOAA Home Page – Lightning Portal](#)
- 🔗 [NWS – Medical Aspects of Lightning](#)
- 🔗 [BoM – Severe Thunderstorm Safety Tips](#)

## Power, control and product branding

There has been a recent effort to establish a peak industry body of environmental consultants within Victoria. A flier circulated in March 2007 called for ecological consultants to establish a Victorian branch of the [Ecological Consultants Association of NSW](#) (ECA).

According to the ECA website, the organisation was formed 1999 after 60 consultants came together to discuss the formation of a professional association to represent the interests of practicing ecological consultants. The goals of the organisation are clear and seem well founded.

On face value the establishment of a peak body for practicing consultants in Victoria does not seem to be to bad an idea but once you scratch away the veneer some serious questions need to be answered.

Why the sudden push into Victoria? Well it was not really a push but an invitation. A Victorian consultant approached the ECA and convinced them that there was a need to establish a similar organization in Victoria and that a regional branch of the ECA would be a good idea. I think the ECA became involved in good faith but they should have considered the motives of the consultant before proceeding.

As it turns out the consultant does not represent the broader ecological community in this state and has made no attempt to gather interested ecological consultants to discuss the need, structure or goals of a peak body. I noticed, when the flier eventually appeared, no one was willing to put his or her name to it.

What are the objectives of the people making this push? Personally I think it's a combination of power, control and product branding. If the protagonists really wished to establish a peak organisation they would declare their interests, invite all and sundry to a conference/meeting and let nature take its course. A peak body is needed in Victoria, but its establishment should be based on what the broader ecological community in the state wants, rather than the desires of a few. The *ECA of NSW* did it the right way, so should we.

The ECA is not the only precedent for this. In 1991 the [Australian Network for Plant Conservation](#) was established after delegates attending a conference on "Protective custody? - *ex situ* plant conservation in Australasia" voted to establish that organisation.

Other Reading  
[Ecological Society of Australia.](#)

## Questions & Answers

"Should the ground watertable be lowered by up to 3 metres under salt marsh vegetation? I presume the salt marsh would deteriorate in time without any remedial action, if so, when would the likely deterioration effects on the salt marsh be evident and would you recommend an adaptive management plan be implemented to combat this deterioration?"

Changes to the hydrology of any wetland will have profound impacts on the component taxa. Saltmarshes are no different. I would expect that impact on the plants would be immediate, although may not become apparent for several years. Once dieback becomes apparent the likelihood of reversing the trend would be slim. The impacts will also vary depending on the type of saltmarsh, what species are present and the level of degradation already present. The response of the vegetation to an adaptive management plan is difficult to predict without specifics, suffice to say unless it includes considerable levels of inundation to compensate for the lower water table, I would not expect too much. If you are talking about coastal saltmarshes, you should also consider the impact of

reduced waterflows on the adjacent estuaries and littoral zone. The following links have some useful documentation on [saltmarsh dieback](#), [groundwater dependant ecosystems](#)<sup>PDF</sup> and [hydrological impacts on coastal ecosystems in South Australia](#).<sup>PDF</sup>

"What impact are the many blue gum plantations in Western Victoria having on groundwater levels for farmers who now have plantations next door to them? They want to know why spring fed creeks which run out of the blue gums, have gone dry for the first time in history."

You would expect that *Eucalyptus globulus* (Southern Blue-gum) would have a bigger impact on groundwater than either pasture or indigenous vegetation. Work in Mettler (WA) showed that groundwater under pasture increased by 0.1 m/yr compared to decreases of 0.11 and 0.33m/yr under blue gums ([LINK](#)). This trend is repeated in many studies readily accessed on the [Internet](#). Detailed studies by CSIRO, however, "established that groundwater usage by plantation trees varies greatly depending on

## Questions & Answers, cont'd

conditions". Factors they believed influenced water use in their sites in South Australia were rainfall, accessibility of groundwater, soil depth and fertility and plantation age ([LINK](#)).

Commonsense tells you that planting trees of any kind will have an impact on groundwater, especially when planted in bulk, but the ecological significance of the impact will depend on the original vegetation present. If you plant trees in historically forested areas that had been cleared, groundwater usage will be closer to 'normal' compared to pasture. Plant trees in grassland areas and... well you get the point.

'The Drought' is another consideration. Reduced rainfall in some areas may explain lower water tables due to reduced groundwater recharge. This however does not appear to be the case for [Casterton Showgrounds](#) in Western Victoria. I checked the Bureau of Meteorology website, and over the last 10 years, this town has had just as many years with above average mean annual rainfall as it has had below average mean annual rainfall. Go figure.

Suffice to say there are no easy answers here. Yes, blue gums could have had an impact on the water table. In all probability they most likely did, especially since the water table was shallow

enough to have spring fed creeks. How big an impact on the local groundwater systems is difficult to know without detailed studies. The impact on the local ecosystem is also debatable, as you need to consider the current landuse compared to conditions prior to European settlement.

**"What sort of changes might we expect to see in our local grassland communities as a result of climate change and as land managers what should be our response?"**

Putting it simply, climate change will result in shifts in the minimum, maximum and mean rainfall and temperature regimes within any region. The ability of grasslands, or any vegetation for that matter, to tolerate these changes will be dependant on its' component taxa. The greater the diversity of taxa present the greater the resilience to change. As one species become less adapted to an area, say due to lower rainfall, another will replace it. So the simple answer to your question about what you should do as land managers as a response to climate change is '*manage for biodiversity*'.

The World Wildlife Fund has an interesting paper on this subject called '*Grasslands at a crossroads: Protecting and enhancing resilience to climate change.*' It is worth a read ([LINK](#)<sup>PDF</sup>).

## Don't ask for financial advice, you won't get it!

I have completed the survey and you now know the extent of indigenous vegetation on your property, its habitat score and consequently the habitat hectares present. You are hoping to become involved in BushTender or BushBroker, so you have me calculate the potential gain that you could achieve if you fence the area, spray the weeds and control the rabbits. My report provides you with all the relevant data and outlines how the two schemes operate.

The next questions are simply. Which scheme is better for me? What price can I sell this potential gain for? When should I sell? Simple questions, yes, but apart from providing you broad explanations how net gain trading works I would be breaking the law if I provided you with specific financial advice.

The reason is that according to the [Corporations Act 2001](#) I need to have an Australian Financial Services Licence to provide this type of advice. Essentially BushBroker is the same as the Stock Market. This did not really hit home for me until I saw parallels between the trading of shares and trading in gain. Consider for example, I

suggest that you hold off selling your vegetation gain until the market matures, only to find that the initial prices were significantly higher than what you were eventually paid. This advice may cost you millions. Trading in any product involves an understanding of market forces and involves a fair amount of risk. Only someone with the appropriate training is meant to provide this advice.

The regulation of the Financial Services Professionals (FSP) is conducted by [Australia Securities and Investment Commission](#). Their site provides a wide range of resources, including a database of [Authorised Representatives](#).

Although it is unlikely that a FSP would be familiar with the nuances of net gain they would be better able to weigh the pros and cons of financial trading, the optimization of profits (if this is your objective) and the minimization of tax obligations, than I would.

Further Reading  
[Australian Financial Services Directory](#)  
[Financial Planning Association of Australia](#)

# Common terms used in conservation

There are a lot of terms that get repeated in technical reports that are used incorrectly or in the wrong context. The following list contains some that are commonly encountered, accompanied with definitions and notes on usage.

## International Treaties

**Bonn Convention.** *n.* 1. *treaties.* a convention on the conservation of migratory species of wild animals signed by the Government of Australia at Bonn on 23 June 1979.

**CAMBA.** *n.* 1. *treaties.* an agreement between the Government of Australia and the Government of the People's Republic of China for the protection of migratory birds and their environment signed at Canberra on 20 October 1986.

**JAMBA.** *n.* 1. *treaties.* an agreement between the Government of Australia and the Government of Japan for the protection of migratory birds and birds in danger of extinction and their environment signed at Tokyo on 6 February 1974.

**RAMSAR.** *n.* 1. *treaties.* a convention on wetlands of international importance as waterfowl habitat signed by the government of Australia at Ramsar, Iran, on 2 February 1971.

## Vegetation Classification

**Ecological Vegetation Class.** *n., pl. -es.* 1. *conservation.* An ecological vegetation class consists of one or a number of floristic communities that appear to be associated with a recognisable environmental niche, and which can be characterised by a number of their adaptive responses to ecological processes that operate at the landscape level. Each ecological vegetation class is described through a combination of its floristic, lifeform and reproductive strategy profiles, and through an inferred fidelity to particular environmental attributes. (NRE 1996). **usage.** Commonly abbreviated to EVC or EVCs.

**Floristic community.** *n., pl. -ies.* 1. *conservation.* A floristic community is an aggregation of floristic sub-communities, which share a common core of species, but with a lower (subjectively chosen) level of floristic homogeneity than a floristic subcommunity. A floristic community is typically considered to reflect the vegetation's response to perennial environmental and/or biogeographic factors at and above the landscape scale, with the term landscape taken to mean the combination of four or more adjacent topographic features (eg. Ridge/ exposed slope/ drainage line/ protected slope). These influences include variations in geology, soils, minor altitudinal changes, landform and aspect. (NRE 1996). **usage.** The name is treated as a binomial with the floristic community component being presented before the EVC component, and is italicised, e.g. *Western Basalt Plains Grassland* and *South Gippsland Plains Grassland* (EVC = Plains Grassland).

**Floristic subcommunity.** *n., pl. -ies.* 1. *conservation.* A floristic subcommunity comprises vegetation from a range of sites, which share a high

(subjectively chosen) level of floristic similarity. These aggregations of quadrats may relate to different temporal phases of floristic communities (such as seral stages following fire), or the differences arising from a transient annual flora or, can be mediated by microclimatic variations below the landscape scale across localised landscapes which are related to position on the slope or proximity to another floristic community. (NRE 1996).

**EVC Complex.** *n., pl. -es.* 1. *conservation.* A vegetation mapping unit with influences of two or more defined EVCs that cannot be differentiated at the site scale (DSE 2004).

**EVC Mosaic.** *n.* 1. *conservation.* A vegetation mapping unit containing two or more defined EVCs that cannot be differentiated at the scale of mapping (DSE 2004).

## Restoration vs. Revegetation

**restoration.** *n.* 1. *conservation.* the act of restoring, or attempting to restore, the original vegetation within an area and the ecological processes required to maintain it. **usage.** existing government policy and legislation within Victoria relating to biodiversity conservation identify the idealistic objective of 'revegetation' programs to be the reinstatement of the vegetation to a condition equivalent to what it was before European settlement (c1750).

**revegetation.** *n.* 1. *conservation.* the act of replacing cleared vegetation. **usage.** care should be made to distinguish between revegetation and restoration. Revegetation does not imply that indigenous species appropriate to the vegetation types that originally occurred in an area will be used. Restoration however implies that the original vegetation, where this is known, will be restored.

**revegetate.** *v. revegetated.* *adj.*



*A candidate for restoration or revegetation?*

## Taxonomic Rankings

**taxon.** *n., pl. -xa.* 1. *taxonomy.* a taxonomic group of any rank .

**genus.** *n., pl. -nera.* 1. *taxonomy.* a group of species that are morphologically and/or genetically similar.

**species.** *n., pl. species.* 1. *taxonomy.* a group of individuals with genotypic and phenotypic similarities, which breed freely among themselves (or have the potential to do so) and are reproductively

## Common terms used in conservation, cont'd

isolated from other groups. **usage.** trends in recent literature have been to use the term *taxon* (pl. *taxa*) instead of *species*. This is because the term *species* represents a specific taxonomic level and recent taxonomic, ecological and conservation research has involved work above or below this level. The term *taxa*, for example, can be used to represent a collection of cultivars, subspecies, species, supraspecies and unpublished / undescribed entities, whereas the term *species* specifically refers to only one of these groups and the author would need to specifically list those groups that were being discussed. **abbr.** *sp.* (singular) and *spp.* (plural).

**subspecies.** *n.* 1. *taxonomy.* a group of individuals that form a distinct group below the level of *species*. **abbr.** *subsp.* or *ssp.*

### Latin terms and abbreviations

**usage.** It is convention to italicise latin words, including scientific names, within technical reports. Scientific names are always italicised regardless whether the name is actually of latin origin or not.

**et al.** *abbrev.* 1. *latin.* *et alii*, and others. **usage.** Commonly used in citations to abbreviate a list of two or more authors, e.g. Cropper *et al.* (2007).

**ex situ.** *adj.* 1. *conservation.* out of the original situation, pertaining to the maintenance of live plant specimens in gardens or out of the wild.

**in situ.** *adj.* 1. *conservation.* in the original situation, pertaining to the maintenance of plants in the wild.

**s.s.** *abbrev.* 1. *latin.* *sensu stricto*, in the strict sense. **usage.** In nomenclature, used as a postfix to a latin name, for a taxon that has been split, to represent the subset that retained the original name.

**e.g.** *Acacia acinacea s.s.* **antonym.** *sensu lato.*

**s.l.** *abbrev.* 1. *latin.* *sensu lato*, in the broad sense. **usage.** In nomenclature, used as a postfix to a latin name, for a taxon that has been split, to represent the original unsplit group. Used to flag old databased records where it is not clear what was actually seen. **e.g.** *Acacia acinacea s.l.* (includes *Acacia rotundifolia*, which is now considered to be a distinct taxon). **antonym.** *sensu stricto.*

### REFERENCES

Natural Resources & Environment (1996) 'East Gippsland - Environment & Heritage Report' (Published by the joint Commonwealth and Victorian Regional Forest Agreement Steering Committee, Canberra). ☆  
DSE (2004) 'Vegetation Quality Assessment Manual - Guidelines for applying the habitat hectare scoring method.' Edition 1.3 (Department of Sustainability and Environment: Melbourne). ☆

## Who is Simon Cropper?



Considering you have taken the time to listen to my ramblings I thought it only fair that I let you know a little bit about myself so you can decide for yourself whether my views are legitimate. I have been a professional ecologist since 1985 and have been involved in survey work, the development and implementation of monitoring programs, detailed ecological research and management of both significant species & ecosystems. I also authored the book 'Management of endangered plants' published by CSIRO. In 1993, I established the natural resource consultancy Botanicus, which has since serviced a broad range of government and private sector clients, and has conducted numerous flora & fauna surveys throughout Victoria.

## Housekeeping

Please feel free to distribute this publication to anyone interested in Natural Resource Management. If you would like to have future issues automatically sent to you by email, send me an email with SUBSCRIBE ECORAMBLINGS in the subject line to my email address below. If at any stage you wish to discontinue receiving future issues, send me an email with UNSUBSCRIBE ECORAMBLINGS in the subject line.

Please note that numerous links to the Internet have been provided in this document to help direct the reader to supportive documentation or further reading. I have assumed that most people will have broadband and Acrobat® Reader on their system. I apologise if this is not the case. I have marked links pointing to Acrobat® Portable Document Format files with the PDF symbol. The reader can be downloaded from the [Adobe Website](#).

Articles in this document can be cited in the same way as traditional journals, viz. Cropper, S.C. (2006) Heat stress in outdoor workers. *EcoRamblings* 1: 1-2.



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