A COMMUNITY IN CONFLICT – DISCUSSION PAPER

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1. PURPOSE

The purpose of this paper is to explore the conflicting challenges faced by many utilities, Councils, and Road Transport Authorities (RTA) when managing vegetation on road reserves, and the impact of conflicting messages emerging from the industry.

This paper is not meant to distract from the work that continues to develop the Australian arboriculture industry. Rather, generate discussion on potential strategies to position the industry to meet future challenges, in a consistent and unified approach.

A solution could comprise the establishment of a single group responsible for the

- coordination of all activities across the industry,
- development of community education strategies, and
- standardisation and implementation of revised training programs, may raise the profile of arboriculture as a trade with a strong, united voice.

2. BACKGROUND

Many organisations are responsible for managing trees on road reserve. Do they have a common goal ?

"Trees and Power-lines do not mix." A phrase used by many electricity utilities seeking to engage the community about powerline safety. However, trees affecting the public space present many utilities similar challenges. They must balance community expectation, value for money, budgets, and safety obligations. The following points summarise some of these interests:

- Road Transport Authority (RTA) / Councils:
  - employ road management groups. Tasked to provide effective and safe roads, they must balance their budget, the demand for better roads, minimal environment impact and increasing road safety. Some American RTA's are trialing 'frangible trees', shrubs and flowers along road reserves to help balance these conflicting needs. Is this the next solution for Australia ? Will it mean the end of the humble eucalypt growing at the side of the road ?
  - employ environmental and landscaping groups. Tasked with improving the community value of our roads and parks. Working with the community, they balance their budgets with the removal of noxious weeds, mowing, removal of dangerous / inappropriate trees, and re-vegetation to improve the safety and community value;
  - employ street lighting groups. Tasked to improve the safety of roads and parks at night. Working to balance budgets, compliance with Australian Standards and community expectations. They seek to keep vegetation away from lights to minimize shadows etc.

- The utilities (gas, Telco's, water) install and maintain their assets. They balance their budgets and customer service levels that are aligned with community and regulator expectations.

- Electricity suppliers install and maintain overhead and underground power lines. They balance legal obligations, community expectations, budgets, and RTA/Council expectations.

- Specialists have their opinions and beliefs on how each group should undertake their roles.

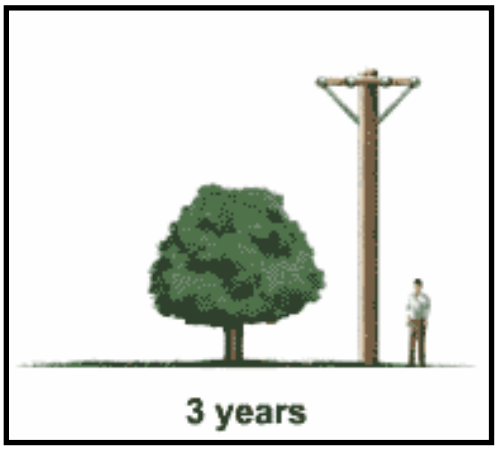
- Whilst customers hold wide and varied opinions on each of these, it could be argued that on balance, the community would like all of the above.

Are all the groups working towards the same goal ?
Does each group understand each other's drivers ?

3. OPTIONS TO MANAGE ROADSIDE VEGETATION

The options include:

1. Corrective focus: react to individual events that arise from customer complaints, or dangerous situations.
2. Preventative focus: establish an ongoing rotational program based on a pre-established routine; or
3. Develop a program that seeks to minimise the total cost using traditional maintenance thinking (refer diagram 1); and/or
4. Plant the right trees (refer **Picture 1**) that meets all needs:-
   - Trees not shrubs
   - Frangible
   - 2.5 m before the lowest branch
   - Maximum height less than 4.5m
   - Limited self seeding;
   - Suitable foliage and flowers
   - Non-intrusive root systems.



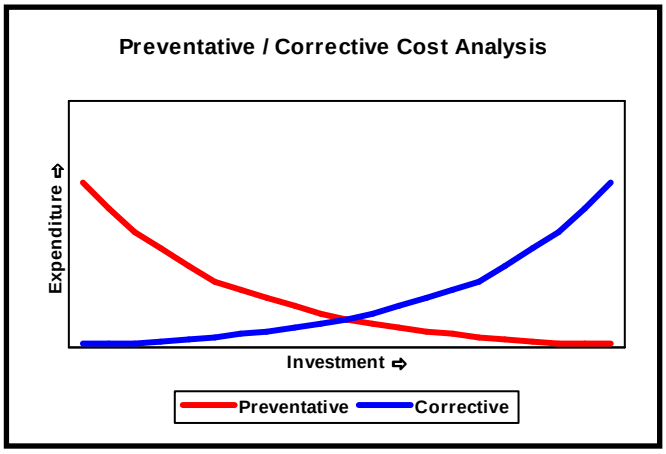


Diagram 1 –Traditional Preventative/Corrective investment decision

Movement along this continuum is affected by many factors including:

- ☐ Uneducated awareness;
- ☐ Community expectation;
- ☐ Budget;
- ☐ Education;
- ☐ Operator expertise;
- ☐ Specialist agreement; and
- ☐ Targeted development for the future

Has anyone found a sustainable solution? In consideration of the community's investment in the management of roadside vegetation, the opportunity to develop a unique and beneficial solution remains elusive.
Are we working towards the same goals ?
Are arboriculture experts working to find a sustainable solution ?

4. STRUCTURING A SOLUTION – ONE VIEW

The financial commitment to managing the vegetation affecting overhead power lines (refer diagram 2) has dramatically increased.

Factors contributing to this include:

- Changing community expectations;
- Education and knowledge;
- Resource availability;
- National skills shortage.

A multi-facetted management program has been developed to develop a comprehensive program including:

- Public Education
- Council Partnerships
- Operator training programs
- Preventative & Corrective vegetation management programs

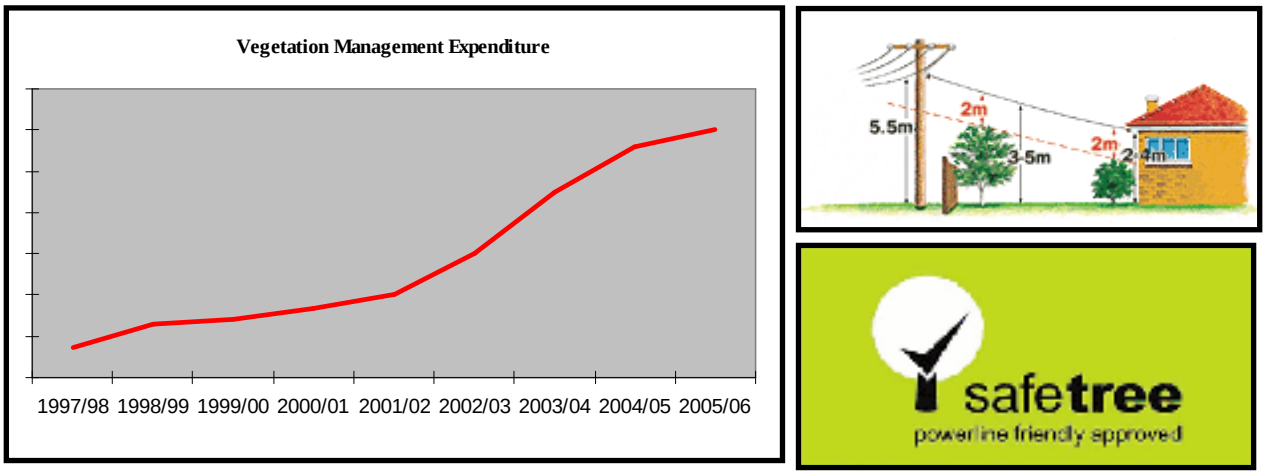


Diagram 2 – Vegetation management expenditure

The management program includes :

- Pruning of vegetation near powerlines, completed on a rotational program (preventative maintenance).
- Pruning and removal of trees following a customer request. Completed as required (corrective maintenance).
- Negotiating the removal of palms and bamboo responsible for supply interruptions (corrective maintenance).
- Pruning and removing trees along easements and access tracks (preventative maintenance).

The community communication and education program includes:

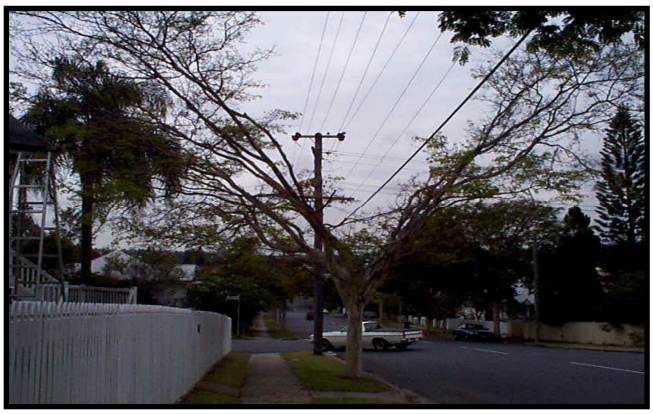
- Greening Australia partnership
- Print advertisements in local and regional newspapers;
- Posters carrying key messages
- Power line friendly planting guidelines brochures
- Internet – information about the program, and power line friendly guidelines.
- Internet – resource material for primary school teachers

Do arboriculture experts agree on a list of power line friendly trees ?

5. MANAGING VEGETATION – WHAT IS THE RIGHT STRATEGY ?

Managing vegetation near powerlines is a growing industry. With an annual investment of more than $150m, commitment to developing sustainable long term solutions is limited. When combined with Council / RTA investment, the industry deserves a significant level of educational investment.

However, do utilities cut trees correctly ?
Is V gully cut right ?
Do the technical experts agree ?
Who are the technical experts ?
Do the training courses reflect the 'right way' ?



Picture 2 – The deep V gully cut .The electricity utilities signature ?

The electricity industry is becoming increasingly de-regulated. Decision makers generally have an engineering or management background. Business strategies and policies are founded upon experience, education, and technical expert advice. Diagram 3 illustrates the framework that helps define strategies/ policies and ultimately their delivery.

Diagram 3 – Framework for success

Community Awareness: - The base for all decisions. A consistent message that aligns community expectation and understanding helps mould individual perceptions. Disagreement between the influential groups generates confusion for stakeholders outside of the industry, and can lead to frustration. eg 'where & how to trim a tree', and 'what is the maximum height of a species growing on a road'.

Education:- Agreement by educators and authors on the 'right way' to manage the vegetation near powerlines is difficult to obtain. As a consequence, trainees are confused, resulting in sub-standard outcomes.

Strategies and Policies:- lay the internal platform to the delivery. The variability in educator's opinions leads to variability in the policies.

Resources:- Financial commitment is built upon the strategy. Drivers such as the national skills shortage, affects the availability of skilled resources.

Competent operators:- a product of training standards / availability, culture, trainer competence, and technical expertise agreement.

6. VARIABILITY IN THE FRAMEWORK.

A. Community Awareness:

Personal, and community expectation varies significantly. Founded upon each persons / groups interests, arboricultural education, and understanding, utilities face a difficult task in developing solutions that meet everyone's needs. Those who have experienced the challenge of negotiating the removal of large trees for community safety or community infrastructure reinforcement reasons, would be well aware of the individuality of our community. Personal experiences include groups preferring the sculpturing of trees well outside the Australian Standards in preference to the removal of a tree for safety reasons. Community groups and individuals also appear to be increasingly willing to seek legal solutions to their concerns when recommended strategies are unpalatable.

B. Standards:

The standard on how to cut a branch, or tree should be considered fairly standard. The majority of text books refer to the same technique and discuss similar strategies. Unfortunately, where to cut the branch does not have similar agreement. Lopping, topping, V-gully cuts, balancing trees, and formative pruning are all strategies commonly used. The development of the Australian Standards goes part of the way, however agreement on which strategy to use and when remains elusive, and often left to operator discretion.

Picture 3 - Should this tree be removed ? Is it unbalanced ?

C. Operator development & training

Arborists are not generally seen as a trade, with new operators 'apprenticed' for 3-4 years as they develop their competence. As a consequence, a person can technically buy a chainsaw, a ute and a ladder, and become a 'tree lopper'. This phenomenon can lead to misconceptions about the expertise within the industry. Would the inclusion of arboriculture as a 'trade' with apprenticeships, and 5 year licenses, generate a framework for improved operator competency, and standards development ?

Should trainers be qualified arborists ? Currently the capability of trainers impacts the quality of training. Variability currently exists between 'qualified' trainers instructing operators in the right stance when cutting branches on the ground, and where a branch should be cut to minimize re-growth. This variability leads to operator confusion, and consequently sub-standard practices.

How do you resolve this situation ? Challenge the training bodies to only allow qualified operators to deliver arboricultural courses ? Who would determine if a person was 'qualified'?

D. Planting the right tree

The simplistic answer to roadside vegetation…… Replace all existing trees with ones that meet everyone's needs. That is, trees that will not kill someone if hit by a vehicle, does not have branches below 2.0 m, nor foliage above 4.5m, not self seeding, does not produce excessive flowers and seed pods, and does not have intrusive root systems.

The next part is a little more challenging, finding a range of species. The difficulty non-arborists face is reaching agreement on what species are appropriate. Conflict between advice leads to confusion, and variability in solutions, and may generate more of a willingness to challenge other standards within the industry.

Whilst it is understood that Nature (and a range of environmental factors) decides the ultimate height of a tree, aligning information in books, articles, and the general printed media would present a united and common message to the wider community.
Who is trying to 'engineer' a solution ? In consideration of the investment in roadside vegetation management across the country, how many research grants and 'industry' projects are considering the problem, seeking to genetically create a range of species that are acceptable to the community, Councils / RTA / and utilities ?

Ms Helen Leicht worked with a local grower to trial a range of power line friendly street trees. The trial culminated in the street planting of the new trees (Noel Surprise), in January 2006. This type of research promotes the industry, can result in lower community costs, and find solutions that are beneficial for Councils, and householders. Helen can be contacted through e-mail at hleicht@bigpond.net.au if you would like more information.

Neighbours turn street green

By PETER BARNES

A GROUP of Tugun neighbours is hoping its tree-planting scheme will take root across the Gold Coast.

Residents of Elizabeth St have defied the heat to plant 30 trees to ensure future generations have not only shade throughout the years, but flowers and wildlife.

What's more, the trees are an experimental power-line friendly variety, which should make Energex happy.

The project was the brainchild of horticulturalist Helen Leicht, who was plantation manager for Energex in southeast Queensland before stopping work to become a mum.

Helen said the project began six months ago when the neighbourly folk of Elizabeth St started talking about planting trees.

"There was only one in the street, right outside my place, and it was suffering from die-back.

"They were all keen on the idea so I started collecting signatures. Then we started going out to dinner together; the project has made the street more of a community."

GREENING ... Ray Mole and Helen Leicht.

Area councillor Chris Robbins said she saw merit in the scheme and contributed $1000 from divisional funds.

Helen said the trees were called Noel Surprise. Grafted on a dwarfing stock, they should grow five to seven metres, making them suitable to plant under power lines, she said.

The trees produced pink-red, bell-shaped flowers after leaf drop between September and November. The flowers were attractive to birds and butterflies.

The species, a relative of the Illawarra flame tree, is fire and drought resistant, and produces a flush of glossy new foliage each year.

Helen is so pleased with the way the project has turned out she is urging other neighbourhoods to follow their example.

Picture 4 - Media article – trial power line friendly trees

E. Who represents the Arboricultural Industry?

As a non-arborist, a problem the author faced was …. Who should we talk too ? The industry comprises a broad range of associations, community groups, business, and educational groups, each with a different focus, and perspective on the broader problems facing the industry. Whilst all are committed to improving the arboricultural industry, the variety in individual strategies, generates conflicting information.

The question that needs to be asked is … Would a single group responsible for the coordination of Australia's arboricultural industry, make it more efficient?

Could this group be funded through the transformation of arboriculture into a 'trade' where licensing, funds research and standardization?

Would operator safety ?

7. DEVELOPING THE INDUSTRY

Positioning the arboricultural industry requires a range of strategies to be implemented now.

The following points should be used to generate discussion on potential solutions.

A. Development of the workforce.

The combined impacts of the National skills shortage, reducing unemployment and increasing financial commitment to the industry, is leading to a rapidly expanding workforce, with a thirst for information. Standardising the information presented in arboriculture courses, and developing the competency and capability of all trainers would provide the future workforce with an opportunity to learn 'the right way'.

Typically, the arboriculture industry works on relatively low margins, with employers seeking to maximise staff productivity. The challenge is to maximise the 'value' employees obtain from new and refresher training, whilst demonstrating benefits to safety, productivity, the environment and total cost.

Transitioning arboriculture as a trade would have significant implications for the industry. The benefits would include improved operator competency and safety. The risks associated with the transition of the existing workforce need to be carefully thought through.

Integrate arboriculture expertise in to the primary trade training packages. As an example, aligning the tree trimming training courses for linesmen with the standard arboriculture training materials.

B. Development of a single voice:

A significant challenge facing the industry, is the variety in opinions, training, and standards. Whilst variety in opinion generates discussion, it can distract people from the broader strategies to advance the industry.

The development of a single group tasked with coordination of the industry, would provide a single voice, standardise training programs, broaden industry standards, and coordinate industry research. However, the success of the group would be dependent upon acceptance of the broader industry and engagement of a broad range of stakeholders.

A central group could investigate and develop strategies to standardise the industry and directly promote the development of the industry as a trade with governments and other stakeholders. They could also facilitate the distribution of consistent industry and training information to the various community groups, provide expert advice to the various supporting industries and arbitrate on conflicting opinions.

8. CONCLUSION

For non-arborist's, finding a solution to the issue of a sustainable vegetation management program for an electricity utility is complicated. The variety in individual expertise, and training programs can be distracting and lead to inefficient solutions.

Arborists are not generally seen by the community as 'tradesmen', and poorly trained operators are able to establish quickly, and present a variety of 'images' to the community. In contrast, the more traditional trades, are progressively moving to annual licensing (blue card), with promotional activities to help the broader community understand the benefits of employing a 'tradesman'.

The industry may benefit from a united focus, and the transformation of the skills into a more trade-based industry, utilising similar promotional activities to raise community awareness of the benefits of an arboricultural tradesman.

The establishment of a central group to facilitate this transformation, would provide a single voice to drive consistency in information, training packages, and community awareness.

Ultimately many groups manage vegetation on road reserves.

- Are they all working to the same goal ?
- Do they understand each others drivers, and the impact of their activities ?
- Who is developing the future roadside trees suitable for planting on roads and under power lines ?
- **Delivery**:- a product of the commitment of the business to the solution, and the alignment of all of the previous items.
  Despite the significant investment to managing roadside vegetation, disagreement between industry experts on the right solution continues.