

## Significant trees on Magnetic Island: identifying them and promoting their conservation

Notes from workshop at Geoffrey Bay, Arcadia 15/10/2016



### Agenda:

- 12.00 Introduction: Geoffrey Bay Coastcare & MINCA
- 12.10 Special guest speaker: Jan Allen, Director, Veteran Tree Group Australia\*
- 1.30 Where to from here?
- 2.00 Field inspection of a selection of trees and discussion of their significance
- 3.30 Close

\*Veteran Tree Group Australia are a not for profit community group identifying, recording and raising awareness about significant trees across Australia. They provide best practice management advice on veteran and ancient trees and advocate for their preservation.

[https://www.facebook.com/Veteran-Tree-Group-Australia-133803626673576/?ref=page\\_internal](https://www.facebook.com/Veteran-Tree-Group-Australia-133803626673576/?ref=page_internal);  
<http://veterantreegroup.blogspot.com.au/>

Attendees: Margaret Vine, Jill & Michael O'Keefe, Cecily MacAlpine, Meredyth Woodward, Jim Thompson, Lorna Hempstead, Gethin Morgan, Wendy Tubman, Zanita Davies, Melissa James, Deidre James, Angela Moore, Margaret Gooch, Rhonda Stevens, Marie de Monchaux, Tony Cuthbertson, Bernadette Boscacci, Mary Boscacci, Anne Cole, Jan Allen, Vandhana, Tony O'Malley, Roxanne Taylor (TCC Horticulture/Arboriculture Officer).

The workshop was organised by Geoffrey Bay Coastcare and MINCA. Thanks to NQ Dry Tropics for the chair hire and MICDA for the loan of their marquee.

Basic Issues: Wulgurukaba Traditional Owners' views on significant trees are important. Are we considering trees and/or bush; natural and/or planted trees; native and/or introduced trees; trees on public and/or private land, etc? Are we proposing a tree register that is developed by the community and/or Council? What are the key aspects when nominating a tree, e.g. the species name, tree location and reasons for its significance? Is our purpose to share knowledge of trees with the local community and/or visitors, and/or to promote the protection and management of significant trees?

Some vegetation already has a level of protection. The island is within the GBR World Heritage Area. There are large areas of National Park and some Conservation Parks, Nature Refuges and Council-managed environment reserves. Remnant vegetation clearing is regulated by Queensland Government but does not apply to urban land that dominates the island lowlands. Threatened plant species and ecological communities (e.g. Semi Evergreen Vine Thicket) are protected from "significant impacts" under the EPBC Act.

Some relevant documents from the last 20 years include:

- O'Malley (1997) *The vegetation on Arcadia* (includes significant vegetation map)
- O'Malley (2000) *Significant vegetation on Magnetic Island land subject to development assessment* (includes significant vegetation definitions)
- Environment North (2001) *Magnetic Island protection of significant vegetation* (focus is vegetation communities)
- Grier (2001) *Vegetation character and significance, Magnetic Island towns and bays* (community perspective)
- Jensen/Ralph Power (2002) *Magnetic Island Heritage Study* (includes trees)
- MICDA/MINCA (2004) *Magnetic Island's World Heritage values* (includes terrestrial values chapter)
- Morgan (2005) *Revised Regional Ecosystem map for the lowlands of Magnetic Island, Brigalow Belt Bioregion*.
- Kenchington/Hegerl (2005) *World Heritage attributes and values identified for Magnetic Island and the surrounding marine environment* (section on flora/vegetation)
- DSEWPaC (2010) *EPBC Act policy statement 5.1 Magnetic island, Queensland* (refers to hoop pines, poplar gum bat habitat, SEVT).
- TCC (2014) *Townsville City Plan* (includes Conservation zone and Environmental Importance overlay)

National Register of Big Trees was started by an individual  
<http://www.nationalregisterofbigtrees.com.au/>

There are various levels of tree protection from national to state to local. Even if trees are on a register, their protection may be dependent on political will. They are often lost in the name of "essential infrastructure" or perceived safety issues. Still, it's worth getting a register in place. But if there is talk of a blanket ban, or trees on private land are nominated/registered, owners might do pre-emptive clearing. Also, by listing certain trees as significant, some people might argue that anything not listed is not valuable and therefore can be cleared.

Redlands Council has a Veteran and Significant Trees project:

<http://biocollect.ala.org.au/project/index/7144ebcd-13b5-471b-b7c9-07b979598d58>

It was initiated by Council and uses CSIRO's Atlas of Living Australia. Access is free. Citizen scientists can register on the site and nominate trees using a proforma and map. Eventually CSIRO will supply a phone app for collection purposes; however, the website interface is already easy to use on a smart phone. Nominating your neighbour's trees is not encouraged although they may still be recorded but the records may not be publicly displayed. For trees on public land, the asset owner (e.g. the relevant section of Council) could be advised that the Council's environmental section want to know when potentially damaging work is planned near the tree location. The database helps with strategic planning. Veteran Tree Group Australia (VTGA) have been supporting Redlands Council in this project with advice, training and technical writing. This is a good trial project to watch. The collection criteria are very similar to the VTGA register criteria. They are broadly based on similar criteria to the Burra Charter used by the National Trust and could be used as a template for similar projects. VTGA are keen to see how the project develops so that it could potentially be used to contribute to an Australia wide register.

TCC value trees using the Burnley method which is based on amenity and safety considerations and can give trees with hollows a low rating (despite their high habitat value). The Thyer Method is also sometimes used for valuations and it does tend to value native vegetation a bit higher.

Bollards and mulch around significant trees can help their conservation.

Are significant trees on the island at risk and if so from who, e.g. developers, scared individuals, storms? Some people move here from areas where fire is a bigger risk. We could provide proactive education about tree species that don't drop limbs, the right trees to plant, etc. Promote the benefits of trees. Help people gain realistic expectations of risk from trees. Death from falling out of bed is a higher risk than death or damage from trees.

Older trees have generally experienced various natural impacts, e.g. cyclones. Consequently, older trees may have a lower canopy due to loss of higher branches; low branches are important on old trees and shouldn't be removed. Council likes to remove low branches so they can slash under. Mowing prevents the next generation of trees from establishing. ANU is looking at tree succession in urban areas in Canberra [http://www.alburyconservationco.org.au/wp-content/uploads/2015/03/The-Future-of-Large-Old-Trees-in-Urban-Landscapes\\_2014.pdf](http://www.alburyconservationco.org.au/wp-content/uploads/2015/03/The-Future-of-Large-Old-Trees-in-Urban-Landscapes_2014.pdf)

Another interesting recent study from the Gold Coast looks at the distribution of hollow bearing trees in urban areas:

[https://www120.secure.griffith.edu.au/rch/file/ccd6a4b0-e276-4395-a472-38d146af8fa1/1/Treby\\_2014\\_02Thesis.pdf](https://www120.secure.griffith.edu.au/rch/file/ccd6a4b0-e276-4395-a472-38d146af8fa1/1/Treby_2014_02Thesis.pdf)

Public land is important for conserving veteran trees.

Townsville City Council introduced a Local Law (Vegetation Management) in 2003 but it was never used and has been dropped. Townsville and Thuringowa Councils each had street tree policies. Post amalgamation, the policies were rescinded. An urban forestry management policy is currently being drafted. But first an urban forest management plan or strategy document is needed. A key purpose is to protect old trees, particularly "veteran" trees that are remnants of the pre-European vegetation. The urban forest management plan is being driven by TCC Maintenance Services. Maintenance Services look after streetscapes, road reserves, open spaces, parklands; basically everything that requires a level of maintenance for public usage. (TCC ISS look after the natural

areas). The urban forestry management policy could break the city into precincts, eg World Heritage rainforest (Paluma), World Heritage island (Magnetic), Cromarty wetlands, older suburbs with cultural trees, etc. Different precincts might have different policies. "Urban forests" include individual trees. Infrastructure upgrades can threaten trees, eg sewer line, stormwater pipes.

Different legislative tools are used to protect trees on private land at a local government level; they can include local laws, Tree Protection Orders (TPOs), mapping overlays (significant vegetation areas) and development codes (Vegetation Protection) written into local planning schemes. In some parts of Sydney, Brisbane, Gold Coast and other local government areas on private land, you can't cut down a tree without approval but that's not likely here currently. Some development approvals in Townsville have conditions that protect remaining trees on the site from removal. If land is zoned urban, state legislation protecting native vegetation generally doesn't apply, but federal EPBC legislation does (which theoretically protects World Heritage values, SEVT, etc but in practice it is difficult to argue that the removal of a single tree is a "significant" impact on the overall values of the entire Great Barrier Reef World Heritage Area). "Offsets" do not work for significant trees.

Councils can't prosecute for tree vandalism unless there is evidence of the person doing it. However Council can replant the area and install large signs, which they thankfully did at Geoffrey Bay. Island people have seen people cutting down a tree on public land and photographed it and reported it to Council and followed it up but have received no response.

Magnetic Island History and Craft have been trying to get trees listed with TCC planning. Maybe try Trust Trees as well. <http://www.trusttrees.org.au/> and <https://www.nationaltrust.org.au/services/significant-tree-register/>

Grafton has a significant tree walk brochure. It is promoted through the local tourist information facility. Grafton's trees are celebrated every year with the Jacaranda Festival.

Contact Redlands Council and ask them how their "Veteran and Significant Trees project" got started and could we share. Contact Candy Daunt [candy.daunt@redland.qld.gov.au](mailto:candy.daunt@redland.qld.gov.au) and Peter Brenton [peter.brenton@csiro.au](mailto:peter.brenton@csiro.au). Veteran Tree Group can help us. It is a long lived project and there are likely to be further promotional events including projects to promote the program in schools.

People can nominate their favourite tree on MINCA website: <http://www.minca.org/favourite-trees.html>

Start by focusing on public land. List individual trees on public land.

Excavation for infrastructure can make nearby trees more likely to fall over in a storm. Extension of sewerage on the island could threaten significant trees.

Leaflets on the island's worst weeds and how to deal with them are popular. Develop a culture of care and knowledge, particularly with new residents. Trees improve microclimate in buildings. Produce a little booklet on island trees like Jo Wieneke's "Birds of Magnetic Island". Or a calendar. Jenny Terrey's "In the Bush Now" from Magnetic Times could be revisited.

<https://www.treenet.org> provides public access to the proceedings of Treenet's annual street tree symposium including podcast presentations and papers with a wealth of info on the benefits of urban trees, eg to human health.

<https://www.itreetools.org/> is a valuation methodology used by local governments to quantify the benefits of their urban tree canopy. One local council in Victoria recently used i-tree valuation methodology to value all the trees in a park and put price tags on each tree to raise awareness. This

project was presented at the Treenet symposium this year and the website has a podcast of the presentation.

Try to engage young people. Consider social media. Bernadette's Mundy Creek group does this well.

<https://www.facebook.com/MundyCreekNaturewayRegenerationProject/?ref=hl>  
<http://www.creektocoral.org/learnsapes/rowesbay/mundy-creek-catchment.htm>  
<https://www.facebook.com/groups/521623634572430/>

Poetrees is a program where people write and share a poem about a tree and possibly attach the poem temporarily and gently to the tree <http://www.poetrees.net.au/>

People could be invited to do a painting, photo, or story, etc about their favourite tree on the island and the art could be collectively exhibited and possibly included in a calendar or booklet.

Encourage the school to collect seed then do a planting. Tie it to the curriculum. Garbutt School did this.

Residents can request a tree seedling to plant from Council.

People/neighbours could adopt a tree to look after.

Each bay could have a "tree walk" with accompanying pamphlet/phone app highlighting significant trees.

MINCA and Geoffrey Bay Coastcare should become members of the Veteran Tree Group.

Removing weeds and mulching around significant trees can reduce the desire to mow and brush-cut close to them which can damage roots and bark. Fallen dead limbs and branches can be left on the ground under the trees; they provide barriers, habitat and eventually decompose, recycling nutrients.

Dahl Trust has grants available for eucalypt projects <http://dahltrust.org.au/> NQ Dry Tropics have grants. MINCA and Geoffrey Bay Coastcare have recently applied to NQ Dry Tropics for funding for weed management and some revegetation.

Consider plaques for significant trees with info including their approximate age.

Potential research project tying tree rings on veteran island trees with coral cores to age them.

We could ask Council to lift blade on slasher when slashing around trees so don't slash roots. But above ground roots could be considered a trip hazard. Could top dress soil so roots no longer exposed. Solution could be designating pathways and keeping them clear of tree roots. Tree removal should be last resort. Tree risk assessment methods include TRAQ and QTRA. They are target-led and consider the consequences of failure. If Council or similar is proposing to remove a tree, we could ask to see the Tree Risk Assessment report. Veteran Tree Group are able to help with technical review, advice and submissions

Ergon have their own act of parliament. They like 2.5m clear of vegetation plus 1m to allow for regrowth before their next visit. Frequency of pruning cycles will influence the severity of cuts e.g. longer between pruning = more severe cuts. It may be possible to negotiate management options for significant trees, e.g. bundle cable or moving poles.

Car parking under trees can cause compaction and physical damage to stems and woody roots. The Australian Standard AS 4970 is commonly used to determine root protection zones; the guideline

states the radius should be calculated at 12 times the diameter of the stem. The Ancient Tree Forum in the UK provide advice that the protection zone for a veteran tree should be 15 times the tree stem diameter or 5 metres beyond the width of the canopy, whichever is greater. Compaction squeezes oxygen out of the soil and also squashes surface roots and fine feeding roots. Compaction reduces water infiltration. Soil inoculation and mulch can assist recovery from compaction.

A young planted *Mimusops* is initially keeping a low profile to keep out of wind and establish itself, and has consequently grown beyond the stakes. Move stakes out wider in recognition of this, so low branches are less likely to be pruned or driven over.

Suzanne Simard talks about the underground environment, how trees impact each other, mother trees, and trees sharing resources <http://profiles.forestry.ubc.ca/person/suzanne-simard/>

A working group will progress the matter of identifying and promoting significant trees on Magnetic Island. Group will include Gethin, Tony, Wendy, Jan, Roxanne, Vandhana and Zanita.



This *Mimusops elengi* could be hundreds of years old.

People were encouraged to come to the workshop with ideas about the trees that were significant to them and why. Some people who couldn't attend emailed their ideas prior to the workshop.

Name	Species	Location*	Why
Jo Petersen	Melaleuca	on a vacant block at Elena St	It is a beautiful big old original Melaleuca tree. I think it was on an old creek line there that was filled in. It is a habitat and roosting tree for a range of birds including kookaburras, lorikeets, friar birds, currawongs, galahs, cockatoos and of course bats when flowering. If I won the lotto I would buy the block just to preserve that tree.
Andrew (and Hilary) Skeat	paperbarks	in the Picnic Bay swale	I am a bit worried that the beautiful tree that leans over Picnic St might get the chop on the grounds of safety etc. The paperbarks are so beautiful it would be best to make them 'significant trees' to make sure that any decisions about their management are made very carefully.
Prue Fleming	paperbark	In the bottom of the creek in Barbarra St near Magnetic St	a massive paperbark - one of the very biggest on the island
Cecily Mac Alpine	gum tree	Yates Street footpath	<p>Glenwood Farm was established in Nelly Bay in 1931 by my parents Horace and Eileen Mac Alpine. My father built up his herd of cows to the required number to become the first and only registered dairy farm on the Island. He was a skilled craftsman and built a small bush forge to enable him to maintain his tools and to make new ones as they were required on the farm.</p> <p>The bush forge consisted of a heavy metal bar about 90cm long with a diameter of approximately 7cm. My father hammered one end into the fork of a young gum tree about 60cm from the ground and rested the other end on a heavy wooden block. He converted a metal drum into a fireplace where the tools were heated prior to being hammered into shape.</p> <p>The remains of the bush forge is still there, no longer on our property, but on the Yates Street footpath near my boundary. The young gum tree has grown to maturity covering the iron bar and leaving it behind as it raised the fork in the tree to over a metre and a half. I would like this tree with its iron bar to be considered as a significant tree.</p>
Cecily Mac Alpine	tamarind tree	on Yates St footpath over the road from gum tree with the bush forge	An ancient tamarind tree, the last remaining one planted by early settlers in the early 1900s

Cecily Mac Alpine	Pine trees	Sooning St	Two Pine trees behind my house were planted by former owners of the property possibly about the turn of the century in the early 1900s. They have grown very high and are chosen by whistling hawks to build their nest each season, although the hawks have to compete with crows who also claim the nesting site.
Cecily Mac Alpine	gum tree	Near the corner of Sooning Street and the road that goes out to the beach on the way to Picnic Bay	A lovely gum tree which I would like to see recognised for its beauty as well as its age, but which has a feral fig growing in its branches. These ubiquitous figs have killed most of the trees in the parkland between the road and the hill but I would like to see the Parks Department rescue this lovely tree on the corner by removing the parasitic fig.
Wendy Tubman	Blue gums	everywhere	They are preferred koala food
Wendy Tubman	Poplar gum	Corner Sooning and Kelly	Old, good holes
Wendy Tubman	Paperbarks	Picnic Bay	Old, good holes
Deidre James & Melissa	Gums	Extending from Arcadia pub along seasonal creek running behind houses on Marine Parade	Historical and cultural value Natural corridor, bat habitats (nursery) Kookaburra, bird holes in trunks etc
Deidre James & Melissa	Melaleucas (paperbark)	Hayles Ave on the other side	As above
Tony Cuthbertson	Poplar gums Bloodwood	1 Grace St, Nelly Bay	Because they are on my private land and I would like to preserve them beyond my life.
Anne Cole	Melaleuca	On verge of 93 Mandalay Ave	Large tree that hosts a variety of birds
Rhonda Stevens	Mangrove area and Melaleucas	Area around east area of Picnic in particular	Old trees around creek
Michael O'Keefe	"Bikini tree" mango tree	Arcadia shops opposite Alma Bay	Lovely giant mango trees providing shade for bus stop, diners at café and pub, and has historical and cultural value because of painted "bikini"
Michael O'Keefe	Rain tree	Shaw St, Nelly Bay	Only rain tree left in Shaw St since cutting down of others in the same street. Provides arch across whole street. Magnificent.
Michael O'Keefe	Eucalypt forest (small)	Wallaby Way and Pirie St extending to Gifford St, Horseshoe Bay	Provides only habitat for small remnant population of koalas (5 only) which has been isolated from other habitat by rapid housing development.
Vandhana	Hoop pines	Headlands,	They are <u>the</u> distinctive tree on the island, look

		lowlands	stunning on the headlands, provide nest sites for raptors, etc
Zanita Davies	Mango	Car park, MI State School	Grown by William Bright
Zanita Davies	Avenue of hoop pines	Sooning St	Grown by William Bright
Zanita Davies	unknown	Creek bed at NW end of Horseshoe Bay	Survey tree (fallen)
Zanita Davies	Tamarind	Eastern end of Esplanade, Picnic Bay	Site of first settler family (Butler) home
John Stowar	Barringtonia	Radical Bay Beach	
John Stowar	Royal Poinciana	Turnbridge St, Nelly Bay	
Selina Hale	Native fig	Esplanade opposite 35 Marine Parade, Arcadia	

\*Street numbers are not included when the tree is on private property unless nominated by the owner.



We were inspecting a Marine Parade paperbark that was large enough in 1893 to be blazed with a survey mark, when this galah emerged from a hollow in the tree. All photos by Vandhana.