

7 CONFIDENTIAL SESSION

11 CONFIDENTIAL - NOT FOR PUBLIC RELEASE - ENVIRONMENT LEVY PROPOSED LAND PURCHASE

Author **Principal Environment Officer, Peter Milne**
Environment and Sustainable Development Department

Index **ECM/ Subject/ Environment Levy**

Attachments 1. **Valuation report**
 2. **Vegetation report**

REASON FOR CONFIDENTIALITY

*This report is **CONFIDENTIAL** in accordance with Section 254J (3) of the Local Government Regulation 2012, which permits the meeting to be closed to the public for business relating to the following:*

- (g) negotiations relating to a commercial matter involving the local government for which a public discussion would be likely to prejudice the interests of the local government*
-

EXECUTIVE SUMMARY

Not applicable.

RECOMMENDATION

That Council note the report by the Principal Environment Officer to the General Committee Meeting dated 18 January 2021 and:

- A. Authorise the CEO to enter into a contract of sale with the owner of the two lots detailed in the report for a price not exceeding the amount set out in the valuation report with the funding for that purchase to be funded from the Environment Levy; and
- B. Remove the confidentiality in relation to this report upon the signing of a contract to purchase.

REPORT

The Noosa Environment Strategy 2019 has a target of *'by 2030, half of all land in Noosa Shire is managed for its environmental values'*. The purchase of environmentally-significant land through the Environment Levy is one mechanism that helps to achieve this target.

The Environment Levy Working Group (ELWG) developed a Conservation Land Policy Guideline to guide the acquisition of environmentally-significant land and this was adopted by Council in September 2018.

Under the Environment Levy Policy, one of the activities of the ELWG is:

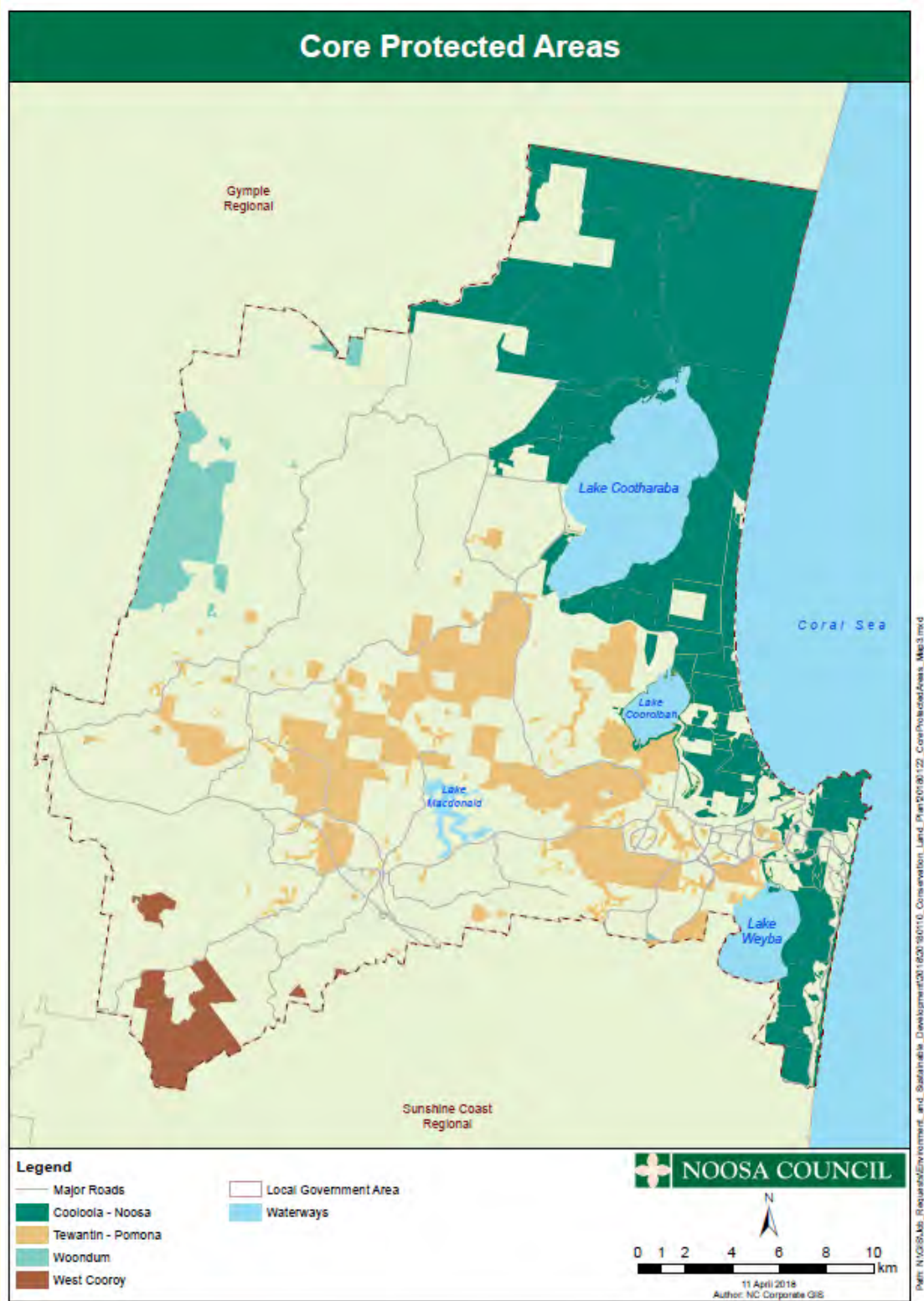
- *Making assessments of properties for potential purchase based on the Conservation Land Guideline. Properties identified as high priority will be presented to Council for a decision on purchase and options available for purchase.*

The owner of Lot 1 RP28724 and Lot 2 RP28724 (325 & 375 Lake Flat Road, Boreen Point) approached environment officers for the potential purchase of this land. The ELWG considered that the land met the Conservation Land Policy Guideline criteria and was worthy of further investigation, so a valuation was commissioned (Attachment 1). The ELWG met on 15 January 2020 and recommended its acquisition be considered by Council. A report was provided to the Ordinary Meeting of 20 February 2020 and Council approved the commencement of negotiations to purchase this land.

Due to COVID-19 and potential budgetary constraints, negotiations to purchase this land were put on hold. With more confidence around Council's cash position the CEO authorised negotiations to recommence. Recently staff met with the owner who advised he would be agreeable to selling the land for \$900,000 which is slightly under the valuation price of \$925,000.

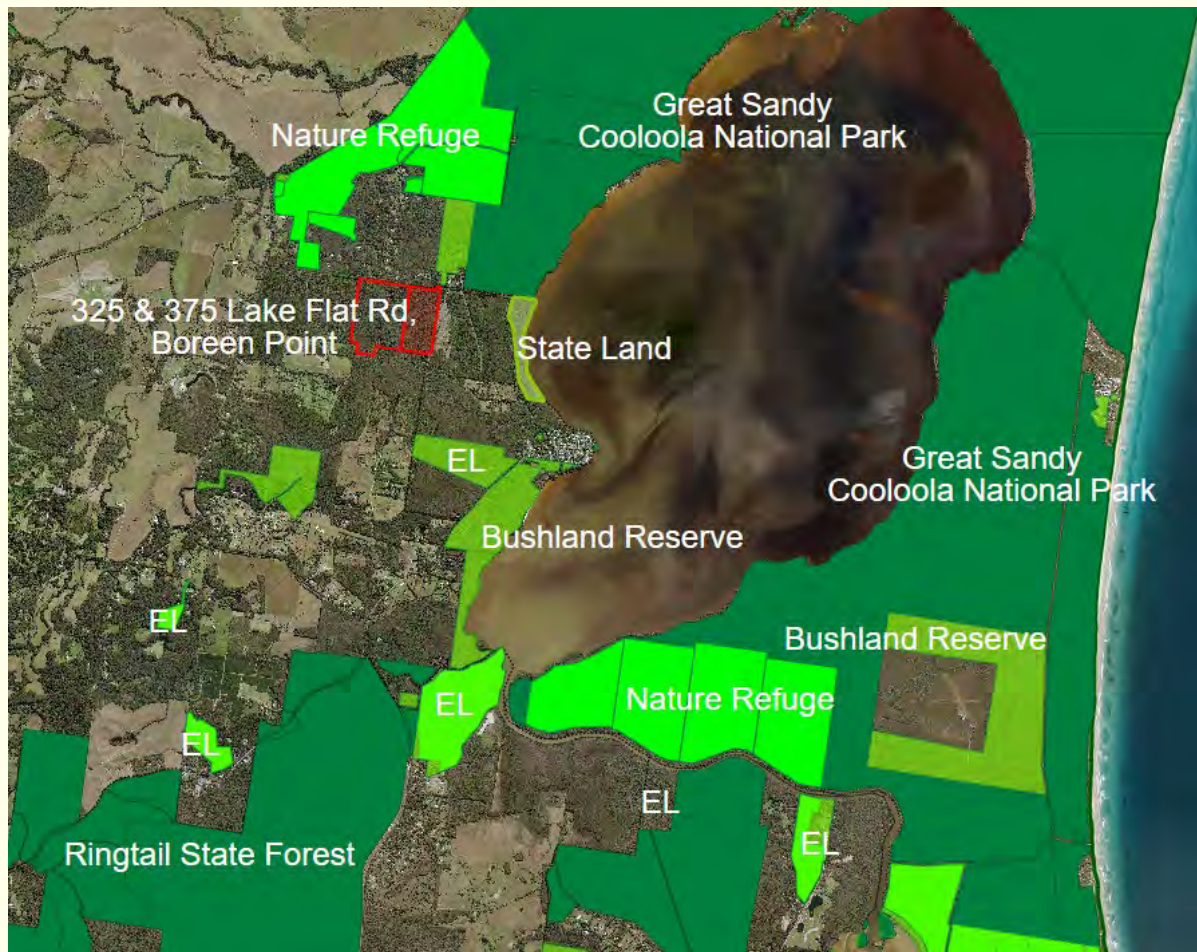
1. Conservation Land Policy Guideline

The Conservation Land Policy Guideline places a priority on the acquisition of large land parcels adjacent to the Cooloola-Noosa Core Protected Area (CPA). This CPA consists mostly of the Great Sandy-Cooloola National Park but also private Nature Refuge and Council Bushland Reserve. The Cooloola-Noosa Core Protected Area is shown in green in Map 1. Map 1 also shows the Tewantin-Pomona CPA to the south which is largely the Yurol-Ringtail State Forest and Tewantin National Park.



Map 1. Noosa's Core Protected Areas (CPAs)

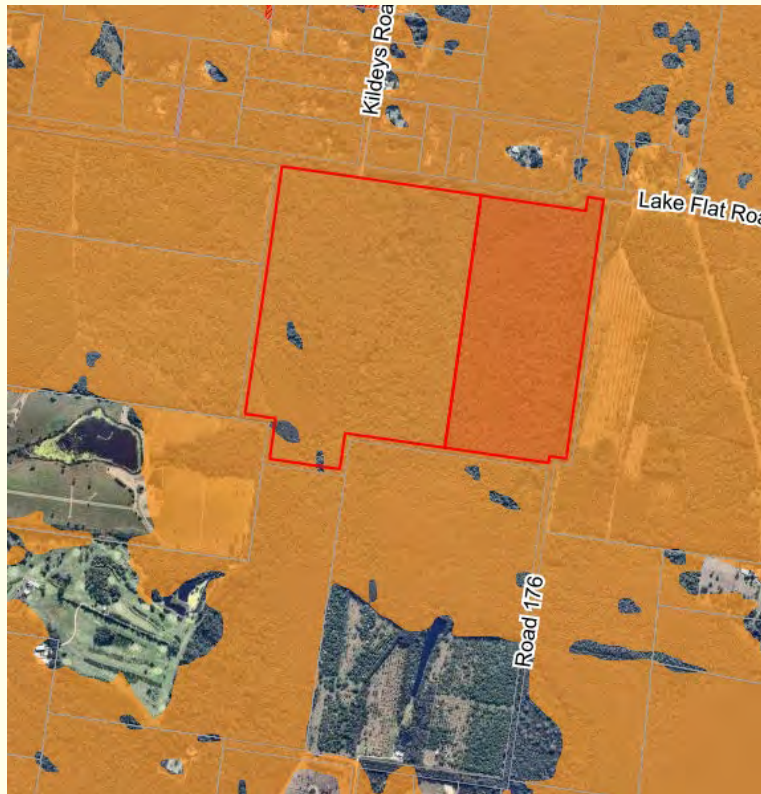
There is an opportunity to build a strategic protected area corridor linking the Cooloolo-Noosa CPA and the Tewantin-Pomona CPA through public and private land conservation measures. 1RP28724 and 2RP28724 have a narrow connection to the Noosa-Cooloolo CPA, through an adjoining Council bushland reserve to the north. The purchase of the land would help consolidate a protected area corridor in the longer term, connecting the Yurol-Ringtail State Forest with Great Sandy-Cooloolo National Park. This concept is shown on Map 2.



Map 2. 325 & 375 Lake Flat Rd in relation to Great Sandy National Park and Ringtail State Forest. The land parcels with an 'EL' were purchased with the Environment Levy previously.

2. New Noosa Plan

325 & 375 Lake Flat Road, Boreen Point are zoned as Rural under the New Noosa Plan and the land is largely outside the flood hazard overlay. The land is also mapped as having a High Potential Bushfire Intensity in the event of a fire (see Map 3).



Map 3 Vegetation is mapped as High Potential Bushfire Intensity under the Noosa Plan

3. Environmental significance

The land is mapped under the Noosa Plan Biodiversity Overlay (see Map 4). However 20% of the land is mapped as Category X under the *Vegetation Management Act 1999* and can be cleared (e.g. for farm forestry purposes).



Map 4 New Noosa Plan Biodiversity Overlay

A vegetation assessment has been completed for the site (Attachment 2). The vegetation on the land is mostly Wet Sclerophyll forest which is listed as 'Of Concern' under the *Vegetation Management Act 1999*. Araucarian Notophyll Vine Forest occurs in the eastern side of the property and in the upper sections of gullies, also listed as 'Of Concern'. Consequently the vegetation and habitat is rated within the highest percentile of biodiversity value under the Noosa Biodiversity Assessment Report with a score of 26 out of 38.

During the vegetation survey two Endangered, Vulnerable or Near Threatened (EVNT) plant species were found onsite. Southern Penda (*Xanthostemon oppositifolius*) and Bacon Wood (*Archidendron lovelliae*) are listed as 'Vulnerable' under the *Qld Nature Conservation Act 1992* and the *Commonwealth Environment Protection & Biodiversity Conservation Act 1999*. There is also a record of *Boronia keysii*, Noosa Shire's emblem, being found on the site, also listed as a 'Vulnerable' species.



Photo: The two land parcels consist of wet sclerophyll forest and vine forest

The land parcels are mapped as Koala Habitat in local and State mapping (see Map 5) and koalas have been recorded in the vicinity. In particular there are a significant number of Swamp Mahogany (*E.robusta*) trees on the land to the south which is a favoured food tree of koalas.

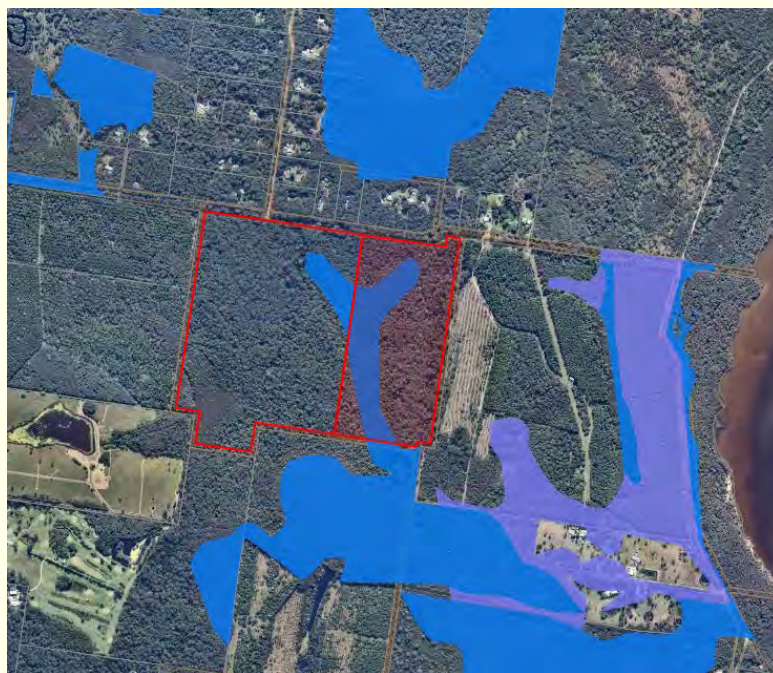


Map 5 Noosa Plan Koala Habitat Area map. (Green-known habitat, light green-possible habitat)

4. Climate change resilience

The land is partially mapped as a Climate Adaptation Biodiversity Resilient Area which means that vegetation and habitat has capacity to adapt and change over time from increased sea level rise and storm tide events.

In addition the protection of this parcel for conservation purposes would secure this important area to maintain its role as a vital corridor linkage within the landscape. This connectivity will help support the adaptive capacity of flora and fauna species into the future as the climate changes (including changes in rainfall, temperatures and increased bushfire risks).



Map 5 Biodiversity climate change resilience mapping

5. Approach to acquisition

Under the Environment Levy Policy and the Conservation Land Policy Guideline there are two approaches to acquisition. The land may be a 'buy and hold' purchase, or it may be a 'revolving fund' purchase. Traditionally Council has used a 'buy and hold' approach and met the ongoing management costs (unless 'gifted' to National Parks).

A revolving fund approach involves on-selling with a protective mechanism such as Nature Refuge. Funds recouped from the sale of the land are re-invested into another land purchase for environmental purposes, thereby expanding the extent of protected areas across the shire.

For on-selling purposes the land must have a suitable house site for marketability. 325 & 375 Lake Flat Road, Boreen Point is 100% vegetated with many tall trees and a well-developed vegetated understory. The ELWG has explored a number of ways for a potential revolving fund purchase, but ultimately vegetation would still need to be cleared for a house site and this is inconsistent with the purpose of the Environment Levy Policy. The Council-adopted Revolving Fund Policy Guideline states:

'Land that is 100% vegetated is not suitable for a revolving fund because for re-sale purposes the land would need a cleared house site'.

However, if Council were to purchase this land and an adjoining land parcel came onto the market in the future, with a suitable house site area, Council could consider purchasing the neighbouring land, undertake a boundary re-alignment and on-sell both land parcels with protective covenants and house site areas.

6. Management considerations

Under the Environment Levy Policy, recurrent land management operational costs can be funded by the Levy. The main management considerations for 325 & 375 Lake Flat Road are invasive species and fire. Deer, foxes, wild dogs and wild pigs occur in the area. The land parcels are relatively weed free except for edge effects. Invasive species would be managed as part of reserve management requirements guided by the Noosa Biosecurity Plan 2020. Given the good condition of the vegetation an Ecological Restoration Plan is not required.

The vegetation is mapped as High Potential Bushfire Intensity and would be managed consistent with Noosa Bushland Reserve Fire Management Plan. The two land parcels are surrounded by road reserve and fire trails are located either within the road reserves or on adjoining land. There may be a need to expand the fire trail network in the future and it is recommended that if purchased, a Bushland Reserve Fire Management Plan be developed specific for the site at a cost of approximately \$4,500.

The eastern side is fenced, northern side partially fenced and there is an internal fence in poor condition that may present a wildlife hazard and could be removed.

Council's Natural Areas advise that the annual cost to manage the land if purchased would be \$7,290 per annum based on requirements for similar reserves. This would be funded as a recurrent land management operational cost as allowed under the Environment Levy Policy.

Previous Council Consideration

Ordinary Meeting Minutes, 20 February 2020, Item 9, Page 6

That Council note the report by the Principal Environment Officer to the Planning and Environment Committee Meeting dated 11 February 2019 and:

- A. *Authorise the CEO to commence negotiations with the owner of the two lots detailed in the report to purchase the land with the Environment Levy; and*
- B. *Submit offers no greater than the valuation price shown in Attachment 1 to the report; and*
- C. *Remove the confidentiality in relation to this report upon the signing of a contract to purchase.*

Finance

Council's Financial Services branch advise there are currently sufficient funds in the Environment Levy Reserves for a potential purchase.

Bugler Francis Valuers have assessed the value of 325 & 375 Lake Flat Road, Boreen Point (88ha) at \$925,000 or \$10,500/hectare. This is more expensive than Council's most recent purchase of 1675 Louis Bazzo Drive, Boreen Point, (51.5ha) for \$395,000 or \$7,700/hectare, but was valued at \$425,000 or \$8,247/hectare. The price difference is because the Louis Bazzo Drive land is flood mapped and the Lake Flat Road land is relatively flood free. In addition approximately 20% of the Lake Flat Road property is mapped as Category X under the *Vegetation Management Act 1999* and can be cleared, for example, for farm forestry purposes. The valuer has considered commercial potential in the valuation.

Management costs are summarised in the table below:

Management cost	Item	Cost (approximate)
Start-up costs	Bushland Reserve Fire Management Plan	\$4,500
	Remove internal barb wire fence	\$2,000
	Total	\$6,500
On-going costs	Fire trail widening and slashing	\$4,890
	Weed control	\$2,400
	Total	\$7,290/annum

Risks & Opportunities

The purchase of this land would temporarily impact on Environment Levy Reserves. If another land parcel of interest comes on the market in the near future, there may be insufficient reserves to purchase.

325 & 375 Lake Flat Road are mapped as having a High Potential Bushfire Intensity and Council would be taking on additional fire risk and management responsibilities.

The purchase of this land would help build a protected area corridor connection between Ringtail State Forest and Great Sandy-Cooloola National Park.

There is an opportunity to protect 325 & 375 Lake Flat Road as a Nature Refuge and thereby avoid the risk of future clearing of 20% of the land area for farm forestry, or clearing for house site areas.

If Council were to purchase the land and a neighbouring land parcel came onto the market in the future, with a suitable house site area, Council could consider purchasing the neighbouring land, undertake a boundary realignment, and on-sell both land parcels with protective covenants and house site areas.

Consultation

External Consultation - Community & Stakeholder

Anne Moran, Botanist

Internal Consultation

Environment Levy Working Group members

Pest Management Officers

Natural Areas Officers

Conservation Partnerships Officer

Departments/Sections Consulted:

<input checked="" type="checkbox"/> Chief Executive Officer	<input type="checkbox"/> Community Services	<input checked="" type="checkbox"/> Corporate Services
Executive Officer	Director	Director
Executive Support	Community Development	x Financial Services
	Community Facilities	ICT
	Libraries & Galleries	Procurement & Fleet
	Local Laws	x Property
	Waste & Environmental Health	Revenue Services
<input type="checkbox"/> Executive Services	<input checked="" type="checkbox"/> Environment & Sustainable Development	<input type="checkbox"/> Infrastructure Services
Director	x Director	Director
Community Engagement	x Building & Plumbing Services	Asset Management
Customer Service	x Development Assessment	Buildings and Facilities
Governance	x Economic Development	Civil Operations
People and Culture	x Environmental Services	Disaster Management
	x Strategic Land Use Planning	Infrastructure Planning,
		Design and Delivery

Lancelyn Pty. Ltd. ABN 41 010 865 273 T/A

BUGLER FRANCIS VALUERS



P.O. Box 232
NOOSA HEADS Q 4567
Phone: (07) 5447 4911
Email: noosaval@bigpond.com

VALUATION OF

325-375 LAKE FLAT ROAD
BOREEN POINT QLD 4565

FOR

NOOSA SHIRE COUNCIL
PO BOX 141
TEWANTIN QLD 4565



VALUATION

\$925,000

INSPECTION DATE

6 DECEMBER 2019

REPORT DATE

13 DECEMBER 2019

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<u>INSTRUCTIONS</u>	To ascertain the "market value" of the subject property as at the date of inspection, subject to the definitions and conditions set out in the valuation addendum attached.
<u>REGISTERED OWNER/S</u>	Graeme Beresford Arbuckle
<u>REAL PROPERTY DESCRIPTION</u>	Lot 1 and Lot 2 on Registered Plan 28724 County of March, Parish of Noosa
<u>LAND AREA</u>	88.35 Hectares
<u>ZONING</u>	Rural
<u>SITE VALUE</u>	Department of Natural Resources, Mines and Energy. \$700,000 as at 30 June 2019 (Total Site 318.32 Hectares)
<u>SERVICES/ROADS</u>	Electricity and telephone available for connection. Bitumen sealed road.
<u>ACCESS</u>	Average
<u>LOCATION</u>	Boreen Point on the western shores of Lake Cootharaba approximately 20 kilometres north west of Tewantin in the Noosa Hinterland
<u>SITE DESCRIPTION</u>	Two adjoining allotments forming part of a five lot amalgamation with frontage to Lake Flat Road and Cootharaba Road. The subject lots are located centrally with frontage to Lake Flat Road and side and rear boundaries adjoining unformed gazetted roads. The land is slightly sloping with low lying areas which may be subject to local flooding. The lots are heavily timbered with forest regrowth and areas of vine scrub.
<u>IMPROVEMENTS</u>	Boundary fencing.

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ENVIRONMENTAL
ISSUES

Contamination

The subject existing and past land use indicates that contamination is UNLIKELY.

We are not contaminated land experts and cannot confirm if the site is contaminated or otherwise.

Flooding Hazard

The land IS NOT located in a flood hazard area.

Landslide Hazard

The land IS NOT located in a landslide hazard area.

Bushfire Hazard

The land IS located in a medium bushfire hazard area.

Biodiversity

The land IS located in an environmental protection area.

The land IS NOT located in an environmental enhancement area.

Acid Sulphate

The land IS located in an acid sulphate area.

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SALES EVIDENCE

Sale 1

1 JULY 2019

1675 Louis Bazzo Drive, Boreen Point. Lot 3 on RP 186809 51.53 Hectares

An irregular shaped mostly low lying parcel of land which is heavily timbered

Sold for \$395,000

Vacant low lying flood prone heavily timbered land within 600 metres of Boreen Point Village. (\$7,775/Ha)

Sale 2

20 JUNE 2016

55 Lake Flat Road, Boreen Point. Lot 7 on SP 109944 40.51 Hectares

An irregular shaped low lying parcel of land which is heavily timbered with a habitable shed.

Sold for \$388,000

Heavily timbered flood prone land in similar location (\$8,000/Ha)

Sale 3

30 OCTOBER 2018

90 Eastern Branch Road, Kin Kin. Lot 3 on RP 164586 45.38 Hectares

A timber and metal roof Queenslander style dwelling and a machinery shed on an undulating irregular shaped partly cleared allotment

Sold for \$601,000

Smaller parcel of more useable land. (\$11,018/Ha)

Sale 4 **29 MARCH 2019**

Superior quality improved pasture. (\$13,680/Ha)

Smaller parcel of heavily timbered land. (\$12,615/Ha)

A vacant heavily timbered allotment with a cleared house site in a superior location. (\$15,254/Ha)

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COMMENTS

The subject property comprises two adjoining allotments of 88.35 Hectares. The parcel is heavily timbered partly flood prone land within 1.5 kilometres of Lake Cootharaba in the Noosa Hinterland. The owner advises he has a farm forestry permit and we have taken this into consideration in our assessment. In our opinion in the current market conditions and having regard to limited recent recorded sales evidence of similar size parcels of land and the subject topography we consider a range of \$880,000 to \$960,000 indicative.

VALUATION

WE VALUE 325-375 LAKE FLAT ROAD, BOREEN POINT QLD 4565 AS FOLLOWS

\$925,000 (\$10,500/Hectare)

(NINE HUNDRED AND TWENTY FIVE THOUSAND DOLLARS)



Warren Walker AAPI
Certified Practising Valuer/Registration No.1828.

Our Ref: 19-29

VALUATION ADDENDUM

Market Value

"Market Value" is defined as "The estimated amount for which an asset should exchange on the date of valuation between a willing buyer and a willing seller in an arm's length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion".

Easements/Encumbrances

The title deed has not been searched to verify if any encumbrance or easement exists. This valuation is assessed on the title being free from any encumbrance or easement other than a registered mortgage.

Improvements

Boundary fencing.

Basis of Valuation

We have assessed our valuation on the basis of Freehold Title with vacant possession. Our valuation is determined on the basis that the property, the title thereto and its use is not affected by any other matter than that mentioned in this report. Specifically, we have assumed that the property is not affected by financial liens of any nature.

We have neither undertaken, requested, nor sighted the following:

- Detailed Title Search or a photocopy of the Certificate of Title;
- Written Town Planning Certificate;
- Identification Survey by a Licensed Surveyor;
- Queensland Transport Roads Search;
- Written Flood Search;
- Farm Forestry Permit;

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- Soil Survey;
- We are not Contaminated Land Experts;
- A search of the Contaminated Land Register has not been made;
- We have assumed the land is free from contamination for valuation purposes.

NOTE: Any comments on these issues are based on observations on site and, where necessary, appropriate verbal inquiry without the benefit of searches, surveys etc. The valuer reserves the right to review the valuation and the report if searches and inquiries reveal contrary conditions or matters not addressed herein.

Disclaimers

Third Party This valuation is for the use only of the party to whom it is addressed and for no other purpose. No responsibility is accepted to any third party who may use or rely on the whole or any part of the content of this valuation.

Market Movement This valuation is current as at the date of valuation only. The value assessed herein may change significantly and unexpectedly over a relatively short period (including as a result of general market movements or factors specific to the particular property). We do not accept liability for losses arising from such subsequent changes in value. Without limiting the generality of the above comment, we do not assume any responsibility or accept any liability where this valuation is relied upon after the expiration of three months from the date of the valuation, or such earlier date if you become aware of any factors that have any effect of the valuation.

Private Lending No responsibility is accepted to any party associated with solicitor arranged mortgages.

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13 December 2019

Peter Milne
Noosa Shire Council
PO Box 141
Tewantin Qld 4565

Re: Valuation – 325-375 Lake Flat Road, Boreen Point Qld 4565

We enclose our valuation report for the abovementioned property, Tax Invoice has been forwarded to the Accounts Department.

Thank you for your instructions. Please advise if we can assist further.

Yours faithfully,



Warren Walker
Bugler Francis Valuers

Encl.

Vegetation Report -325 and 375 Lake Flat Road Cootharaba



Background

The owner of 325 and 375 Lake Flat Road approached Council with a view to selling these properties to Council under the Environment Levy land acquisition program.

This report highlights the results of desktop analysis and field surveys of the vegetation within the two properties. It also provides notes on habitat values and condition.

Property Description

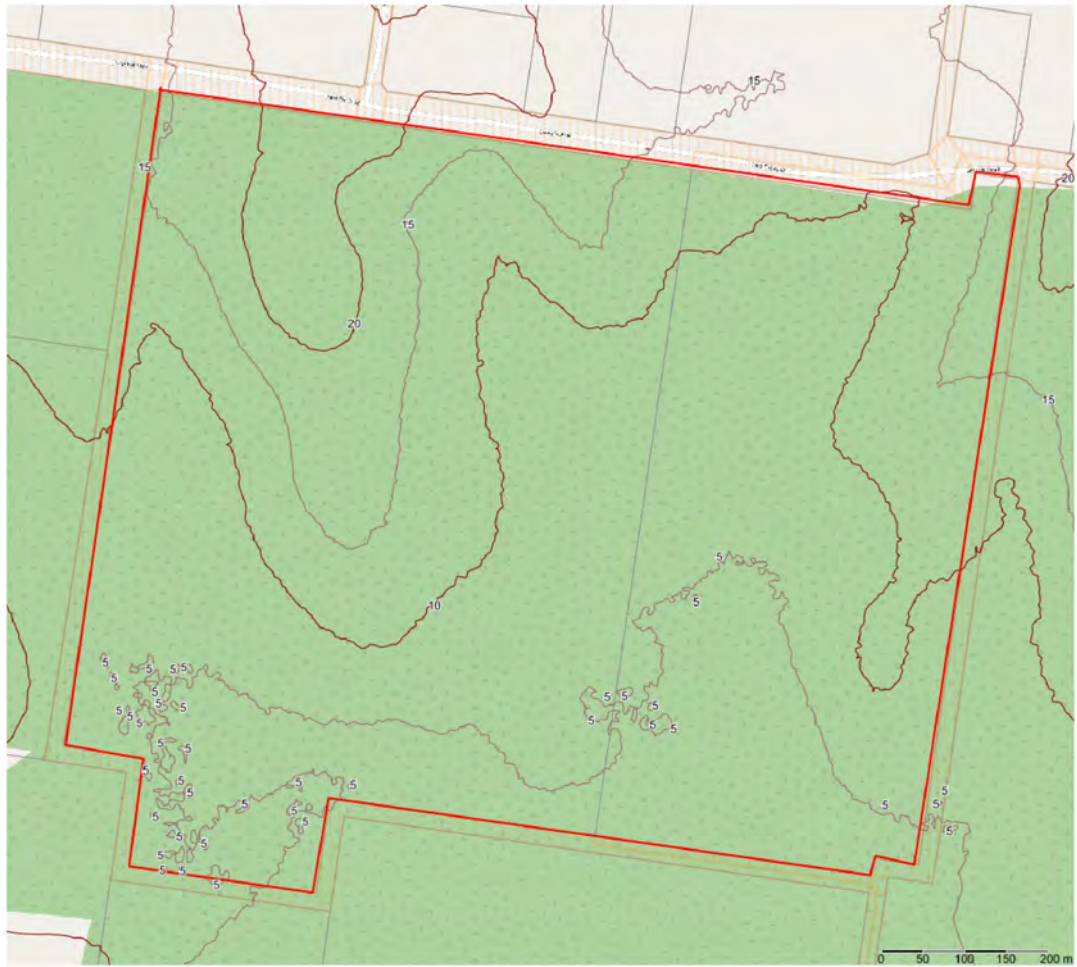
325 Lake Flat Road (1RP28724) has an area of 32.35 hectares. 375 Lake Flat Road (2RP28724) has an area of 55.9 hectares. Both properties are fully vegetated with native vegetation. There are no buildings on either property. Parts of the properties contain fencing which roughly delineates property boundaries in some areas. There is a network of access tracks along the boundaries, and an internal track within 375 Lake Flat Road.

Geology and Topography

Geological formations within the properties are Myrtle Creek Sandstone (Land Zone 9-10) on higher land grading to alluvial soils within the central gully and the south west corner (Map 1). Elevation falls from the highest area (20 metres ASL) in the ridgeline to the north east and along Lake Flat Road to 5 metres ASL in the southern sections.



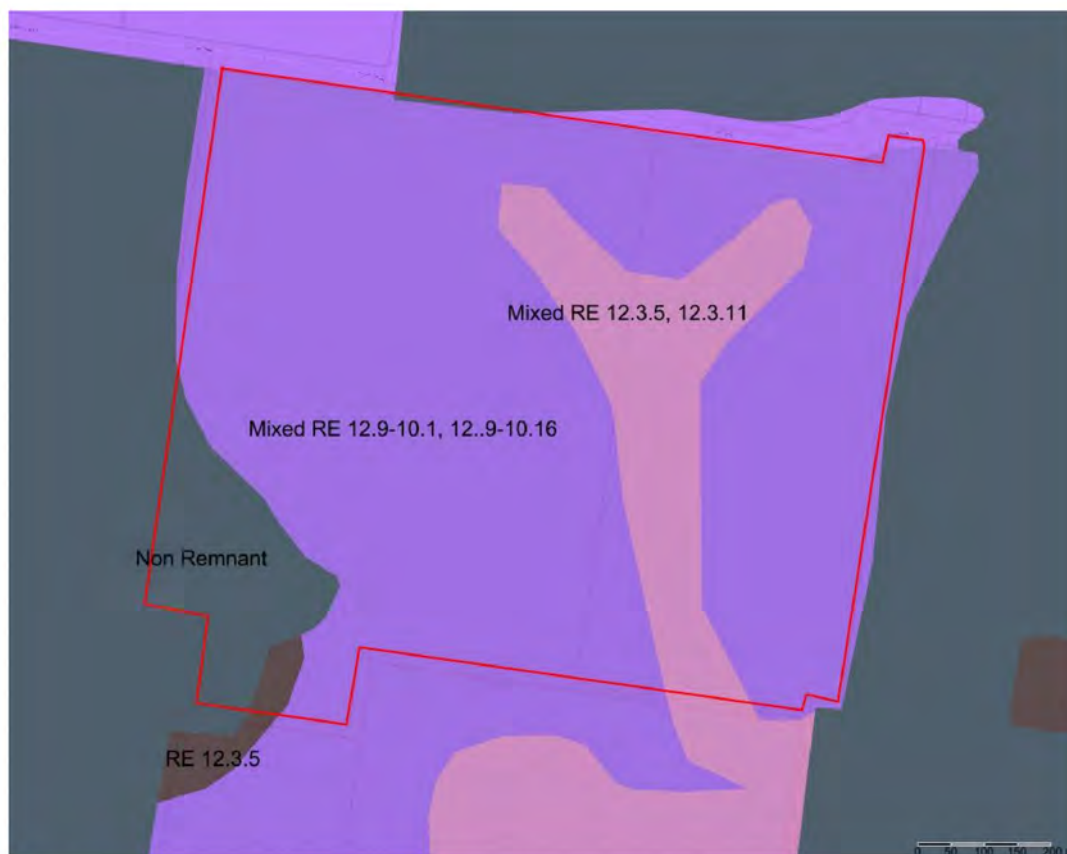
Map 1 - Geology



Map 2 – Contours and Elevation

Mapped Regional Ecosystems

Four Remnant Regional Ecosystems and a patch of non-remnant vegetation are mapped onsite as indicated on Map 3 below.



Map 3 – Mapped regional ecosystem coverage (version 11)

Historical vegetation coverage

A sequence of aerial photos from 1965 indicate that the properties were well vegetated, the property boundaries in the below sequence are indicative.

The 1965 aerial indicates some cleared areas on Lot 325 on the northern ridgeline. The patch of non-remnant vegetation in the south west corner is evident, giving an indication that the initial clearing of that section occurred prior to 1965.

The 1974 aerial indicates that the south west corner had recently been cleared as evidenced by the windrows. The access track within Lot 325 had also been widened.

In 1984 the south west section showed signs of regeneration, and the previously cleared areas were also regrowing. This trend continues in the 1996 aerial to the present.



1965 aerial



1974 aerial



1984 aerial



1996 aerial

Vegetation – Field survey results

Map 4 indicates the indicative distribution of vegetation communities' onsite. These are described below.

Tall open mixed Eucalypt forest (Wet Sclerophyll) on Sandstone

Tall open forest to 30 metres canopy height. Dominant canopy species are Flooded Gum (*Eucalyptus grandis*) with Red Stringybark (*Eucalyptus resinifera*), Pink Bloodwood (*Corymbia intermedia*), Tallow-wood (*Eucalyptus microcorys*) and Brush Box (*Lophostemon confertus*). In lower areas the Flooded Gum dominance is replaced by Swamp Mahogany (*Eucalyptus robusta*) and Red Stringybark. Transition zones are evident where both species occur as canopy dominants. The sub canopy /mid strata comprises species such as Hickory Wattle (*Acacia disparrima*), Cheese Tree (*Glochidion ferdinandi*), Red Ash (*Alphitonia excelsa*), Paper bark tea tree (*Melaleuca quinquenervia*) and a range of shrub and vine species. The ground layer is grassy with species such as *Ottochloa nodosa* and *Lomandra longifolia* common. In many areas saw sedge (*Gahnia clarkei*) is dominant in the ground layer. Some areas have a well-developed vine forest sub canopy with occasional emergent Kauri Pine (*Agathis robusta*). This vegetation type equates to Regional Ecosystem 12.9-10.1, listed as Of Concern under the Vegetation Management Act.



Eucalypt forest/woodland on alluvial soils

Open forest/ woodland to 20 metres. Canopy species include Swamp Mahogany, Red Stringybark, Paper bark Tea Tree and Swamp Box (*Lophostemon suaveolens*).

The mid strata is diverse, with vine forest species present in some areas including Pink Euodia (*Melicope elleryana*), and Cabbage Tree palm (*Livistona australis*). Twiggy Heath Myrtle (*Sannantha bidwillii*) is common in some areas. The ground layer is generally dominated by Sawsedge with Swamp Foxtail (*Balaskion tetraphyllum*) present in some areas. It equates to Regional Ecosystem 12.3.5 listed as Not of Concern under the Vegetation Management Act.



Swamp Mahogany open forest to Woodland.

Areas on the edge of the alluvium on higher ground are dominated by Pink Bloodwood and Red Stringybark. This equates to Regional Ecosystem 12.3.11 listed as Of Concern under the Vegetation Management Act.



Tall open forest – Bloodwood and Red Stringybark

Araucarian Notophyll Vine Forest

The north east section of the property and the upper sections of the central gullies contain vine forest. Canopy species include Southern Penda (*Xanthostemon oppositifolius*), Hoop Pine (*Araucaria cunninghamiana*), Blush walnut (*Beilschmiedia obtusifolia*), Kauri Pine (*Agathis robusta*) and Bolly Gum (*Litsea reticulata*). This vegetation type transitions into RE 12.9-10.1 where the canopy becomes dominated by Eucalypts (mainly Flooded gum). The mid strata contains a diverse range of vine forest tree, shrub and vine species. The ground layer contains mainly sawsedge, and extensive areas of Lawyer Vine (*Calamus muelleri*). This vegetation type equates to Regional Ecosystem 12.9-10.16, listed as Of Concern under the Vegetation Management Act.

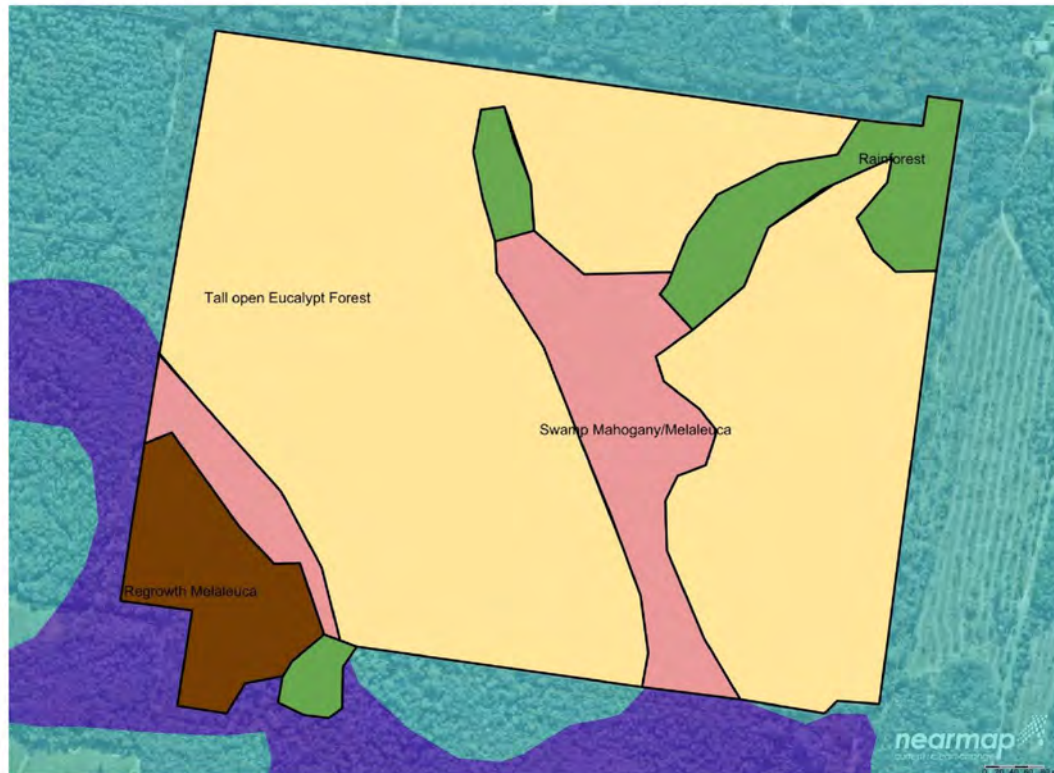


Araucarian Notophyll Vine Forest

Regrowth vegetation

The south west corner of the property contains regrowth vegetation dominated by Paper Bark tea tree from clearing in the early 1970s. The vegetation has a closed canopy to 18 metres height, and associated species are Swamp Box, Swamp Mahogany, and Bloodwood.

**Regrowth vegetation**



Map 4 Indicative vegetation communities

Floral diversity

Preliminary flora surveys in January 2020 recorded 172 native plant species, indicating a high level of plant diversity. (Appendix 1) Two plants species listed under State and Commonwealth legislation were recorded on the property.

Southern Penda (*Xanthostemon oppositifolius*). A vine forest tree growing to 25 metres. Several large specimens recorded on the north east section of the property and adjacent property within the vine forest area. It was also recorded within the adjacent tall open forest areas that have a well-developed vine forest sub canopy. Southern penda is listed as vulnerable under the State Nature Conservation Act and Commonwealth Environment Protection and Biodiversity Conservation Act.



Southern penda

Bacon Wood (*Archidendron lovelliae*). A vine forest tree growing to 10 metres. Several plants recorded on and adjacent to the property. It is listed as vulnerable under the State Nature Conservation Act and Commonwealth Environment Protection and Biodiversity Conservation Act.

Other listed plant species that have been recorded in the local area and that are likely to occur within the property include:

- Keys Boronia (*Boronia keysii*)
- Wide Bay Boronia (*Boronia rivularis*)

Landscape Connectivity

The properties form a corridor linkage between vegetated areas to the south along Cootharaba Road and Council reserves along the edge of Lake Cootharaba north to Coolool National Park. There are a number of Land for Wildlife and Nature Refuge properties within this corridor that add to the significance of Lots 325 and 375 properties as an key north south linkage.

Habitat values

Four Eucalypt tree species on the properties are primary koala food trees. These are Tallow-wood, Swamp Mahogany, Flooded Gum and Blue Gum.

Numerous large trees on the property exhibit hollow formation critical for hollow dependant fauna species. Fallen trees on the property are evident and provide habitat for ground dwelling species. The diversity of plant species and habitats provides a diverse range of food resources, and nesting for a range of fauna species.

Ephemeral waterways in the lower sections of the property would develop ponding during the wet season, and are potential breeding areas for amphibian species, including Acid Frog species such as *Crinia tinnula*.

Condition

The vegetation communities on the properties are in very good condition with all structural elements present (i.e. emergents, canopy, sub canopy, ground layer). The area of Melaleuca regrowth is free of invasive plant species. A full list of invasive plant species is presented in Appendix 2. Lantana is the most widespread weed but is at a very low density. Some patches of Singapore daisy along the northern boundary adjacent to Lake Flat road require treatment. There are some isolated camphor laurel trees throughout the property.

Appendix 1 Flora list

Flora checklist

Location: 325 and 375 Lake Flat Road

Date: 17/1/2020 and 23/1/2020

Form: T-tree, S/T-small tree, S-shrub, H-herb, V-vine, G-grass/sedge, O-orchid, F-fern, P-palm

Species	Family	Common name	Abundance	Form
<i>Acacia cincinnata</i>	Mimosaceae	Coil Pod Wattle	R	T
<i>Acacia disparrima</i> subsp. <i>disparrima</i>	Mimosaceae	Hickory Wattle	C	T
<i>Acacia leiocalyx</i> subsp. <i>leiocalyx</i>	Mimosaceae	Early-flowering Black Wattle	C	S/T
<i>Acacia melanoxylon</i>	Mimosaceae	Blackwood	O	T
<i>Acacia penninervis</i> var. <i>longiracemosa</i>	Mimosaceae	Mountain Hickory Wattle	R	S
<i>Acmena smithii</i>	Myrtaceae	Narrow-leaf Lilly Pilly	O	S/T
<i>Acronychia imperforata</i>	Rutaceae	Pilly	O	S/T
<i>Acronychia oblongifolia</i>	Rutaceae	Beach Acronychia	O	S/T
<i>Acronychia wilcoxiana</i>	Rutaceae	White Lilly Pilly	R	T
<i>Acrotriche aggregata</i>	Epacridaceae	Silver Aspen	O	S/T
<i>Agathis robusta</i>	Araucariaceae	Red Ground Berry	R	S
<i>Alphitonia excelsa</i>	Rhamnaceae	Kauri Pine	R	T
<i>Alpinia caerulea</i>	Zingiberaceae	Red Ash	C	T
<i>Alyxia magnifolia</i>	Apocynaceae	Native Ginger	O	H
<i>Amylothea dictyophleba</i>	Loranthaceae	Large-leaf Chain Fruit - rare	R	S
<i>Araucaria cunninghamii</i> var. <i>cunninghamii</i>	Araucariaceae	Rainforest Mistletoe	R	Para
<i>Archidendron grandiflorum</i>	Mimosaceae	Hoop Pine	R	T
<i>Archidendron lovelliae</i>	Mimosaceae	Lace Flower Tree	R	S/T
<i>Archontophoenix cunninghamiana</i>	Arecaceae	Bacon Wood	R	S/T
<i>Artenema fimbriatum</i>	Scrophulariaceae	Bangalow Palm	R	P
<i>Austromyrtus dulcis</i>	Myrtaceae	Koala Bells	R	H
<i>Austrosteenisia blackii</i> var. <i>blackii</i>	Fabaceae	Midgim Berry	O	S
<i>Baloskion tetraphyllum</i>	Restionaceae	Blood Vine	R	V
<i>Beilschmiedia elliptica</i>	Lauraceae	Swamp Foxtails	O	S
<i>Beilschmiedia obtusifolia</i>	Lauraceae	Grey Walnut	O	T
<i>Blechnum cartilagineum</i>	Blechnaceae	Blush Walnut	O	T
<i>Blechnum indicum</i>	Blechnaceae	Gristle Fern	O	F
<i>Brachychiton acerifolius</i>	Sterculiaceae	Bungwall Fern	O	F
<i>Breynia oblongifolia</i>	Euphorbiaceae	Flame Tree	R	T
<i>Calamus muelleri</i>	Arecaceae	Coffee Bush	O	S
<i>Callerya megasperma</i>	Fabaceae	Lawyer Cane	C	V
<i>Calochlaena dubia</i>	Dicksoniaceae	Native Wisteria	O	V
<i>Caelospermum paniculatum</i>	Rubiaceae	Soft Bracken	C	F
<i>Carex horsfieldii</i>	Cyperaceae	Caelospermum	O	V
<i>Carex maculata</i>	Cyperaceae	Rainforest Carex	O	G

<i>Cinnamomum oliveri</i>	Lauraceae	Oliver's Sassafras	R	T
<i>Cissus hypoglauca</i>	Vitaceae	Water Vine	O	V
<i>Cissus sterculiifolia</i>	Vitaceae	Water Vine	O	V
		Smooth		
<i>Clerodendrum floribundum</i>	Verbenaceae	Clerodendrum,		
		Lolly Bush	O	T
<i>Commersonia bartramia</i>	Sterculiaceae	Brown Kurrajong	O	S/T
		Red-Fruited Palm		
<i>Cordyline rubra</i>	Agavaceae	Lily	O	P
<i>Corymbia intermedia</i>	Myrtaceae	Pink Bloodwood	C	T
<i>Cryptocarya glaucescens</i>	Lauraceae	Silver Sycamore	O	T
<i>Cryptocarya macdonaldii</i>	Lauraceae	Rusty Laurel	O	T
<i>Cryptocarya microneura</i>	Lauraceae	Murrogun	O	T
		Hairy Three Veined		
<i>Cryptocarya triplinervis var pubens</i>	Lauraceae	Cryptocarya		T
<i>Cupaniopsis serrata</i>	Sapindaceae	Smooth Tuckeroo	R	S/T
<i>Cyclophyllum coprosmoides</i>	Rubiaceae	Coast Canthium	O	S/T
<i>Cymbidium suave</i>	Orchidaceae	Sweet Cymbidium	R	O
<i>Cyperus haspan</i>	Cyperaceae	Flat Sedge	O	G
<i>Denhamia celastroides</i>	Celastraceae	Orange Boxwood	R	S/T
<i>Dianella caerulea</i>	Hemerocallidaceae	Blue Flax Lily	C	L
<i>Dianella caerulea var aspera</i>	Hemerocallidaceae	Blue Flax Lily	O	L
<i>Dianella longifolia</i>	Hemerocallidaceae	Blue Flax Lily	O	L
<i>Dioscorea transversa</i>	Dioscoreaceae	Native Yam	R	V
<i>Diospyros pentamera</i>	Ebenaceae	Myrtle Ebony	R	T
<i>Diospyros yandina</i>	Ebenaceae	Shiny Ebony	O	S
<i>Dodonea triquetra</i>	Sapindaceae	Hopbush	R	S
<i>Drypetes deplanchei</i>	Euphorbiaceae	Yellow Tulip	R	T
<i>Duboisia myoporoides</i>	Solanaceae	Duboisia	R	S/T
		Eumundi		
<i>Elaeocarpus eumundi</i>	Elaeocarpaceae	Quandong	R	T
<i>Elaeocarpus obovatus</i>	Elaeocarpaceae	Hard Quandong	R	T
<i>Elaeocarpus reticulatus</i>	Elaeocarpaceae	Blueberry Ash	O	S/T
<i>Elatostachys nervosa</i>	Sapindaceae	Beetroot Tree	R	T
<i>Embelia australiana</i>	Myrsinaceae	Embelia	O	V
<i>Endiandra discolor</i>	Lauraceae	Rose Walnut	O	T
<i>Endiandra sieberi</i>	Lauraceae	Corkwood	R	T
<i>Entolasia marginata</i>	Poaceae	Bordered Panic	O	G
<i>Entolasia stricta</i>	Poaceae	Wiry Panic	O	G
<i>Eragrostis elongata</i>	Poaceae	Lovegrass	O	G
		Rose Gum/Flooded		
<i>Eucalyptus grandis</i>	Myrtaceae	Gum	C	T
<i>Eucalyptus microcorys</i>	Myrtaceae	Tallowwood	O	T
<i>Eucalyptus resinifera</i>	Myrtaceae	Red Mahogany	C	T
<i>Eucalyptus robusta</i>	Myrtaceae	Swamp Mahogany	C	T
<i>Eucalyptus tereticornis</i>	Myrtaceae	Forest Red Gum	O	T
<i>Eupomatia laurina</i>	Eupomatiaceae	Copper Laurel	O	S
<i>Euroschinus falcatus var. falcatus</i>	Anacardiaceae	Ribbonwood	R	T
		Ballart / Native		
<i>Exocarpus latifolius</i>	Santalaceae	Cherry	R	S/T
<i>Ficus fraseri</i>	Moraceae	Sandpaper Fig	R	T
<i>Ficus watkinsiana</i>	Moraceae	Nipple Fig	R	T
<i>Fimbristylis dichotoma</i>	Cyperaceae	A Rush	O	G
<i>Flagellaria indica</i>	Flagellariaceae	Supplejack	O	V
<i>Flindersia bennettii</i>	Rutaceae	Bennett's Ash	R	T

<i>Flindersia schottiana</i> var. <i>pubescens</i>	Rutaceae	Bumpy Ash/Silver Ash	O	T
<i>Gahnia clarkei</i>	Cyperaceae	Creeping Sword Grass	C	G
<i>Geitonoplesium cymosum</i>	Hemerocallidaceae	Scrambling Lily	O	V
<i>Geodorum densiflorum</i>	Orchidaceae	Painted Orchid	R	O
<i>Glochidion ferdinandi</i> var. <i>ferdinandi</i>	Euphorbiaceae	Cheese Tree	C	T
<i>Goodenia rotundifolia</i>	Goodeniaceae	Round-leaf Goodenia	O	H
<i>Gossia acmenoides</i>	Myrtaceae	Scrub Ironwood	R	S/T
<i>Grevillea hilliana</i>	Proteaceae	White Oak	R	T
<i>Guioa acutifolia</i>	Sapindaceae	Northern Guioa	O	T
<i>Guioa semiglauc</i>	Sapindaceae	Native Quince	O	T
<i>Gymnostachys anceps</i>	Araceae	Settler's Flax	R	G
<i>Gynochthodes jasminoides</i>	Rubiaceae	Sweet Morinda	O	V
<i>Halfordia kendack</i>	Rutaceae	Saffron Heart	R	S/T
<i>Hibbertia scandens</i> var. <i>glabra</i>	Dilleniaceae	Snake Vine, Guinea Flower	O	V
<i>Hovea acutifolia</i>	Fabaceae	Pointed-leaf Hovea	C	S
<i>Hypolepis muelleri</i>	Dennstaedtiaceae	Harsh Ground Fern	O	F
<i>Hypericum gramineum</i>	Clusiaceae	Native St Johns Wort	O	H
<i>Hypserpa decumbens</i>	Menispermaceae	Hypserpa	R	V
<i>Imperata cylindrica</i>	Poaceae	Blady Grass	C	G
<i>Kennedia rubicunda</i>	Fabaceae	Running Postie	R	V
<i>Linospadix monostachyos</i>	Areaceae	Walking Stick Palm	R	P
<i>Litsea australis</i>	Lauraceae	Brown Bolly Gum	R	T
<i>Litsea reticulata</i>	Lauraceae	Bolly Gum	O	T
<i>Livistona australis</i>	Areaceae	Cabbage Palm	O	P
<i>Lobelia purpurescens</i>	Campanulaceae	White Root	C	H
<i>Lomandra longifolia</i>	Laxmanniaceae	Mat Rush	C	G
<i>Lomandra spicata</i>	Laxmanniaceae	Rainforest Mat Rush	R	G
<i>Lophostemon confertus</i>	Myrtaceae	Brush Box	O	T
<i>Lophostemon suaveolens</i>	Myrtaceae	Swamp Box	C	T
<i>Marsdenia rostrata</i>	Asclepiadaceae	Common Milk Vine	R	V
<i>Melaleuca quinquenervia</i>	Myrtaceae	Paper Barked Tea Tree	C	S/T
<i>Melaleuca salicina</i>	Myrtaceae	White Bottle Brush	O	S/T
<i>Melicope elleryana</i>	Rutaceae	Pink Euodia	O	T
<i>Melodinus australis</i>	Apocynaceae	Bellbird Vine	O	V
<i>Melodorum leichhardtii</i>	Annonaceae	Zig Zag Vine	O	V
<i>Mezoneuron scortechinii</i>	Caesalpiniaceae	Mother-in-Law Vine	O	V
<i>Mischarytera lautereriana</i>	Sapindaceae	Corduroy Tamarind	R	T
<i>Mischocarpus pyriformis</i> subsp. <i>pyriformis</i>	Sapindaceae	Yellow Pearfruit	O	T
<i>Monotoca scoparia</i>	Ericaceae	Prickly Broom Heath	O	S
<i>Myrsine variabilis</i>	Myrsinaceae	Muttonwood	O	S/T
<i>Neolitsea dealbata</i>	Lauraceae	White Bolly Gum	O	T
<i>Notelaea longifolia</i>	Oleaceae	Mock Olive	O	T
<i>Notothixos incanus</i>	Viscaceae	Grey-leaved Mistletoe	R	Parasite
<i>Ottochloa gracillima</i>	Poaceae	Graceful Grass	O	G
<i>Ottochloa nodosa</i>	Poaceae	Large-leaf Graceful Grass	C	G

<i>Oxylobium robustum</i>	<i>Fabaceae</i>	Weeping Bush Pea	O	S
<i>Pandorea jasminoides</i>	<i>Bignoniaceae</i>	Native Jasmine		V
<i>Panicum effusum</i>	<i>Poaceae</i>	Native Panic	O	G
<i>Parsonsia straminea</i>	<i>Apocynaceae</i>	Monkey Rope	O	V
		Narrow-leaf		
<i>Persoonia virgata</i>	<i>Proteaceae</i>	Geebung	R	S
<i>Petalostigma triloculare</i>	<i>Euphorbiaceae</i>	Quinine Bush	R	S
<i>Phebalium woombye</i>	<i>Rutaceae</i>	Phebalium	O	S
		Small-leaf Plum		
<i>Pilidiostigma rhytispermum</i>	<i>Myrtaceae</i>	Myrtle	O	S
<i>Pittosporum multiflorum</i>	<i>Pittosporaceae</i>	Orange Thorn	R	S
<i>Pittosporum revolutum</i>	<i>Pittosporaceae</i>	Hairy Pittosporum	O	S
<i>Planchonella australis</i>	<i>Sapotaceae</i>	Black Apple	O	T
<i>Planchonella chartacea</i>	<i>Sapotaceae</i>	Coondoo	C	T
<i>Platyserium bifurcatum</i>	<i>Polypodiaceae</i>	Elkhorn	O	F
<i>Polyalthia nitidissima</i>	<i>Annonaceae</i>	Canary Beech	O	S/T
<i>Polyscias elegans</i>	<i>Araliaceae</i>	Celery Wood	O	T
<i>Pothos longipes</i>	<i>Araceae</i>	Candle Vine	R	V
<i>Psychotria loniceroides</i>	<i>Rubiaceae</i>	Hairy Psychotria	R	S
<i>Pteridium esculentum</i>	<i>Dennstaedtiaceae</i>	Bracken	C	F
<i>Rhodamnia acuminata</i>	<i>Myrtaceae</i>	Cooloola Ironwood	R	T
<i>Rubus moluccanus</i>	<i>Rosaceae</i>	Native Bramble	O	V
<i>Sannantha bidwillii</i>	<i>Myrtaceae</i>	Twiggy Myrtle	O	S
<i>Sarcopetalum harveyanum</i>	<i>Menispermaceae</i>	Pearl Vine	O	V
<i>Schizomeria ovata</i>	<i>Cunoniaceae</i>	Crabapple	R	T
<i>Smilax australis</i>	<i>Smilacaceae</i>	Barbwire Vine	C	V
<i>Smilax glycyphylla</i>	<i>Smilacaceae</i>	Native Sarsparilla	C	V
<i>Solanum densivestitum</i>	<i>Solanaceae</i>	Soft Nightshade	R	S
<i>Stenocarpus sinuatus</i>	<i>Proteaceae</i>	Wheel of Fire Tree	R	T
<i>Stephania japonica</i> var. <i>discolor</i>	<i>Menispermaceae</i>	Tape Vine	O	V
<i>Sterculia quadrifida</i>	<i>Sterculiaceae</i>	Peanut Tree	O	T
<i>Symplocos stawellii</i>	<i>Symplocaceae</i>	Hazelwood	R	T
<i>Synoum glandulosum</i> ssp. <i>glandulosum</i>		Scentless		
	<i>Meliaceae</i>	Rosewood		T
<i>Syzygium australe</i>	<i>Myrtaceae</i>	Brush Cherry	O	S/T
<i>Syzygium leuhmannii</i>	<i>Myrtaceae</i>	Riberry	R	T
<i>Syzygium oleosum</i>	<i>Myrtaceae</i>	Blue Lilly Pilly	O	T
<i>Tabernaemontana pandacaqui</i>	<i>Apocynaceae</i>	Banana Bush	O	S
<i>Trachymene procumbens</i>	<i>Apiaceae</i>	Wild Parsnip	R	H
<i>Tragia novae-hollandiae</i>	<i>Euphorbiaceae</i>	Stinging Vine	R	V
<i>Trophis scandens</i> subsp. <i>scandens</i>	<i>Moraceae</i>	Sandpaper Vine		V
		Creeping Native		
<i>Viola hederacea</i> subsp. <i>hederacea</i>	<i>Violaceae</i>	Violet	O	H
<i>Wikstroemia indica</i>	<i>Thymelaeaceae</i>	Tie Bush	O	S
<i>Wilkiea huegiana</i>	<i>Monimiaceae</i>	Hairy Wilkiea	O	S
<i>Xanthorrhoea fulva</i>	<i>Xanthorrhoeaceae</i>	Swamp Grasstree	O	G
<i>Xanthostemon oppositifolius</i>	<i>Myrtaceae</i>	Kin Kin Penda	O	T
<i>Zieria smithii</i>	<i>Rutaceae</i>	Midge Bush	O	H

Appendix 2 – Exotic (Weed) species**Flora checklist****Exotic species**

Location: Lake Flat Rd

Date:

Species	Family	Common name	Form
<i>Brachiaria ruziziensis</i>	<i>Poaceae</i>	Signal Grass	G
<i>Lantana camara</i>	<i>Verbenaceae</i>	Lantana	S/V
<i>Paspalum mandiocanum</i>	<i>Poaceae</i>	Broad-leaf Paspalum	G
<i>Passiflora suberosa</i>	<i>Passifloraceae</i>	Corky passionfruit	V
<i>Schefflera actinophylla</i>	<i>Araliaceae</i>	Umbrella Tree	T
<i>Senna pendula</i> var. <i>glabrata</i>	<i>Caesalpinaceae</i>	Easter Cassia	S
<i>Wedelia trilobata</i>	<i>Asteraceae</i>	Singapore Daisy	H