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**Let's Talk
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Managing the Urban Forest

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LET'S TALK ABOUT TREES
Managing the Urban Forest

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Arboricultural Assessment for: **Tree Identification, Health and Retention Value**

**91 – 125 Coriyule Road
CURLEWIS, 3222**

This report has been commissioned by:
Curlewis Bellarine Pty Ltd

In reference to
**Pre Development Arboricultural
Assessment Trees on site
Excluding remnant indigenous
natives.**

February 2021



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Table of Contents

1.0 Key Objectives	4
2.0 Methodology	4
3.0 Observations.....	5
3.1 General Observations.....	5
4.0 Discussion	10
5.0 Conclusion	10
6.0 Recommendations	16
7.0 Appendices	17
7.1 Photographs - Appendix One. - Typical trees of the project.	17
7.2 Site Plan	21
7.3 Tree Protection Signage.....	22
7.4 Tree Protection Zone (TPZ) Example.....	23
7.5 Indicative Stages in Development and the Tree Management Process	23
8.0 References	26
9.0 Terms and Limitations of the Report.....	27

1.0 Key Objectives

This report has been commissioned by Curlewis Bellarine Pty Ltd, in relation to trees which require consideration in a development project on a site referred to as 91 – 125 Coriyule road, Curlewis, 3222

The report is to look at trees on the site, with the exclusion of remnant indigenous natives, and make consideration of identification, health, arboricultural retention value and tree protection zone calculations so as planning for the site can progress in a tree focused manner.

This report does not give permission for tree removal, pruning or management.

It is assumed the permissions for removal or pruning if any are required, are sought and approved by other means, i.e. the application and granting of vegetation management permits.

2.0 Methodology

On the 26th of February 2021, the inspection performed on site, by Matthew Branagh, a Level 5 Consulting Arborist from 'Let's Talk About Trees'.

A ground-based Visual Tree Assessment was performed on the above-ground section of all trees on site, in line with modern Arboricultural Practices and Principles, AS 4970 – 2009 – Protection of Trees on Development Sites and AS 4373 – 2007 – Pruning of Amenity Trees.

All photographs and data within graphs tables and charts were taken or recorded at the time of the inspection and shall be used within this report for referencing or identification purposes.

3.0 Observations

3.1 General Observations

The following tree data was collected at inspection and refers to the trees.

No.	Identification	Est. Age Yrs	ULE	Health	Structure	Significance / Retention Value	Hazard	Esti. Height (m) & Spread (m)	DBH (cm) *multi stemmed	TPZ Radius (m) SRZ Radius (m)	Comment
1	<i>Eucalyptus cladocalyx</i> – Sugar Gum	M	S	P	P	L	L	8	45	5.4 2.4	Poor tree with significant phototropic lean from under pines. (in paddock)
2	<i>Pinus radiata</i> – Monterey Pine	M	M	F	G	L	L	13	48	5.8 2.4	Sound tree (in paddock)
3	<i>Eucalyptus cladocalyx</i> – Sugar Gum	M	M	F	P	L	L	8	48*	5.8 2.4	Past copping has caused a modified open crown of poor structure. (in paddock)
4	<i>Eucalyptus cladocalyx</i> – Sugar Gum	M	M	F	P	L	L	8	57*	6.8 2.6	Past copping has caused a modified open crown of poor structure. (in paddock)
5	<i>Eucalyptus cladocalyx</i> – Sugar Gum	M	M	F	P	L	L	9	38	4.6 2.2	Past copping has caused a modified open crown of poor structure. (in paddock)
6	<i>Pinus radiata</i> – Monterey Pine	M	M	F	P	L	L	13	47	5.6 2.4	Sound tree (in paddock)
77	<i>Corymbia citriodora</i> – Lemon scented Gum	M	L	G	G	L	L	13	38	4.6 2.2	Sound but open spreading and lion tailed.
78	<i>Gleditsia triacanthos</i> – Honey Locust	M	M	P	G	L	L	9	34*	4.1 2.1	Sound in declining health.
80	<i>Robinia pseudoacacia</i> - Sunburst	M	M	G	G	L	L	7	38*	4.6 2.2	Sound
79	<i>Crataegus azarolus</i> - Hawthorn	M	L	G	G	L	L	5	13*	2.0 1.5	Sound
76	<i>Gleditsia triacanthos</i> – Honey Locust	M	M	P	G	L	L	7	17*	2.0 1.6	Sound trifurcated tree.
76 B	<i>Schinus molle</i> – Pepper Corn	M	L	G	G	L	L	11	55*	6.6 2.6	Sound in good health with a trifurcated structure.
75	<i>Eucalyptus camaldulensis</i> – Red Gum	M	L	G	G	L	L	15	58	7.0 2.6	Sound planted landscape tree.
74	<i>Prunus cerasifera purpurea</i> – Flowering Plumb	M	L	G	G	L	L	5	14	2.0 1.5	Sound

No.	Identification	Est. Age Yrs	ULE	Health	Structure	Significance / Retention Value	Hazard	Esti. Height (m) & Spread (m)	DBH (cm) *multi stemmed	TPZ Radius (m) SRZ Radius (m)	Comment
73	Corymbia ficifolia – WA flowering gum	M	M	P	P	L	M	7	19*	2.3 1.6	Epicormic branches off a past failed stump. No retention value.
76 A	Cedar deodara – Himalayan Cedar	M	L	G	G	L	L	14	49	5.9 2.5	Sound tree, has potential to be retained as feature subject to final design.
7	Allocasuarina verticillata - Sheoak	SM	L	G	G	L	L	10	<15	2.0 1.5	Sound, planted indigenous native
9	Allocasuarina verticillata - Sheoak	SM	L	G	G	L	L	4	5	2.0 1.5	Sound, planted indigenous native
11	Eucalyptus lehmannii – Busy Yate	M	S	P	P	L	H	8	26	3.1 1.9	Mostly failed stump, open spreading canopy – No retention value.
60	Allocasuarina verticillata - Sheoak	Y	L	G	G	L	L	7	<15	2.0 1.5	Sound, planted indigenous native. Grows in garden surrounded by garden infrastructure.
61	Allocasuarina verticillata - Sheoak	Y	L	G	G	L	L	7	<15	2.0 1.5	Sound, planted indigenous native. Grows in garden surrounded by garden infrastructure.
10	Eucalyptus gomphocephala – Tuart Gum	M	M	F	P	L	L	12	36	4.3 2.2	Grown as wind break to current dwelling in a hedge row. Lopped to 5m in the past. Regrowth is unchecked and epicormic. Tree has no retention value in future site development.
16	Eucalyptus gomphocephala – Tuart Gum	M	M	F	P	L	L	12	34	4.1 2.1	Grown as wind break to current dwelling in a hedge row. Lopped to 5m in the past. Regrowth is unchecked and epicormic. Tree has no retention value in future site development.
12	Eucalyptus gomphocephala – Tuart Gum	M	M	F	P	L	L	12	65	7.8 2.8	Grown as wind break to current dwelling in a hedge row. Lopped to 5m in the past. Regrowth is unchecked and epicormic. Tree has no retention value in future site development.

No.	Identification	Est. Age Yrs	ULE	Health	Structure	Significance / Retention Value	Hazard	Esti. Height (m) & Spread (m)	DBH (cm) *multi stemmed	TPZ Radius (m) SRZ Radius (m)	Comment
14	Eucalyptus gomphocephala – Tuart Gum	M	M	F	P	L	L	12	42	5.0 2.3	Grown as wind break to current dwelling in a hedge row. Lopped to 5m in the past. Regrowth is unchecked and epicormic. Tree has no retention value in future site development.
13	Malus - Apple	M	L	G	P	L	L	5	20	2.4 1.7	Ornamental fruit tree, heavily timed in the past.
18	Melaleuca nesophila – Purple Melaleuca	M	L	G	G	L	L	5	<14	2.0 1.5	Trifurcated with sound form and structure.
17	Eucalyptus gomphocephala – Tuart Gum	M	M	F	P	L	L	12	47	5.6 2.4	Open and spreading crown. Tree with no retention value.
15	Cupressus macrocarpa – Monterey Cypress	D	D	D	D	D	D	D	D	D	Dead
19 20 21 23 25 26 28 29 31 33 34 36 38 40 42 43 45 49 53 55 56 58	Cupressus macrocarpa – Monterey Cypress	D	D	D	D	D	D	D	D	D	Dead row of trees around tennis court – no retention value
22 24 27 30 32 35 37 39 41	Eucalyptus gomphocephala – Tuart Gum	M	M	F	P	L	L	11	Ave 32	3.8 2.1	Tuart plantation around tennis court. Trees have been lopped to manage as a hedge and allowed to regrow. No retention value in development.

No.	Identification	Est. Age Yrs	ULE	Health	Structure	Significance / Retention Value	Hazard	Esti. Height (m) & Spread (m)	DBH (cm) *multi stemmed	TPZ Radius (m) SRZ Radius (m)	Comment
44 46 47 48 50 51 52 54											
57	Cupressus macrocarpa – Monterey Cypress	M	L	G	G	L	L	14	76	9.1 2.9	Sound tree
62	Eucalyptus gomphocephala – Tuart Gum	M	M	F	P	L	L	12	47	5.6 2.4	Grown as wind break to current dwelling in a hedge row. Lopped to 5m in the past. Regrowth is unchecked and epicormic. Tree has no retention value in future site development.
63	Eucalyptus gomphocephala – Tuart Gum	M	M	F	P	L	L	12	47	5.6 2.4	Grown as wind break to current dwelling in a hedge row. Lopped to 5m in the past. Regrowth is unchecked and epicormic. Tree has no retention value in future site development.
64	Eucalyptus gomphocephala – Tuart Gum	M	M	F	P	L	L	12	47	5.6 2.4	Grown as wind break to current dwelling in a hedge row. Lopped to 5m in the past. Regrowth is unchecked and epicormic. Tree has no retention value in future site development.
65 - 72	Eucalyptus gomphocephala – Tuart Gum	M	M	F	P	L	L	12	47	5.6 2.4	8 X Trees grown as a group / avenue. Partly dead with no useful life in development.
95	Eucalyptus melliodora – Yellow Box	M	L	G	G	L	L	10	52	6.2 2.5	Grows on a lean was a single specimen impacted by erosion and compaction around base from past site grazing and farming.

Further trees of the site:

441-418 Cupressus macrocarpa, Monterey Cypress – Driveway (West boundary – Southern group) 24 trees.

These trees are mature specimens and are grown as a group lining the driveway to the neighbouring allotment. A break in the plantation separates these trees from the group of a further 17 trees referred to as tree 38. The trees are growing at spacing's of approximately 2m and as such have developed as a single group reliant on one another, and as such should be treated all in the same manner. Partial retention of the planted group is not recommended. Trees appear stunted and in poor form and have a low retention value.

417-400 Cupressus macrocarpa, Monterey Cypress – Driveway (West boundary – Northern group) 17 trees

A shadow group of tree 37, this group is separate from the other and as such reported here as a separate group. They are similar / same condition and comment as the group forming tree 37. Trees appear stunted and in poor form and have a low retention value.

442-529 Cupressus macrocarpa, Monterey Cypress – Front Boundary (North boundary) 85 trees

A long plantation across the front of the allotment. The trees were recently impacted by heavy pruning in a poor manner to allow for infrastructural development along the road shoulder of Coryule Road.

As such the Northern face of the trees presents as dead and unsightly with little to no chance of recovery.

Excavation impacts within the TPZ of these trees is also notable along the front of the allotment in the form of trenching.

It is as such these trees show decline of recent time, and an open canopy from past pruning.

Poorly managed these trees have a reduced useful life expectancy and a low retention value to the in future development.

96-134 Pinus radiata, Monterey Pine – stand of 44 trees, (Centre of site) Runs North – South.

Central to the open pasture of the site is a plantation which runs north to South. The plantation is in a state of advanced senescence. All specimens are over mature, have open under canopies. 14 trees present as dead but standing and pose a very high failure risk. A further 8 trees show between 40% and 80% dead canopy. A smaller number show major limb failings. The remainder of the stand with the exception of two tree spaced well apart are in advanced decline with short useful life expectancies.

The two sound trees have a high dependency on the retention of the failing trees around them for retention of their structural integrity both above and

below ground. As such these two trees will follow suit of the plantation in the shorter term future.

Over all the stand has out grown its useful life expectancy and is unsound in retention for its rural pasture use. The stand has no contribution to make to urban life, and is not suitable for inclusion in future development of the site.

4.0 Discussion

The exotic and planted trees of the site carry a low retention value as an overall group.

Whilst there are plenty of trees on this site, many are planted in avenues and windbreaks and have been established with a utility use. This use has passed with the changing of the site use over the last decade. As such the trees which show past management have been abandoned to develop outside the bounds of arboricultural management. The result is tree decline across the site, with no trees showing a significance great enough to be included in an urban design for the site.

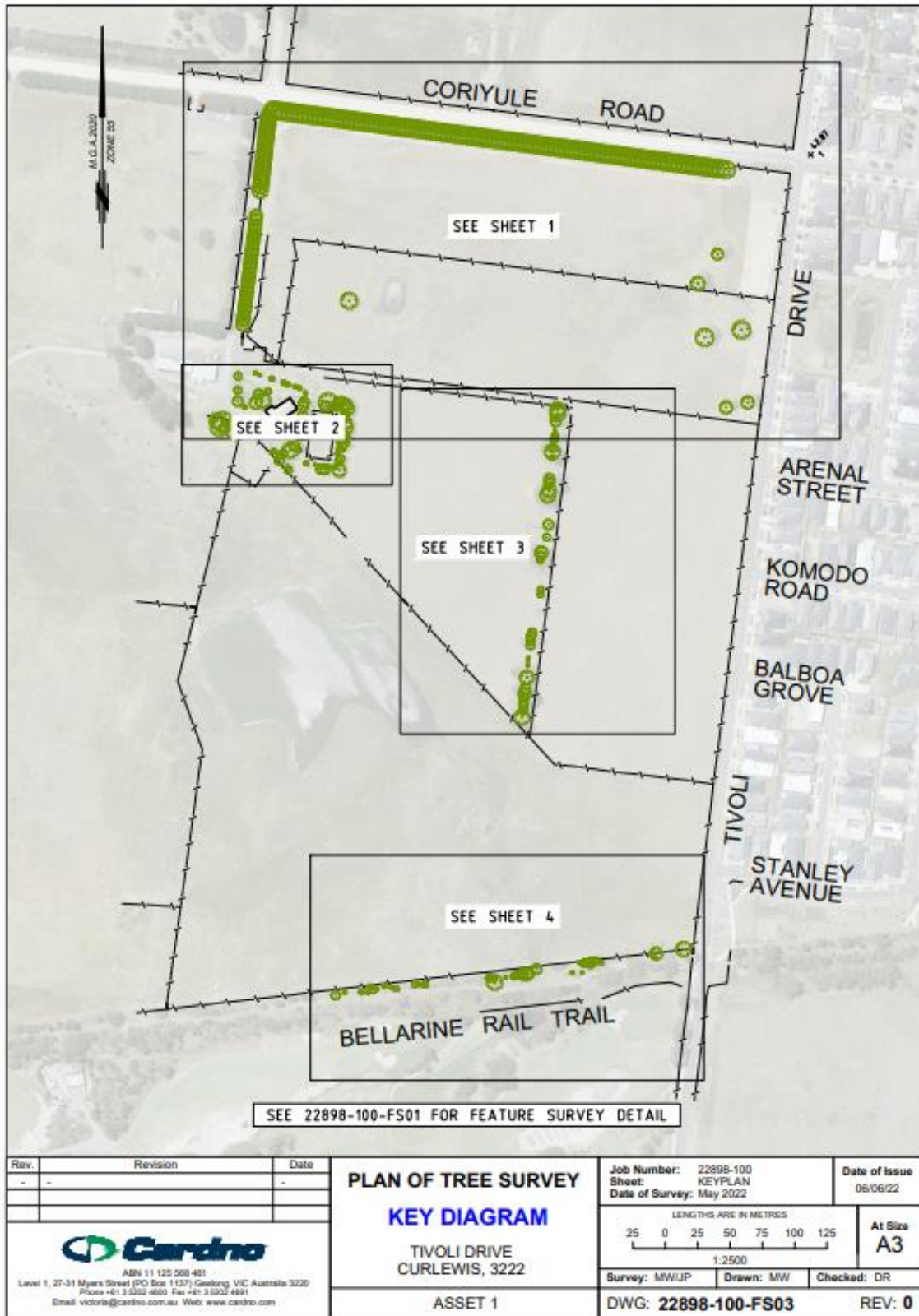
The plantation trees whilst showing a site presence due to their size and number, show past impacts of development and change around them and their senescent state sees them with short useful life expectancies. Over all I found no trees within the scope of this report, worthy of retention.

5.0 Conclusion

In conclusion the trees present as a disjointed, failing asset to the site. No trees pose a future sound use, nor offer a long useful life expectancy.

This report recommends the removal of trees from this site pre further site development.

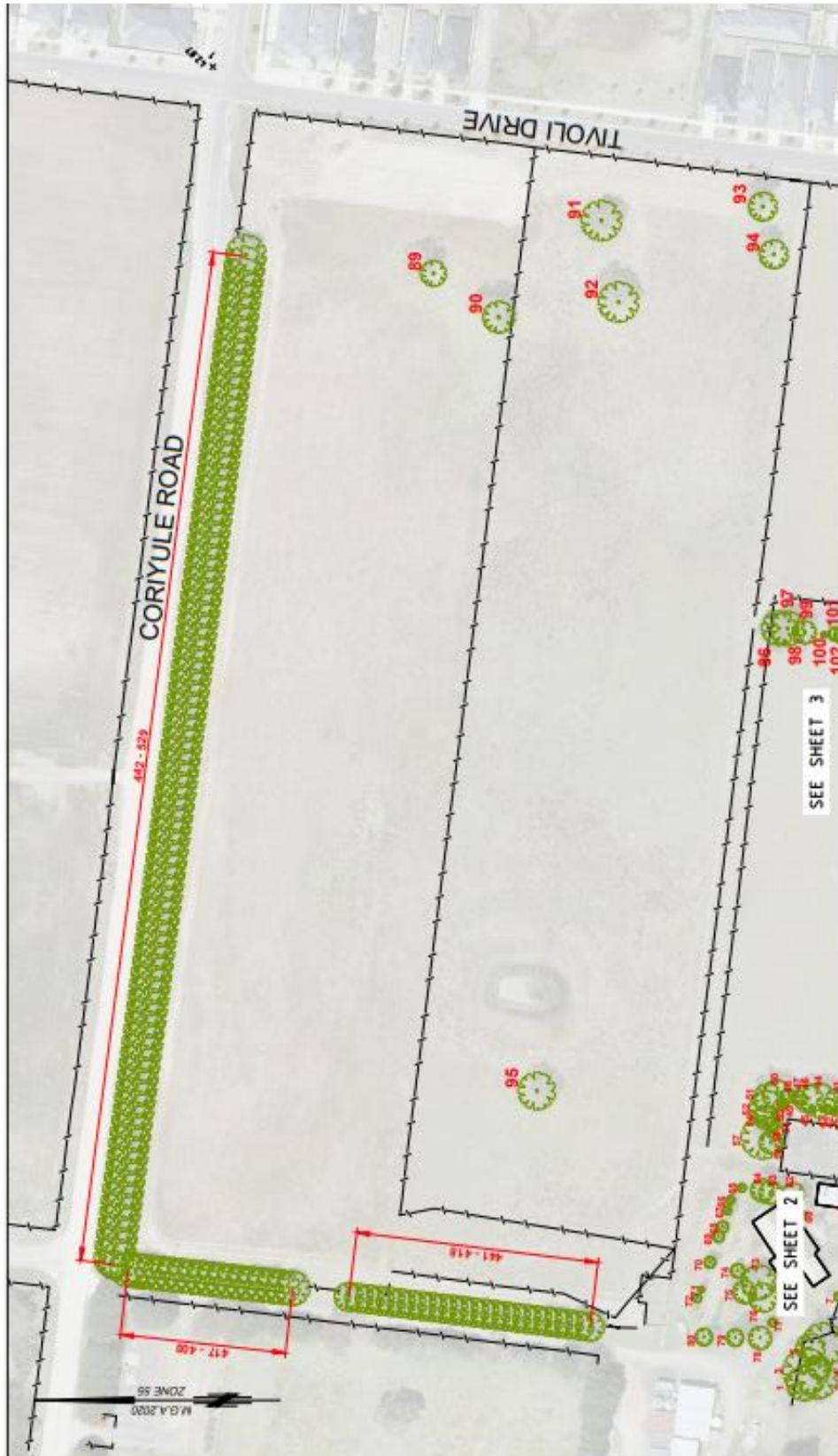
Location of trees on site.



Rev.	Revision	Date
-	-	-

PLAN OF TREE SURVEY
KEY DIAGRAM
 TIVOLI DRIVE
 CURLEWIS, 3222
 ASSET 1

Job Number: 22898-100	Date of Issue: 06/06/22
Sheet: KEYPLAN	
Date of Survey: May 2022	
LENGTHS ARE IN METRES	
1:2500	
Survey: MW/JP	At Size: A3
Drawn: MW	Checked: DR
DWG: 22898-100-FS03	REV: 0



Job Number: 22898-100 Sheet: 1 of 4 Date of Survey: May 2022	Date of Issue: 06/06/22
LENGTHS ARE IN METRES 12.5 0 12.5 25 37.5 50 62.5 1:1250	At Size: A3
Survey: MNI/JP Drawn: MNV Checked: DR	DWG: 22898-100-FS03 REV: 0
PLAN OF TREE SURVEY	
TIVOLI DRIVE CURLLEWIS, 3222	
ASSET 1	
<p>General Notations This plan is prepared for the purposes of tree identification. All notes are an integral part of the plan, if the plan is copied, these notes are to accompany the copy.</p> <p>Aerial image: Mapomaps 20/11/21 Green Tree symbol denotes tree trunk size 105 and spread Red Number corresponds with identification tag on trunk (where applicable)</p>	
Rev:	Date
Revision	
<p>ASBN 11 125 568 461 Level 1, 27-31 Myers Street (PO Box 1137) Geelong, VIC Australia 3220 Phone +61 3 5322 4600 Fax +61 3 5322 4601 Email: tech@cardno.com.au Web: www.cardno.com</p>	



Rev:	Revision	Date	PLAN OF TREE SURVEY TIVOLI DRIVE CURLEWIS, 3222 ASSET 1	Job Number: 22898-100 Sheet: 2 of 4 Date of Survey: May 2022	Date of Issue: 06/06/22
				Survey: MNY/JP Drawn: MNY Checked: DR	At Size A3
General Notations This plan is prepared for the purposes of tree identification. All notes are an integral part of the plan, if the plan is copied, these notes are to accompany the copy. Aerial Image: Metromap 25/11/21 Green Tree symbol denotes tree trunk size and spread Red Number corresponds with identification tag on trunk (where applicable)			DWG: 22898-100-FS03 REV: 0		
ASBN 11 125 258 461 Level 1, 27-31 Myers Street (PO Box 1137) Geelong, VIC Australia 3220 Phone +61 3 522 8800 Fax +61 3 522 4811 Email: victoria@cardno.com.au Web: www.cardno.com					



Rev.	Revision	Date
-	-	-

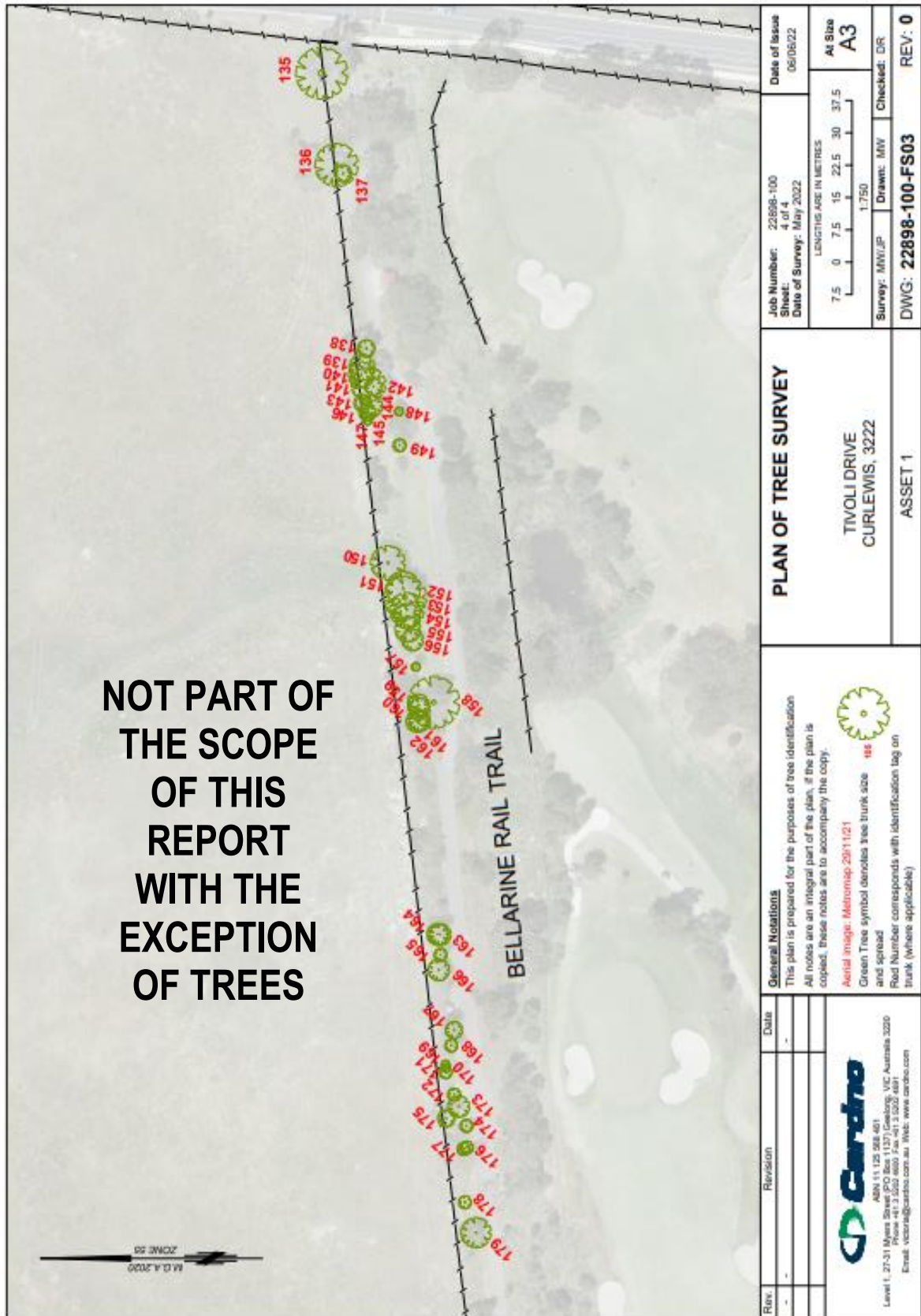
PLAN OF TREE SURVEY

TIVOLI DRIVE
CURLEWIS, 3222

ASSET 1

General Notations
 This plan is prepared for the purposes of tree identification. All notes are an integral part of the plan, if the plan is copied, these notes are to accompany the copy.
 Aerial image: Metromap 29/11/21
 Green Tree symbol denotes tree trunk size and spread
 Red Number corresponds with identification tag on trunk (where applicable)

Job Number: 22898-100	Date of Issue: 06/06/22
Sheet: 3 of 4	
Date of Survey: May 2022	
LENGTHS ARE IN METRES	
1:750	
Survey: MW/UP	At Size: A3
Drawn: MW	Checked: DR
DWG: 22898-100-FS03	REV: 0



Rev.	-	Revision	Date	-	<p>General Notations This plan is prepared for the purposes of tree identification. All notes are an integral part of the plan, if the plan is copied, these notes are to accompany the copy.</p> <p>Aerial Image: Metronap 20/11/21</p> <p>Green Tree symbol denotes tree trunk size and spread</p> <p>Rod Number corresponds with identification tag on trunk (where applicable)</p>	<p>PLAN OF TREE SURVEY</p> <p>TIVOLI DRIVE CURLEWIS, 3222</p> <p>ASSET 1</p>	<p>Job Number: 22898-100 Sheet: 4 of 4 Date of Survey: May 2022</p> <p>LENGTHS ARE IN METRES</p> <p>7.5 0 7.5 15 22.5 30 37.5</p> <p>Survey: MW/JP Drawn: MW Checked: DR</p> <p>DWG: 22898-100-FS03</p>	<p>Date of Issue: 06/06/22</p> <p>AI Size: A3</p> <p>REV: 0</p>

6.0 Recommendations

It is the recommendations of this report that;

1. The trees on this site should be managed as per this report.
2. Whilst none is recommended for retention, all vegetation to be retained on site should be protected and retained using AS4970 – 2009 Protection of Trees on Development Sites.
3. The process of managing trees on construction sites is clearly outlined by AS4970 – 2009 Protection of Trees on Development Sites, and further reports may be required to protect and guide the retention of trees throughout the process of development of this project. These should be commissioned as practicable.
4. A full understanding of the Australian Standard 4970 – 2009 Protection of Trees on Development Sites is required to fully manage this project. In order that this is carried out, a Level 5 Project arborist should be commissioned for the projects entirety to manage all retained / impacted and proposed to be impacted trees.
5. It is recommended that due consideration be given to any vegetation removed as a result of this report in regards to replacing lost vegetation post development.

7.0 Appendices

7.1 Photographs - Appendix One. - Typical trees of the project.









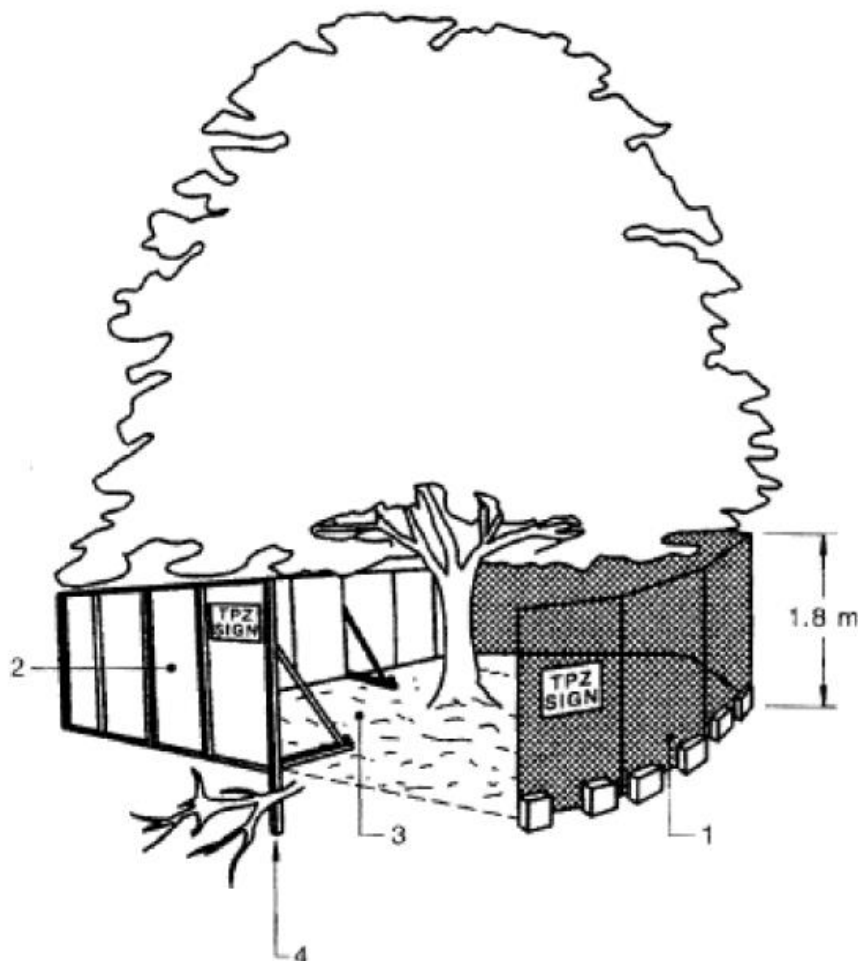
7.2 Site Plan



7.3 Tree Protection Signage

4.4 SIGNS

Signs identifying the TPZ should be placed around the edge of the TPZ and be visible from within the development site (refer Figure 3). The lettering on the sign should comply with AS 1319. Appendix C provides an example of a suitable TPZ sign.



LEGEND:

- 1 Chain wire mesh panels with shade cloth (if required) attached, held in place with concrete feet.
- 2 Alternative plywood or wooden paling fence panels. This fencing material also prevents building materials or soil entering the TPZ.
- 3 Mulch installation across surface of TPZ (at the discretion of the project arborist). No excavation, construction activity, grade changes, surface treatment or storage of materials of any kind is permitted within the TPZ.
- 4 Bracing is permissible within the TPZ. Installation of supports should avoid damaging roots.

FIGURE 3 PROTECTIVE FENCING

(Extract from AS4970 – 2009 Protection of trees on Development sites)

7.4 Tree Protection Zone (TPZ) Example

AS 4970—2009

28

APPENDIX C

TREE PROTECTION ZONE SIGN EXAMPLE

(Informative)

A TPZ sign provides clear and readily accessible information to indicate that a TPZ has been established. Figure C1 provides an example of a suitable sign.



FIGURE C1 TREE PROTECTION ZONE SIGN

(Extract from AS4970 – 2009 Protection of trees on Development sites)

7.5 Indicative Stages in Development and the Tree Management Process

Stage in Development	Tree Management Process	
	Matters for Consideration	Actions and Certificates
Planning (Sections 2 and 3)		
Site acquisition	Legal constraints	
Detail surveys	Council plans and policies Planning instruments and controls Heritage Threatened species	Existing trees accurately plotted on survey plan.
Preliminary tree assessment	Hazard/risks Tree retention value	Evaluate trees suitable for retention and mark on plan Provide preliminary arboricultural report and indicative TPZs to guide development layout.
Preliminary development design	Condition of trees Proximity to buildings Location of services Roads Level changes Building operations space Long-term management	Planning selection of trees for retention Design review by proponent Design modifications to minimise impact to trees.
Development submission	Identify trees for retention through comprehensive arboricultural impact assessment of proposed construction. Determine tree protection measures. Landscape design.	Provide arboricultural impact assessment including tree protection plan (drawing) and specification.
Development approval	Development controls Conditions of consent	Review consent conditions relating to trees.
Pre-construction (Sections 4 and 5)		
Initial site preparation	State based OHS requirements for tree work Approved retention/removal Refer to AS 4373 for the requirements on the pruning of amenity trees Specifications for tree protection measures.	Compliance with conditions of consent. Tree removal/tree retention/transplanting Tree pruning Certification of tree removal and pruning. Establish/delineate TPZ Install protective measures Certification of tree protection measures.

Stage in Development	Tree Management Process	
	Matters for Consideration	Actions and Certificates
Construction (Sections 4 and 5)		
Site establishment	Temporary infrastructure Demolition, bulk earthworks, hydrology	Locate temporary infrastructure to minimise impact on related trees. Maintain protective measures Certification of tree protection measures.
Construction work	Liaison with site manager, compliance Deviation from approved plan	Maintain or amend protective measures Supervision and monitoring
Implement hard and soft landscape works	Installation of irrigation services Control of compaction work Installation of pavement and retaining walls	Remove selected protective measures as necessary Remedial tree works Supervision and monitoring
Practical completion	Tree vigour and structure	Remove all remaining tree protection measures Certification of tree protection
Post Construction (Section 5)		
Defects liability / maintenance period	Tree vigour and structure	Maintenance and monitoring Final remedial tree works Final certification of tree condition

NOTES:

1. Owing to variations in planning legislation, this Table is a general indication of the process only
2. Certification of tree protection and condition should be carried out by the project Arborist.

Extract from Australian Standard 4970 – 2009 – Protection of Trees on Development Sites.

The above Table shows clearly the process of tree protection on development sites as set out in the Australian Standard.

This Table should be followed in the management of all trees on development sites.

Depending on the stage of the project you are undertaking, the type of project you are undertaking and specific other requirements of various planning departments, in some instances additional reports may be required.

The above Table serves as an indicative guide to the process of managing and protecting trees.

8.0 References

Australian Standard® **AS4970-2009, *Protection of trees on development sites, 2009, Sydney***

Australian Standard® **AS4373-2007, *Pruning of Amenity Trees, 2007, Sydney***

Writings within the report are of the author's personal knowledge and belief. The information and knowledge released in the report when referenced should be referenced to

Matt Branagh, Dip.App.Scl – Horticulture/Arboriculture – Let's Talk About Trees.

9.0 Terms and Limitations of the Report

- Any legal information in the report has been provided to Let's Talks About Trees by an external source and it is assumed to be correct. All references to property title and/or control or ownership of land are assumed to be correct as Let's Talk About Trees has been advised.
- Great care has been taken in sourcing information for this report so as it is correct. Let's Talk About Trees cannot be responsible for information provided which is not directly under control of its staff.
- No Let's Talk About Trees employee shall be required to give testimony or attend court for any matter in relation to this report, unless further contractual arrangements have been made.
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- In no way is this report biased or weighted. The content of the report is written in the full, honest opinion of the Let's Talk About Trees Consulting Arborist.
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- This report is developed around the information provided by our client in the project brief. Only issues covered by the project brief are discussed in this report.
- All details, information and advice contained in this report have been researched and referenced. Where no reference is included, it is the author's learned opinion, experience and observations.

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